African Union | TASAI The African Seed Access Index | AGRA Sustainably Growing Africa's Food Systems

African Seed Sector Performance Index

2025 Status Report

October 2026

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Foreword

Effective, competitive, and diverse seed systems are essential for promoting resilient and fair food systems across Africa. Improved seed varieties can bring advanced technology to farmers, leading to increased yields, greater resistance to diseases and pests, better adaptation to climate change, and enhanced nutrition. To support this, African governments, regional economic bodies, donors, and development organizations have launched numerous programs to support sustainable seed systems.

Within the African Union Commission, the Department of Agriculture, Rural Development, Blue Economy, and Sustainable Environment (DARBE) spearheads continental initiatives aimed at advancing agricultural and rural transformation through increased productivity and sustainable growth. In this capacity, the AUC's DARBE oversees the development, implementation, and monitoring of policies, strategies, and programs in line with key AU Decisions, such as Assembly/AU/Dec. 135(VIII), which endorsed the African Seed and Biotechnology Program (ASBP) as a strategic framework for seed sector advancement in Africa. The ASBP functions within the context of the Malabo Declaration, the Comprehensive Africa Agriculture Development Programme (CAADP), and the First Ten-year Implementation Plan of Africa's Agenda 2063.

Since its inception, AGRA has identified seed systems as the fundamental component of agricultural research, quality assurance, extension, and distribution. AGRA aims to establish robust, efficient, and resilient seed systems that ensure farmers have timely and affordable access to high-quality varieties with traits that enhance yields and resistance to pests and diseases. In this context, the Center of Excellence for Seed Systems in Africa (CESSA) is committed to forming strategic partnerships to address challenges within African seed systems. CESSA provides support to governments, the private sector, and development partners in their efforts to implement modern, effective, and resilient seed systems that better serve the needs of African farmers.

Both the AUC's DARBE and AGRA's CESSA stress the importance of objectively measuring and tracking seed system performance in African countries to ensure accountability and foster peer learning. To support this, they have partnered with TASAI Inc. to develop a score-based tool that evaluates seed system vitality. Originally called Seed Sector Performance Index (SSPI), the 2023 Status Report for Africa was released in 2024. This second report builds on the first report with trends that inform seed sector stakeholders on the evolution of the seed sectors in the different countries. Its data was also incorporated in the 5th Biennial Review Report.

The report highlights the urgent need to increase investment in seed systems to support sustainable farming. In countries demonstrating slower progress, it is particularly important to increase investment and operationalize existing policies and regulations. By tackling the challenges discussed in this report, member countries can improve African farmers' access to quality, affordable seed. Along with other measures, this will contribute to advancing food and nutrition security.

We express our sincere appreciation to TASAI Inc., as well as the national and regional seed experts, reviewers, and all other contributors whose efforts made this report possible.

H. E. Moses Vilakati

Commissioner
Agriculture, Rural Development,
Blue Economy, and Sustainable Environment

Alice Ruhweza

President
AGRA

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Executive Summary

Purpose and Context

The African Seed Sector Performance Index (ASSPI) is a collaborative initiative of the African Union Commission (AUC), AGRA's Center of Excellence for Seed Systems in Africa (CESSA), and TASAI Inc. It provides a standardized, score-based framework for assessing the health of national seed sectors across the African continent. The ASSPI was first conducted in 2023; this second round, conducted in 2025, builds on that pilot with expanded country coverage, refined methodology, and the first systematic time-series comparison of seed sector performance across Africa.

The ASSPI serves a dual purpose: it provides seed sector data for the African Union's 5th Biennial Review (BR) Report under the Comprehensive Africa Agriculture Development Programme (CAADP), and it functions as an independent diagnostic and planning tool for national governments, regional economic communities (RECs), development partners, and the private sector.

Scores are reported on a 0–10 scale, interpreted as follows: **0 to <2: extremely poor; 2 to <4: poor; 4 to <6: fair; 6 to <8: good; 8–10: excellent.** All 17 indicators draw on both quantitative data and expert opinion, and scores are validated through national and regional stakeholder processes.

Scope and Coverage

ASSPI 2025 covers **50 of the 55 African Union member states**, an increase from 47 in 2023, with Cape Verde, Equatorial Guinea, and Gabon joining for the first time. Five countries — Algeria, Mauritius, Morocco, São Tomé and Príncipe, and the Sahrawi Republic — did not participate. Results are presented across 17 indicators spanning the full seed value chain, from plant breeding and variety release through seed production, quality assurance, trade, and policy. Findings are reported at country, indicator, and REC level, covering seven RECs: COMESA (21 countries), EAC (8), SADC (15), IGAD (8), ECOWAS (15), UMA (3 participating members), and ECCAS (9).

Methodological improvements for 2025 include the introduction of scoring rubrics for greater consistency, an increase from 12 to 33 sub-indicators to isolate key components of broader indicators, expanded training and regional validation sessions, and an interactive online data dashboard built in Tableau.

Overall Performance: A Continent of Contrasts

The 2025 ASSPI reveals a continent whose seed systems span a wide performance spectrum. The continental mean score across all 50 countries is **4.64 out of 10**, reflecting that Africa's seed systems overall remain in the "fair" range, with significant headroom for improvement.

Country-level scores break down as follows:

- **Excellent (8–10):** 2 countries — South Africa (8.64) and Egypt (8.13).
- **Good (6 to <8):** 12 countries — Zambia, Kenya, Zimbabwe, Tanzania, Ethiopia, Tunisia, Rwanda, Ghana, Malawi, Eswatini, Nigeria, and Uganda.
- **Fair (4 to <6):** 16 countries, down from 19 in 2023, with some countries moving into the "good" category and others sliding into "poor."
- **Poor (2 to <4):** 15 countries, up from 13 in 2023.
- **Extremely poor (0 to <2):** 5 countries — Gabon, Guinea (Conakry), Congo Republic, the Central African Republic, and Equatorial Guinea.

At the REC level, COMESA records the highest mean score (5.26), followed by EAC (5.25), SADC (5.14), IGAD (4.96), ECOWAS (4.61), UMA (4.23), and ECCAS (2.82).

Notable Changes Since 2023

Of the 47 countries with data from both rounds, results are mixed: some countries have made substantial gains, while others have experienced significant setbacks, underscoring that seed sector progress is neither automatic nor irreversible.

Countries recording the largest improvements:

- Djibouti posted the largest overall gain of any country, rising from 1.35 to 4.53 (+3.18 points). The improvement is largely the result of a methodological change, namely, replacing, at the request of the country, two of the focus crops (citrus and melon) in the 2023 pilot study with chili pepper and okra in 2025.
- Somalia improved substantially, driven by new seed legislation — including the SARIS Law No. 32 (2024) and the Seed and Plant Varieties Law No. 35 (2024) — recording large improvements (>2.5 points) across five indicators.
- Ethiopia achieved large improvements in crop varietal choice, alignment with regional regulations, and seed availability in small packages, reflecting new policy instruments and ISTA membership.
- Rwanda recorded a large improvement in biosafety frameworks, rising from 1.0 to 7.50 (+6.50 points), supported by public-private partnerships and new seed legislation.
- Tunisia improved by 1.15 points overall (5.77 → 6.92), driven by gains across variety release, plant genetic resources, EGS adequacy, seed import regulation, and seed trade association performance.

Countries recording the most significant declines:

- Botswana fell by 1.55 points, with sharp drops in NARIs adequacy, plant genetic resources, and biosafety frameworks.
- Guinea (Conakry) declined by 1.60 points.
- Cameroon dropped by 0.59 points, including a large decline in NARIs adequacy (−3.41 points).

Key Thematic Findings

Seed Utilization: The Continent's Most Persistent Weakness

Actual uptake of quality commercial seed by farmers is the weakest or near-weakest dimension of seed systems in nearly every country assessed. REC averages on seed utilization range from 4.28 (IGAD) down to just 0.89 (ECCAS), with COMESA at 4.10, SADC at 3.78, EAC at 3.45, UMA at 2.85, and ECOWAS at 2.63. Even in countries with relatively advanced regulatory environments and growing private sectors, the majority of smallholder farmers continue to rely on farm-saved or informally traded seed. Bridging this gap requires coordinated effort in input distribution, farmer education, and last-mile logistics.

Thin Variety Development Pipelines

The number of varieties released is the second-weakest indicator continent-wide. In many countries, the pipeline of new varieties reaching farmers falls well short of what is needed to provide meaningful varietal choice across diverse agro-ecological zones and in the face of growing climate pressures. Underlying this weakness is the chronic underfunding and understaffing of National Agricultural Research Institutes (NARIs) in many countries. Investment in human capital and research infrastructure at the NARI level is a precondition for expanding variety development.

Regulatory Frameworks Are Ahead of Implementation Capacity

Across all seven RECs, national seed policy frameworks and seed import regulations consistently rank as the highest-scoring indicators, while seed inspection services, efforts to combat counterfeit seed, and actual seed utilization scores lag significantly behind. This reflects a well-documented structural pattern: laws and policies are comparatively advanced, but operational enforcement and delivery capacity remain weak. Closing this implementation gap requires sustained investment in qualified inspection personnel, functional laboratory infrastructure, and adequate enforcement budgets.

Regional Harmonization: Progress but Unevenly Distributed

The harmonization frameworks established by ECOWAS (2008), SADC (2013), and COMESA (2014) represent significant achievements in reducing regulatory fragmentation. ECOWAS leads on REC policy harmonization (I12 = 7.13) and has the highest seed policy frameworks score of any REC (8.05). However, harmonization at the policy level has not fully translated into harmonized practice, and cross-border seed movement remains inconsistent. UMA scores lowest on harmonization (I12 = 2.33), reflecting the absence of an operational regional framework for the Maghreb. ECCAS presents the most urgent case: foundational country-level institution-building is a prerequisite for meaningful regional integration.

Farmer-Managed Seed Systems Remain Underrecognized in Policy

Informal and farmer-managed seed systems (FMSS) supply the majority of seed used by smallholder farmers across Africa, yet the ASSPI indicator tracking FMSS recognition in national policy instruments scores just 0.83 in UMA, 2.67 in ECCAS, 2.83 in ECOWAS, 3.88 in EAC, 4.10 in COMESA, and 4.80 in SADC — IGAD is the notable exception at 5.38, the highest of any REC. Most countries have yet to develop coherent policies that recognize and support these systems. Integrating FMSS into national seed sector strategies is both an equity and a practical imperative, given the scale at which these systems operate.

Priorities for Action

Based on the 2025 ASSPI findings, five priority areas are identified for governments, development partners, and regional bodies:

1. **Invest in variety development and NARI capacity.** Governments and donors should prioritize sustained funding for national plant breeding programs, breeder training, and research infrastructure.
2. **Close the last-mile access gap.** Expanding agro-dealer networks into underserved rural areas, requiring seed companies to supply certified seed in small, affordable packages, and investing in farmer awareness are essential to converting regulatory and production gains into actual seed use.
3. **Strengthen seed inspection and quality assurance systems.** Investment in inspection personnel, laboratory equipment, and anti-counterfeit enforcement is essential to maintain farmer confidence and market integrity.
4. **Build foundational seed sector institutions in fragile contexts.** For the lowest-performing countries — particularly in ECCAS — the immediate priority is basic institution-building: enabling legislation, functional variety release committees, seed inspection units, and rehabilitated gene banks.
5. **Accelerate regional harmonization and intra-African seed trade.** Deepening harmonization of variety catalogs, mutual recognition of seed certification, and phytosanitary standards would substantially expand market access for seed companies and variety availability for farmers across the continent.

Looking Ahead

With two rounds of data now available, the ASSPI is beginning to function as a genuine time-series diagnostic for Africa's seed systems. The expansion from 47 to 50 countries in 2025, combined with methodological improvements and the launch of an interactive data dashboard, has strengthened the reliability and utility of ASSPI data for policy and investment decisions. As the index matures, its capacity to track trends over time will become increasingly valuable for identifying effective interventions and holding stakeholders accountable for progress.

Africa's seed systems hold enormous potential to contribute to food security, agricultural transformation, and climate resilience. The ASSPI 2025 provides the clearest picture yet of where that potential is being realized — and where sustained political commitment, adequate public investment, strong private sector engagement, and robust regional cooperation are still needed to turn it into reality.

Acronyms

AATF	African Agricultural Technology Foundation
AFSTA	African Seed Trade Association
ARDWE	Agriculture, Rural Development, Water and Environment
ASBP	African Seed and Biotechnology Program
ASSPI	African Seed Sector Performance Index
AUC	African Union Commission
BR	Biennial Review
CAADP	Comprehensive Africa Agriculture Development Programme
CBO	Community-Based Organization
CESSA	Center of Excellence for Seed Systems in Africa
CGIAR	Consultative Group on International Agricultural Research
COMESA	Common Market for Eastern and Southern Africa
CORAF	West and Central African Council for Agricultural Research and Development
CSB	Community Seed Bank
EAC	East African Community
ECCAS	Economic Community for Central African States
ECOWAS	Economic Community for West African States
EGS	Early Generation Seed
FMSS	Farmer-Managed Seed Systems
GMO	Genetically Modified Organism
IGAD	Intergovernmental Authority for Development
IRRI	International Rice Research Institute
ISAAA	International Service for the Acquisition of Agri-biotech Applications
ISTA	International Seed Testing Association
KALRO	Kenya Agricultural and Livestock Research Organization
NARI	National Agricultural Research Institute
OPV	Open-Pollinated Variety
PGRFA	Plant Genetic Resources for Food and Agriculture
PVP	Plant Variety Protection
QDS	Quality Declared Seed
REC	Regional Economic Community
SADC	Southern African Development Community
SANSOR	South African National Seed Organization
SARIS	Somali Agricultural Regulatory and Inspection Services
STC	Specialized Technical Committee
TASAI	The African Seed Access Index
UMA	Union du Maghreb Arabe
VCU	Value for Cultivation and Use

Section 1: Background and Introduction

The ASSPI: Purpose and Context

Agriculture in Sub-Saharan Africa faces multiple challenges, including climate change, insufficient investment, inefficient markets, and policy constraints—that contribute to low crop yields and persistent food insecurity. Smallholder farmers who rely on rain-fed agriculture are particularly vulnerable. Using adaptive technologies, especially locally suited, high-quality seeds, can increase yields, enhance resilience, and improve farmer livelihoods. However, effective seed systems require coordinated activities across breeding, production, marketing, distribution, regulation, and quality assurance.

Many Sub-Saharan African countries lack efficient, cost-effective systems for distributing certified seeds of improved varieties. Available seeds often fail to meet farmers' evolving needs across diverse agro-ecological zones. While farmers require climate-smart, disease-resistant, and nutrient-enriched seeds, improved options are seldom available in a timely manner, in sufficient quantities, or at affordable prices.

The African Seed Sector Performance Index (ASSPI) was developed to assess how national seed sectors address these critical challenges. Launched in 2023 through collaboration among the African Union Commission (AUC), TASAI Inc., and AGRA, the ASSPI provides a unified, score-based tool for evaluating seed system health across the continent. It also supplies essential data for the African Union Commission's Biennial Review (BR) report. Unlike other monitoring tools such as the TASAI Country Study and SeedSAT, which assess individual countries' seed sectors, the ASSPI offers a comprehensive overview across multiple countries simultaneously.

Although the ASSPI focuses primarily on the formal seed system, it also recognizes the role of the informal seed system in overall national seed sector performance. The ASSPI includes an indicator tracking the integration of Farmer-Managed Seed Systems (FMSS) in policy instruments. Seed systems in Africa can be classified primarily into formal and informal systems, with several countries also maintaining an intermediate seed system (Box 1.)

The informal seed system refers to a system in which seed is produced, maintained, and distributed through informal networks. These activities "tend to be decentralized and might revolve around local entrepreneurship, seed banking, community-based seed production, or seed villages" (McGuire and Sperling 2016). In many cases, farmers save seed from the harvest and exchange it with neighbors, relatives, and through rural markets. Seed from this system is of variable varietal purity, physical quality, and sanitary quality.

The formal seed system is a structured and regulated value chain for the production and sale of improved and certified seed varieties. This process involves many actors and institutions, whose activities range from breeding varieties to multiplication, processing, and distribution of certified seed. Different stages of improved seed production are overseen by governments according to approved regulations and standards. Seed from this system is sold through limited distribution channels, such as registered seed producers/companies and agro-dealers.

The intermediate seed system comprises business-oriented community-based groups (producer cooperatives or unions) engaged in multiplication and distribution of non-certified seed of either modern or traditional local varieties. Seed producers usually access basic seed from the formal seed system and produce and distribute Quality Declared Seed (QDS) to other farmers through both informal arrangements and local markets. Multiplication and distribution generally occur within the local community and nearby areas (as opposed to seed producers in the formal system, who may scale beyond the local community.

This report presents detailed findings from the 2025 ASSPI study, which collected data for the 5th Biennial Review report. It builds on the pilot report entitled "Seed Sector Performance Index (SSPI): 2023 Status Report for Africa" (AUC, TASAI, and AGRA 2024) . While providing data for the 5th BR Report was the primary objective, this study also serves as an independent assessment of national seed sectors across Africa in 2025 and offers a valuable resource for stakeholders involved in seed sector development on the continent.

ASSPI and the CAADP Biennial Review

The CAADP BR report serves as the African Union's primary mechanism for tracking member states' implementation of the Malabo Declaration, which aims to achieve agricultural transformation, shared prosperity, improved livelihoods, and enhanced food security by 2025 (African Union Commission 2014). Using detailed country-level data, the report measures progress and informs policy changes, updates to national plans, and evidence-based decision-making to advance Africa's agricultural development.

The BR report focuses on seven core performance areas: Commitment, Investment, Ending Hunger, Poverty Reduction, Intra-African Trade, Climate Resilience, and Mutual Accountability. Progress is measured through 47 indicators that generate country-level performance scores. The report also provides policy recommendations to improve data quality, planning, and implementation of the CAADP Agenda. The inaugural BR report was released in 2018 (African Union 2018). The 2nd, 3rd, and 4th BR reports were released in 2020, 2022, and 2024, respectively.

One of the 47 indicators measures the seed sector. In prior BR reports, seed was grouped with other agricultural inputs, such as crops, livestock, and fisheries, which obscured its impact on the crops sector. Recognizing this gap, the AUC approached TASAI Inc. to help develop a data collection tool focused on national seed sectors in Africa. The ASSPI was developed to provide a detailed picture of the health of a country's seed sector that feeds into the CAADP BR. Previous BR reports captured improved seed use in Performance Component 3.1iii as the growth rate of quality agricultural inputs relative to national requirements, but only for one priority crop and aspect: the proportion of quality seed sold compared to the total national seed need for at least one key commodity[1]. Thus, what is represented as a single score about a country's seed sector in the BR is the combination of scores from the 17 ASSPI indicators. The ASSPI was developed and piloted in 2023; 2025 marks the second round of ASSPI data collection.

Development of the 5th Biennial Review (BR) report

Development of BR reports has followed a rigorous process beginning with careful evaluation of lessons from the most recent edition. Table 1 summarizes key milestones in developing the 5th BR report.

TABLE 1: KEY MILESTONES IN THE DEVELOPMENT OF THE 5TH BR REPORT

Date	Activity
October 2024	Critical analysis of the 4th BR report to gather lessons for the 5th BR report
January–April 2025	Review of indicators and survey tools by all contributors to the BR report. TASAI led the revisions to the ASSPI – Performance Component 3.1viii
March 2025	Continental-level Training of Trainers (ToT) where all indicators were reviewed and adopted. Technical guidelines on indicators and country reporting templates were reviewed and adopted
May–July 2025	Data collection for all BR performance components, including ASSPI, at the national level
July 2025	Data submission into the e-BR platform, managed by Akademiya 2063, for the production of scores by performance components
August–September 2025	Data validation workshops at continental, regional, and national levels. Following these sessions, countries resubmitted validated/revised data
October 2025	Consolidation of the draft 5th BR report
October 2025	Presentation of the draft 5th BR report to the Specialized Technical Committee (STC[2]) on Agriculture, Rural Development, Water and Environment (ARDWE)
January 2026	Presentation of the draft 5th BR report to Heads of State and Government for endorsement
May 2026	Launch of the 5th BR report

1 See full description in paragraph 3.39 on page 39 (African Union 2023)

2 These are thematic committees answerable to the Executive Council. Each STC is composed of member states' ministers and senior officials responsible for sectors falling within their respective areas of competence.

Collaborative Partnership

As mentioned above, the ASSPI is a collaborative initiative by the African Union Commission, AGRA, and TASAI Inc. Within the AUC, the activity falls under the aegis of the African Seed and Biotechnology Program (ASBP). At AGRA, the partnership is with the Center of Excellence in Seed Systems in Africa (CESSA). The three partners are introduced in more detail below.

The African Seed and Biotechnology Programme (ASBP) of the AUC

The Eighth Ordinary Session of the Assembly of the African Union (AU), held in Addis Ababa, Ethiopia, on 29–30 January 2007, endorsed the African Seed and Biotechnology Programme (ASBP) as a strategic framework for seed sector development in Africa (Doc. ASSEMBLY/AU/6 (VIII)). The program's overarching goals are to increase food security and nutrition and alleviate poverty in Africa through effective seed systems and the enhanced application of biotechnologies in the seed sector.

The ASBP has eight objectives:

1. Enhanced national capacity for improved seed production, multiplication, and distribution to better supply farmers with high-quality seed that enables them to respond to changing environmental conditions and market demands;
2. Improved seed quality assurance procedures in place to ensure sustained production and distribution of high-quality seed to farmers;
3. Strengthened linkages between the formal and informal seed sectors to better understand and respond to farmer needs, including small-scale and women farmers;
4. Effective seed policies and regulations in place to enable and promote increased seed trade among African nations;
5. Enhanced capacity for the conservation and sustainable use and development of plant genetic resources for food and agriculture, to ensure adapted crop varieties are available to meet future farmer needs;
6. Increased capacity to utilize tools of biotechnology to enhance plant breeding and high-quality seed production;
7. Increased capacity to implement biosafety measures in relation to seed production and distribution and plant genetic improvement, to protect human health and the environment;
8. Establishment of model codes of conduct for seed used in emergency situations.

TASAI Inc.

TASAI Inc. is the nonprofit organization that coordinates the work of The African Seed Access Index (TASAI).[3] Founded on the premise that well-informed, evidence-based interventions will result in competitive seed systems serving African smallholder farmers, TASAI Inc.'s goal is to create, promote, and maintain enabling environments—including institutional, policy, and regulatory realms—for formal seed systems that catalyze inclusive agricultural transformation in Africa.

TASAI accomplishes its goal by collecting high-quality data at the national level and sharing it through country reports (the **TASAI Country Study**) and an interactive digital dashboard that provides a detailed picture of each country's seed industry. The platform allows for cross-country comparisons and continent-wide rankings of seed sectors. Specifically, TASAI covers 22 indicators divided into five broad categories:

3 https://www.tasai.org/en/about/our-story/ Accessed 23 January 2026

Research and Development, **Industry Competitiveness**, **Policy and Regulations**, **Institutional Support**, and **Service to Smallholder Farmers**. Using these indicators, TASAI studies evaluate the structure, conduct, and performance of seed systems serving smallholder farmers. To date, TASAI has collected data in 26 Sub-Saharan African countries.

AGRA-CESSA

The Center of Excellence for Seed Systems in Africa (CESSA),[4] hosted by AGRA, focuses on forming partnerships to address challenges in African seed systems. Launched in September 2021, CESSA serves as a one-stop center to accelerate the availability of quality seeds that meet the market and ecological demands of African farmers for increased profitability, resilience, and production.

CESSA supports governments, the private sector, and development partners to deliver modern, effective, and resilient seed systems that better serve African farmers. It seeks to strengthen the seed value chain, particularly variety development and release, production and distribution of both early-generation and certified seed, farmer awareness creation and participation, quality assurance, national planning, and policy and regulatory frameworks.

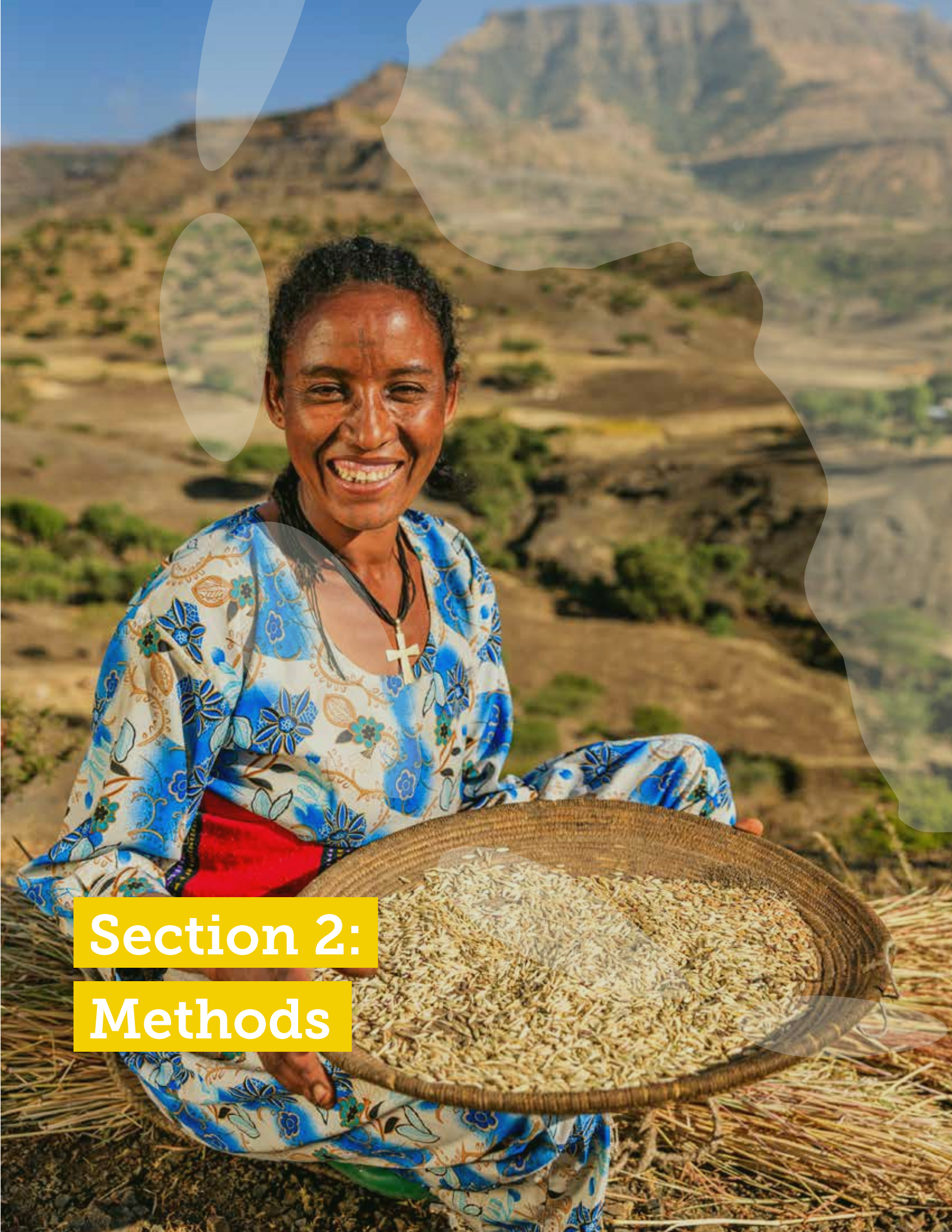
CESSA supports informed, evidence-based decision-making, investments, and provision of technical advice for implementing improved seed systems. CESSA programs are implemented under 11 national flagships focused on policy, state capability, and system-level implementation.

AGRA's SeedSAT (Seed Assessment Tool) collaboratively undertakes in-depth country seed system analysis with governments and other stakeholders, leading to improvements that increase delivery and use of improved seed varieties. SeedSAT covers 166 indicators and has been implemented in 11 countries to date.

Report Structure

Following this introduction, Section 2 explains the data collection methods used for the ASSPI. Subsequent sections present country-level findings and cross-country comparisons by indicator. The report ends with key insights on seed sector performance in Africa and priorities for improvement.

4 https://agra.org/what-we-do/programmes/center-of-excellence-for-seed-systems-in-africa/ (accessed 23 January 2026).



Section 2: Methods

Overview

The design and development of the inaugural (pilot) ASSPI study are described in detail in the Methods section of the Seed Sector Performance Index (SSPI): 2023 Status Report for Africa (AUC, TASAI, and AGRA 2024) . That report provided seed sector data for the 4th Biennial Review (BR) Report, subsequently released by the African Union Commission (AUC) in 2024. The 2023 SSPI Status Report for Africa presented seed sector data from 47 of the 55 AU member states. In 2025, the scope of the study expanded to 50 countries, while retaining the same 17 indicators used in 2023. This section describes the methods used to collect and analyze the ASSPI data, highlighting notable changes since 2023 and explaining the rationale behind these modifications.

Phase 1: Preparation

Prior to data collection, the TASAI team reviewed the overall methodology and identified issues encountered in 2023. The review encompassed indicators, survey instruments, and enumerator recruitment and training protocols, and yielded proposed improvements across all these areas. This section describes the methodological adjustments implemented, provides the rationale for changes, and outlines elements that remained unchanged.

Lessons from ASSPI 2023 and Improvements for 2025

As ASSPI 2023 was a pilot study, the first step for ASSPI 2025 involved reviewing successful methods and addressing challenges from 2023. Table 2 lists the challenges encountered in 2023 and the improvements made for 2025.

TABLE 2: CHALLENGES IN ASSPI 2023 AND IMPROVEMENTS IN ASSPI 2025

Challenge in 2023	Improvements in 2025
Limited country participation: Eight countries (Algeria, Cape Verde, Equatorial Guinea, Gabon, Mauritius, Morocco, São Tomé and Príncipe, and the Sahrawi Republic) did not participate despite repeated outreach efforts.	Proactive engagement with regional seed sector experts and national focal points raised country participation from 47 to 50. All countries involved in 2023 participated in 2025 and were joined by Cape Verde, Equatorial Guinea, and Gabon. Algeria, Mauritius, Morocco, the Sahrawi Republic, and São Tomé and Príncipe did not participate.
Data discrepancies and errors: Data submissions contained transcription mistakes, missing decimals, and invalid entries (e.g., scores outside the allowed range). These errors complicated validation and required time-consuming follow-up with country teams.	Training materials were enhanced, indicator definitions refined, and data entry tools improved. A new data review form created a clear audit trail for validation, allowing easier identification and correction of errors before final submission.
Unnotified changes to scores: In some cases, countries changed their scores during or after validation exercises without consulting the technical experts trained in ASSPI methodology. This led to inconsistencies between data submitted to ASSPI and final scores in the e-BR system.	TASAI joined regional validation meetings to ensure all changes were reviewed and agreed upon by national seed sector experts. This collaborative approach reduced incidences of uncoordinated data changes and improved data consistency.
Confusion between de jure and de facto policy states: National seed sector experts sometimes confused policy existence (de jure) with its actual implementation (de facto), especially when scoring indicators related to policy enforcement. This resulted in misinterpretation and inconsistent scoring.	Indicator definitions were clarified, and sub-indicators were introduced to separate policy status from implementation. Training sessions emphasized these distinctions, helping seed sector experts score policy instrument status more accurately and consistently.
Challenges with vegetatively propagated crops: For some crop-specific indicators, countries lacked reliable data on vegetatively propagated crops (e.g., banana, cassava, sweet potato), making it difficult to assess seed sector performance for these crops.	Analytical methods were adapted by adding sub-indicators to better accommodate a wider range of crops.
Inconsistent indicator ratings: Countries at different stages of seed sector development rated themselves inconsistently. Less developed countries tended to overrate their progress, while more advanced countries were often more critical, leading to rating bias.	Regional seed sector experts participated in validation exercises to reduce rating bias by reviewing data and suggesting necessary adjustments. The additional guidance promoted objective self-assessment.

Challenge in 2023	Improvements in 2025
Exclusion of ASSPI data from 4th BR report: Twelve new ASSPI indicators were not included in the 4th BR report due to lack of baseline data from previous years, limiting the ability to track progress over time.	Baselines were established during the critical review of the 4th BR report, making it possible to incorporate 2025 data into the 5th BR report.
Insufficient up-to-date data: Many indicators relied on qualitative scores due to lack of current quantitative data from government sources. This reduced the precision and reliability of results.	Opinion scores continue as an interim solution, with a goal of reducing reliance on opinion scores as better data become available. Efforts are ongoing to improve data collection through inclusion of sub-indicators and encouraging governments to provide more timely and accurate statistics.

Table 3 provides a side-by-side comparison of key aspects of the 2023 and 2025 ASSPI studies, highlighting aspects that remained the same and aspects that changed or were improved, following a careful review of lessons learned from the pilot study.

TABLE 3: SIDE-BY-SIDE COMPARISON OF KEY ASPECTS OF ASSPI 2023 (PILOT) AND 2025

Aspect	2023	2025	Explanation
Number of participating countries	47	50	Familiarity with ASSPI from 2023 and more focused outreach from the TASAI team increased the number of participating countries.
Number of indicators	17	17	No change: the initial set of indicators provides a comprehensive picture of the seed sector.
Number of sub-indicators	12	33	Twenty-one sub-indicators were added to isolate key components of an indicator, thereby enhancing clarity. The change also affected scoring; for indicators with sub-indicators, the overall score was calculated as a simple average of the sub-indicator scores.
Number of priority crops per country	4	4	No change to the four priority crops of importance to national food security and take a large share of the field crops grown. In 2023, the average share of the four crops to the total area harvested to field crops was 80%. In 2025, it was 85%.
Scoring rubrics	No	Added	Scoring rubrics provided a more objective definition of each indicator and sub-indicators, enabling seed sector experts to score indicators more objectively and consistently, which in turn improved the reliability of cross-country comparisons.
Data review template	No	Added	Continued to use online Kobo Collect for data collection, which was exported to an Excel workbook. However, in 2025, the Excel workbook was reformatted for easier use and expanded with sections for calculations and comments from seed sector experts. After resolving queries, a clean worksheet was produced, and the final version formed the basis of the country brief.
Data collection by country seed experts	Yes	Yes	National seed experts contribute essential insights into their respective seed sectors, drawing upon their extensive experience and engagement with industry stakeholders.
Data collection support by regional seed experts	Yes	Yes	Regional seed experts validate information using their experience with various countries and sometimes help translate technical terms to maintain accuracy.
Number of training sessions	2	5	The training sessions helped seed sector experts grasp the index's indicators, sub-indicators, and scoring rubric. Additional sessions enabled us to deliver training to seed experts within their respective RECs, keeping the groups smaller, more focused, and enabling communication in participants' preferred language.
Regional data validation sessions	1	7	Three in-person and four online regional validation meetings were held, which allowed countries to review their data and provide feedback, reducing the chances of errors. The in-person validation meetings took place during the 10th Statutory meeting of the ECOWAS Seed and Seedlings Committee, held in Accra, Ghana, in September 2025, the ASBP Steering Group meeting held in Kampala, Uganda, in October 2025, and the AFSTA Congress held in Cape Town, South Africa, on March 25, 2026.
Interactive data dashboard	No	Added	Both the 2025 and the 2023 ASSPI data have been uploaded to the online visualization platform Tableau, which allows viewers to interact with the data at country, continent, and REC-level, as well as to compare data from the two studies.

Review of Indicators and Calculations for ASSPI 2025

Overview of ASSPI Data and Indicator Scoring

Consistent with the previous edition, ASSPI 2025 incorporates both qualitative and quantitative data. Qualitative data are derived from expert opinions on specific aspects of the seed sector, such as the clarity of the variety release process and the adequacy of breeding capacity. These opinion scores were intended, wherever possible, to reflect available quantitative information from relevant sources, such as government reports and statistics. In addition, qualitative scores are triangulated with opinions of key subject matter experts — for example, the head of a breeding program for a specific crop on the adequacy of breeding facilities. The opinion scores were provided by national seed sector experts, in consultation with the relevant entities. Secondary data sources include official reports from national seed authorities and relevant seed policy instruments. In some countries, data were sourced from the most recent TASAI country reports.

When necessary, data were converted from their original values to scores on a uniform 0–10 scale with the following interpretation: 0 to <2: extremely poor, 2 to <4: poor, 4 to <6: fair, 6 to <8: good, and 8–10: excellent. Both the 2023 and 2025 reports use the same five-color key to ensure uniformity in the presentation of scores.

Scoring:

Very poor 0-<2	Poor 2-<4	Fair 4-<6	Good 6-<8	Excellent 8-10

ASSPI Indicators – Description and Improvements for 2025

Following the indicator review, the next step was to reassess whether any modifications were needed to computation methods or scoring rubrics in light of refinements to the indicators. This section reviews each indicator in detail, describing computation methods and scoring for all 17 indicators, and highlighting refinements for 2025 where applicable. Computation methods are described in greater detail for quantitative indicators.

Indicator 1. Quality of the Variety Release and Registration Process

Description: This indicator measures the extent to which the variety release and registration process is clearly defined by the regulatory agencies, understood by all breeders, and followed by both breeders and regulatory agencies.

Sub-indicators: The rating is based on the following sub-indicators:

1. Clarity of the variety release process to breeders and regulatory agencies.
2. Adherence by the variety release committee to the schedule of meetings as stipulated in the Seed Regulations/ Ministerial Orders.
3. Adherence to the frequency of updates of the national variety catalog as stipulated in the law.
4. Adherence to the cost structures of the variety release process, as prescribed in the Seed Regulations/ Ministerial Orders.

Sources: Expert opinion, government documents

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the four sub-indicators. A country that does not have a variety release and registration process scores 0.

Refinement for 2025: Addition of sub-indicators 2-4.

Indicator 2. Number of Varieties Released in the Last Three Years

Description: This quantitative indicator captures the total number of varieties registered or released in the three-year period 2022–2024 for the four priority crops. Data were sourced from recent national and regional variety catalogs.

Sub-indicators: None

Sources: If catalogs were not available, data were obtained from the entity in charge of variety release in the country.

Scoring method: A three-slope scoring system, shown in Table 4, was used, in which a linear relationship is assumed within each bracket. This approach was selected because it best captures the pattern of seed sector growth over time.

TABLE 4: SCORING ASSIGNED BASED ON NUMBER OF VARIETIES RELEASED

Total number of varieties released	Score
0	0
1-50	1-8
51-100	8-<10
Above 100	10

Refinement for 2025: None.

Indicator 3. Adequacy of the National Agricultural Research Institutes' Breeding Programs

Description: This indicator assesses the extent to which public research institutions have the requisite resources — in terms of human capacity (breeders), funding, and infrastructure — to carry out variety development and release.

Sub-indicators:

1. Adequacy of the number of breeders employed by national breeding programs for each of the four priority crops. Note: only breeders qualified at MSc or PhD level should be counted.
2. Adequacy of available funding for breeding and variety development for each of the four priority crops.
3. Adequacy of existing research facilities for breeding and variety development for each of the four priority crops.

Sources: Expert opinion

Scoring method: The country's score is the average of the 12 sub-scores (three scores for each of the four crops). A country with a high score will have national breeding programs with an adequate number of breeders for all priority crops, adequate funding for breeding and variety development, and adequate research facilities across all four priority crops. A country with no breeding programs for any of the four priority crops scores 0.

Refinement for 2025: None.

Indicator 4. Status of the National Program Coordinating Activities on Plant Genetic Resources for Food and Agriculture (PGRFA)

Description: This indicator assesses the functioning of a national program (e.g., an institute, department, or agency) mandated to coordinate and carry out activities related to PGRFA, including management of in-situ conservation areas and ex-situ conservation facilities, such as a national gene bank.

Sub-indicators:

1. Adequacy of performance of the entity in the collection, characterization, and conservation of PGRFA.
2. Adequacy of the entity's human resources to undertake its PGRFA mandate.
3. Adequacy of collaboration between Community Seed Banks (CSBs) and Community-Based Organizations (CBOs).
4. Adequacy of the duplication of conserved PGR (i.e., entity safely duplicates PGR as a risk mitigation measure against disaster or effects of climate change).

Sources: Expert opinion based on consultation with relevant stakeholders.

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the sub-indicators. A country that does not have any entity in charge of PGRFA activities scores 0.

Refinement for 2025: Addition of sub-indicators 2-4.

Indicator 5. Adequacy of Early Generation Seed (EGS)

Description: This indicator assesses the availability and adequacy of EGS to meet certified seed production needs, based on the quality, quantity, and timeliness of EGS supplied.

Sub-indicators:

1. Adequacy of the quality EGS supplied for each of the four priority crops.
2. Adequacy of quantities of EGS supplied for each of the four priority crops.
3. Adequacy of the timeliness of delivery of EGS orders for each of the four priority crops.

Sources: Expert opinion

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the three sub-indicators. For a top score, NARIs should produce adequate quantities of quality EGS, delivered on time to the entities that require it. A country where NARIs do not produce EGS and no other sources of EGS are available for any of the four priority crops scores 0.

Scoring guidelines for special cases:

- **Countries with no domestic production of EGS for the four crops:** Since the primary purpose of this parameter is to measure a country's domestic EGS production capacity, countries that rely (extensively) on external sources of EGS may not score higher than 5/10 overall, even if they source sufficient quantities of EGS. This does not apply to NARIs that collaborate with private EGS suppliers.
- Countries that source EGS from NARIs in neighboring countries and/or from CGIAR centers and meet their country's demand for EGS may not score higher than 1/10. This recognizes that, while local capacity to produce EGS is lacking, the domestic demand for EGS is met.

Refinement for 2025: No change.

Indicator 6. Availability of Varietal Choice to Farmers

Description: Availability of Crop Varietal Choice to Farmers Description: This indicator tracks the number of varieties of the four priority crops sold to farmers, using the most recent year for which data are available.

Sub-indicators: None

Sources: Seed experts, national seed authorities, and TASAI reports where available.

Scoring method: As in 2023, a three-slope scoring system, shown in Table 5, was applied. A linear relationship is assumed within each score bracket. This approach was selected because it best captures the stages of seed sector growth. One limitation of this method is that the score boundaries may need to be reviewed in subsequent reports if the number of varieties sold changes significantly across many countries. No such revision was required for the 2025 report.

TABLE 5: SCORING ASSIGNED BASED ON NUMBER OF VARIETIES SOLD

Total number of varieties sold	Score
0	0
1-100	1-8
100-200	8-10
Above 200	10

Refinement for 2025: No change.

Indicator 7. Utilization of Quality Commercial Seed by Farmers

Description: This indicator tracks the extent to which the supply of quality commercial seed meets national seed requirements.

Sub-indicators: None

Sources: Government sources, FAOSTAT, research studies.

Refinement for 2025: Refinement of scoring method as described below.

Scoring method: For each crop, the volume of available commercial seed (computed as local seed production plus imports minus exports), the proportion of hybrid seed, and the number of times OPVs should be replaced together form the numerator, while the national seed requirement serves as the denominator. The denominator (national seed requirement) is calculated based on three variables for each crop: land under cultivation, seeding rate, and seed replacement rate.

- **Land under cultivation: Data are sourced from government statistics**, if available, or from the FAOSTAT database.
- **Seeding rate:** Data is sourced from government agencies in cases where the government has a recommended seeding rate. In all other cases, data is sourced from expert entities from the private and public sectors for different crops. These sources include the SeedCo Growers' Manual[5] (for maize, sorghum, soya bean, cowpea, and groundnut), the International Rice Research Institute (IRRI) (for rice[6]), and the Kenya Agricultural and Livestock Research Organization (KALRO) (for bean[7]). Most recommended seeding rates are for a range; in these cases, the average was taken.

5 SeedCo Group. 2022. Agronomy Manual. Available at: https://seedcogroup.com/wp-content/uploads/2022/07/Agronomy-Manual.pdf [Accessed 30 January 2026].
6 International Rice Research Institute (IRRI). Seed High Rate. Rice Knowledge Bank. Available at: https://www.knowledgebank.irri.org/decision-tools/rice-doctor/rice-doctor-fact-sheets/item/seed-high-rate [Accessed 30 January 2026].
7 Kenya Agriculture and Livestock Research Organization (KALRO). Crop Production Guidelines — Bean. Available at: https://kalrotimps.com/timps/29 [Accessed 30 January 2026].

- **Replacement rate:** A replacement rate of 33% was applied to OPV seed-propagated crops, based on the assumption that seed is replaced every three seasons/three years. For hybrid varieties, the replacement rate of 100% was used. For maize, the percentage varied depending on the estimate of hybrid utilization. The replacement rates for other crops ranged from 10% to 60%, as provided by the country experts. Due to different cropping systems, seeding and replacement rates may vary by country.

National seed requirements are often difficult to calculate due to incomplete data. We used a flexible method that accommodates missing information, such as hybrid share estimates and unknown farmer ratios. National seed requirements were calculated as follows:

$$\sum_{i=1}^{n}\left(Li \times SRi \times \left(Hi + \frac{1-Hi}{Yi}\right)\right)$$

Where:

- Li = Land cultivated for crop *i*
- SRi = Seeding rate for crop *i*
- Hi = Estimated hybrid share for crop *i*
- Yi = Assumed OPV seed replacement cycle (default = 3 years)

In 2025, this approach was adopted based on lessons from 2023, when only eight of the 47 countries provided country-based estimates. In 2025, 23 countries (46% of participating countries) did not have national processes for determining seed requirements. In the remaining 27 countries, a range of methodologies was employed, including: national forecasts based on crop area and recommended seeding rates adjusted for adoption rates; planning meetings with stakeholders; analysis of historical seed sales with forward projections; aggregation of seed requirement data by regional government agencies; annual projections derived from long-term planning forecasts; and recommendations issued by national seed committees to meet national seed requirements or subsidy targets. Table 14 presents the national seed production volumes and computed seed requirement volumes for the four priority crops.

Important considerations for this indicator:

Countries with no certified seed production: Computations for this indicator are only made where data on seed production and national seed requirements are available. In addition, data were lacking for some countries for vegetatively propagated crops such as banana, cassava, sweet potato, and potato. These are listed as missing data (MD) in Table 14. As there are no imports of certified seed into these countries, seed utilization is recorded as 0. In 2025, Equatorial Guinea, Gabon, Libya, and Seychelles produced no certified seed for the four priority crops, according to government records, and are therefore listed as MD.

Computation of indicator score*:* The indicator score is the sum of the area-weighted seed utilization rates for the four crops. Seed utilization is computed as the volume of available seed as a percentage of the national seed requirement; this utilization rate is then weighted by land under cultivation. The indicator is scored out of 10.

Assumptions and shortcomings: There are several notable assumptions and shortcomings with the different variables used to compute this indicator, including:

- *Inaccurate government data*: Some governments do not have reliable systems for collecting and managing seed-related data, including data on seed production, imports, and exports. The reliability of these data depends on the effectiveness of the national seed authorities responsible for seed quality assurance. In addition, in many cases, significant volumes of seed imports and exports occur through informal channels and are therefore not captured in government records.

- *Unreliability of data on land under cultivation*: Most governments do not regularly collect data on land under cultivation. Data are usually based on estimates, forecasts, and sampling. Reliability is further affected by farmers' tendency to switch crops in response to previous season experiences (such as price changes and pest or disease outbreaks) and by the practice of intercropping, where the same piece of land is planted with more than one crop.
- *Seeding rate not consistently applied:* The assumption that farmers use recommended seeding rates does not hold in most cases, as most smallholder farmers estimate seed spacing when planting, plant more than one kernel per hole, and replant in cases where germination fails.
- *Replacement rate not consistently applied:* In most cases the replacement rate is unknown and varies widely by farmer and by crop.
- *Crop selection outside cereals and legumes:* Some countries that do not have significant crop sectors listed crops such as fruits and vegetables among their four priority crops. As the formula for this indicator is not readily applicable to these crops, the analysis of data from this indicator is limited for those countries.

Indicator 8. Clarity and Enforcement of Seed Import Regulations

Description: This indicator tracks the clarity of seed import regulations and the consistency of their enforcement.[8]

Sub-indicators:

1. Clarity of seed import regulations
2. Consistency of enforcement of seed import regulations.[9]

Sources: Expert opinion; national seed authority; seed experts; ministry of agriculture.

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the two sub-indicators. For a top score, a country must have clearly defined seed import regulations that are enforced consistently. A country that does not have any seed import regulations scores 0.

Refinement for 2025: Addition of sub-indicator 2.

Indicator 9. Adequacy of Agro-Dealer Networks

Description: This indicator tracks the adequacy of the agro-dealer (or seed seller) network in each country. The results also include data on the number of agro-dealers per agricultural household, which together with the indicator score provides a proxy measure of the robustness of the agro-dealer network.

Sub-indicators:

1. Adequacy of the number of agro-dealers
2. Adequacy of the distribution of agro-dealers (i.e., the extent to which agro-dealers are accessible to all farming areas of the country).

Sources: Seed experts; national seed authority; ministry of agriculture

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the two sub-indicators. Countries that do not have any agro-dealers score 0.

8 Seed exports are not tracked because export regulations are generally less restrictive to seed trade than import regulations, and most countries in sub-Saharan Africa are net seed importers.

9 This indicator focuses on the import regulatory framework rather than the export framework, as the former imposes greater constraints on cross-border seed trade.

Refinement for 2025: Addition of sub-indicator 2.

Indicator 10. Availability of Seed in Small Packages

Description: This indicator assesses the percentage of seed sold in packages of 2 kg or less.

Sub-indicators: None

Sources: TASAI reports, where available; seed experts; national seed authority; national seed association

Refinement for 2025: Refinement of scoring method as described below.

Scoring method: The data point is the total volume of seed by crop (for seed-propagated crops) sold in small packages, expressed as a percentage of the total volume of seed produced for the four crops. The final score is given out of 10. The volume of seed produced is used as a proxy for seed sales. Note that vegetatively propagated crops such as potato, banana, and cassava are excluded from this calculation, as they are not sold to farmers in small packages.

Limitations of this method:

- The 2 kg upper limit for a small package is not always appropriate. The 2 kg limit does not apply to all crops or in all countries. For example, in Egypt, the government has set 5 kg as the smallest package size as this fits the area of the average landholding for a smallholder Egyptian farmer. In addition, 2 kg may be appropriate for some, but not all crops, depending on the seeding rate. The seeding rate varies widely for key crops from 20 kg/ha for maize to 200 kg/ha for wheat, implying that 2 kg of seed may not be appropriate for all smallholder farmers.
- Data are based on estimates. For countries where TASAI studies have not been conducted and this information has not been collected from seed producers, responses are based on informed estimates from the national seed authorities.
- The exclusion of vegetatively propagated crops (VPCs) from the calculation affects 10 countries, as their scores are not based on all four crops. Of these 10 countries, five selected two VPCs.

For a country to have a top score, all seed for the focus crops should be sold in packages of 2 kg or less. A country where none of the seed for the priority crops is sold in small packages of 2 kg or less scores 0.

Indicator 11. Status of National Seed Policy Instruments

Description: This indicator tracks the status of important national seed policy instruments (seed policies, laws, regulations, decrees, Ministerial Orders, and others as they may apply to a country) that create an enabling environment for a competitive seed sector and encourage private sector participation in seed sector development.

Sub-indicators: None

Sources: Expert opinion

Scoring method: Each policy instrument is scored independently on a 0–10 scale based on expert opinion. The opinion score is strictly informed by the presence and completeness of these instruments. The score is computed as the simple average of qualitative expert opinion scores for all policy instruments. For a country to achieve a top score, all relevant policy instruments should be enacted by the relevant government entity — that is, they should not be drafts, undergoing amendments, under review, or (in the case of a Seed Law) still at the Seed Bill stage. A country with no seed policy instruments scores 0.

Refinement for 2025: No change.

Indicator 12. Status of Alignment of National Seed Policy Instruments with Harmonized Regional Seed Regulations

Description: This indicator measures the extent to which national seed regulations are aligned with the regulations of the Regional Economic Communities (RECs) to which a country belongs. The RECs tracked to date are COMESA, EAC, ECCAS, ECOWAS, IGAD, SADC, and UMA.

Sub-indicators: None

Sources: Expert opinion

Scoring method: The regional economic communities that have regional seed regulations are the Common Market for Eastern and Southern Africa (COMESA)(COMESA Seed Trade Harmonization Regulations 2014), Economic Community of Central African States (ECCAS)(ECCAS 2014) , Economic Community for West African States (ECOWAS) (ECOWAS C/REG.4/05/2008 on Harmonization of the Rules Governing Quality Control, Certification and Marketing of Plant Seeds and Seedlings in ECOWAS Region 2008), and the Southern Africa Development Community (SADC).[10] The opinion is strictly informed by the status of alignment since the process varies by REC.

In the ECOWAS region, a top-scoring country either adopts the ECOWAS Seed Regulations or issues Ministerial Orders to address its requirements, such as establishing a seed fund, national seed committee, and procedures for seed import/export and producer registration. In the COMESA region, a top-scoring country aligns and legalizes its national regulations with COMESA's systems for certification, variety release, and phytosanitary measures. For SADC, a top scoring country signs the Memorandum of Understanding to adopt the SADC Harmonized Seed Regulatory System guidelines.

Refinement for 2025: Refinement of scoring approach as described below.

Indicator 13. Status of Adoption of National Biosafety Frameworks to Guide Plant Breeding and Seed Production

Description: This indicator measures the extent to which a country has adopted national biosafety frameworks, including agricultural biotechnology policies, laws, and/or regulations, and whether these frameworks are operational.

Sub-indicators:

1. Status of adoption of national biosafety frameworks.
2. Status of operationalization of national biosafety frameworks.

Sources: Expert opinion

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the two sub-indicators. A country with a high score will typically have an enacted biosafety policy instrument that is fully operationalized.

Refinement for 2025: Addition of sub-indicator 2.

Indicator 14. Status of Farmer-Managed Seed Systems (FMSS) in National Seed Policy Instruments and Institutional Arrangements

Description: This indicator tracks the extent to which national seed policy instruments (seed policies, laws, regulations, and decrees) recognize FMSS and promote institutional arrangements that allow FMSS to be represented in (or to influence) seed sector development. The indicator only tracks the status of a policy and promotion of FMSS by the government; it does not track operationalization.

10 Southern African Development Community (SADC). SADC Harmonized Seed Regulatory System. Gaborone: SADC Secretariat

Sub-indicators:

1. Extent to which national seed policy instruments (seed policies, laws, regulations, and decrees) recognize FMSS.
2. Extent to which the government promotes FMSS to allow it to play a role in seed sector development.

Sources: Expert opinion

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the two sub-indicators. A country where seed policy instruments do not recognize FMSS scores 0.

Refinement for 2025: Addition of sub-indicator 2.

Indicator 15. Adequacy of Seed Inspection Services

Description: This indicator assesses the adequacy of human resources (i.e., public seed inspectors), means of transport, and use of digital tools available for public seed inspection.

Sub-indicators:

1. Adequacy of the number of seed inspectors to carry out seed inspection.
2. Adequacy of means of transport to carry out seed inspection.
3. Adequacy of the use of digital tools to carry out seed inspection.

Sources: Expert opinion

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the three sub-indicators. A country with a top score has a well-resourced seed inspection system that effectively conducts inspection services in a timely and cost-effective manner. A country that does not have any seed inspectors scores 0.

Refinement for 2025: Addition of sub-indicators 2-3.

Indicator 16. Adequacy of Government Efforts to Combat Counterfeit Seed

Description: This indicator assesses government efforts to eliminate counterfeit seed.

Sub-indicators:

1. Adequacy of government measures to combat counterfeit seed as stipulated in the law.
2. Adequacy of implementation of government measures to combat counterfeit seed.

Sources: Expert opinion

Scoring method: The score is computed as the simple average of qualitative expert opinion scores for the two sub-indicators. For a top score, a country should have legal measures to combat the production and sale of counterfeit seed, and those measures should be effectively enforced. A country where no efforts are made to combat the production and sale of counterfeit seed scores 0.

Refinement for 2025: Addition of sub-indicator 2.

Indicator 17. Performance of the National Seed Trade Association

Description: This indicator assesses the performance of the national seed trade association.

Sub-indicators:

1. Performance with respect to activities on important seed sector issues.
2. Performance with respect to democracy and governance.

3. Performance with respect to effectiveness in advocacy.
4. Performance with respect to managerial ability.
5. Performance with respect to provision of value to members.
6. Performance with respect to ability to mobilize resources.

Sources: Expert opinion

Scoring method: The indicator score is the average of scores across the six performance areas. The opinion scores are informed by a description of the association's profile, its management and governance structures, and examples of its activities and achievements. For a top score, the national seed trade association should score well in each of the six performance areas.

Refinement for 2025: No change.

Phase 2: Selection and Training of Seed Sector Experts and Data Collection

In each of the 50 countries, one seed sector expert was recruited at the recommendation of the national seed authority or the ministry of agriculture. In addition, TASAI engaged four regional seed sector experts with cross-country experience to assist with data collection and validation before data were submitted to TASAI. The role of the regional seed sector experts was to verify that the data accurately reflected conditions in each country.

Selection and Training of Seed Sector Experts

As in 2023, ASSPI data were collected by national seed sector experts working in their respective countries, assisted by four regional seed sector experts who served as liaisons between the national seed sector experts and the TASAI team.

Between May and July 2025, TASAI conducted five online training sessions in English and French for all national seed sector experts (Table 6). A total of 50 seed sector experts, representing 50 countries, participated in the training. The training introduced the indicators and sub-indicators and reviewed the scoring rubrics to support more uniform interpretation of the questions and more rigorous scoring. In addition, the training covered common sources of error identified in the 2023 data, the computation methods TASAI would use to analyze qualitative and quantitative data, and suggestions for appropriate data sources. The training content was summarized in a set of guidelines and shared with seed sector experts after the sessions.

TABLE 6: DETAILS ABOUT THE FIVE ASSPI DATA COLLECTION TRAINING SESSIONS CONDUCTED

Date of training session	Number of national seed sector experts in attendance	Training language
22 May 2025	10	English
29 May 2025	12	English
4 June 2025	4	English
4 June 2025	17	French
11 June 2025	7	French
Total	**50**	

Crop Selection

In keeping with the methodology used in 2023, data collection in each country focused on four crops designated as "priority crops" in this report. These crops were identified by the national seed sector experts and selected based on their importance to national food security, land under cultivation, and government prioritization. The 47 countries that participated in 2023 were encouraged not to change their priority crops unless compelling reasons — such as shifting government priorities — dictated otherwise. In all, 41 of the 47 returning countries maintained their previous crop selection.11

Altogether, the 50 participating countries selected a total of 32 crops, including cereals, legumes, vegetatively propagated crops, fruits, and vegetables (Table 7). The ten most frequently selected crops (each chosen by eight or more countries) were maize, rice, sorghum, groundnut, millet, bean, wheat, soya bean, cowpea, and cassava. Cape Verde, Djibouti, and Seychelles — which do not have substantive crop sectors — selected vegetables, fruits, and roots and tubers. Collectively, these crops account for 85% of total cultivated land across the 50 countries.

TABLE 7: FOUR MAIN CROPS[12] BY COUNTRY SELECTION AND PERCENTAGE OF AREA HARVESTED TO FIELD CROPS

Country	Crop 1	Crop 2	Crop 3	Crop 4
Angola	maize	bean	soya bean	rice
Benin	maize	rice	soya bean	cassava
Botswana	maize	sorghum	cowpea	millet
Burkina Faso	sorghum	maize	millet	rice
Burundi	bean	maize	rice	potato
Cameroon	maize	sorghum	rice	cassava
Cape Verde	tomato	sweet potato	banana	sugar cane
Central African Republic	maize	groundnut	bean	sorghum
Chad	millet	sorghum	groundnut	sesame
Comoros	banana	cassava	maize	pigeon pea
Congo Republic	cassava	maize	groundnut	banana
Côte d'Ivoire	yam	cassava	rice	maize
Democratic Republic of the Congo	maize	rice	bean	soya bean
Djibouti	tomato	onion	chili pepper	okra
Egypt	wheat	rice	maize	broad bean
Equatorial Guinea	cassava	banana	groundnut	maize
Eritrea	sorghum	wheat	millet	chickpea
Eswatini	maize	groundnut	bean	sweet potato
Ethiopia	teff	maize	wheat	sorghum
Gabon	cassava	banana	maize	vegetables[13]
Gambia	rice	millet	groundnut	maize
Ghana	maize	rice	soya bean	sorghum
Guinea (Conakry)	rice	maize	fonio	groundnut
Guinea-Bissau	rice	maize	millet	cowpea
Kenya	maize	bean	cowpea	sorghum
Lesotho	maize	sorghum	wheat	bean
Liberia	rice	maize	groundnut	cowpea
Libya	barley	wheat	green peas	broad bean

11 Countries that changed crops in 2025 are DRC (replaced cassava with soya bean), Djibouti (replaced citrus and melon with chili and okra), Eritrea (replaced barley with chick pea), Guinea-Bissau (replaced sorghum with cowpea), Nigeria (replaced soya bean with cowpea), and Seychelles (replaced eggplant and cassava with pawpaw and pineapple).

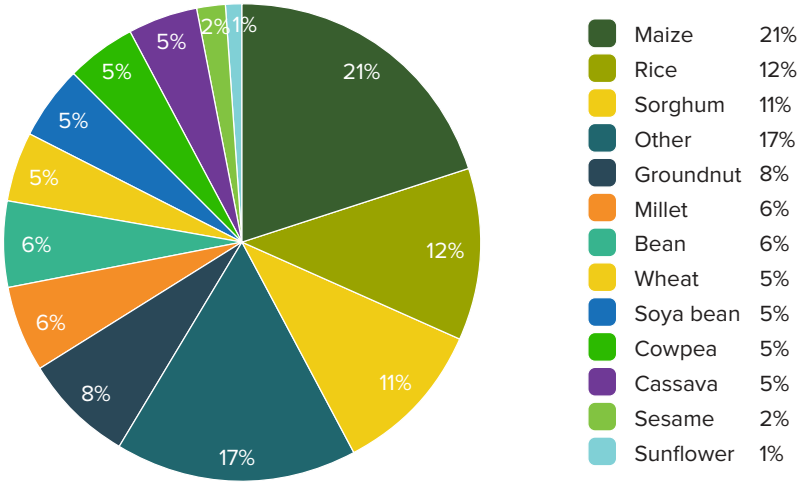
12 Crop Classification: Cereals | Legumes | Vegetative propagated crops | Fruits | Vegetables | Oil crops

13 According to Gabon's seed sector expert, the fourth priority crop category is vegetables, comprising tomatoes, peppers, lettuce, cabbage, and leafy greens. None of these was identified as a clear priority over the others.

Country	Crop 1	Crop 2	Crop 3	Crop 4
Madagascar	rice	maize	bean	groundnut
Malawi	maize	groundnut	bean	soya bean
Mali	rice	maize	sorghum	millet
Mauritania	sorghum	rice	maize	cowpea
Mozambique	maize	groundnut	rice	cowpea
Namibia	millet	maize	sorghum	cowpea
Niger	millet	cowpea	sorghum	rice
Nigeria	maize	sorghum	rice	cowpea
Rwanda	bean	cassava	maize	potato
Senegal	groundnut	millet	rice	maize
Seychelles	citrus	banana	pawpaw	pineapple
Sierra Leone	rice	maize	sorghum	groundnut
Somalia	maize	sorghum	cowpea	sesame
South Africa	maize	soya bean	sunflower	wheat
South Sudan	groundnut	sorghum	sesame	maize
Sudan	sorghum	millet	wheat	groundnut
Tanzania	maize	rice	bean	sunflower
Togo	maize	rice	sorghum	soya bean
Tunisia	durum wheat	barley	soft wheat	triticale
Uganda	maize	bean	banana	cassava
Zambia	maize	soya bean	wheat	rice
Zimbabwe	maize	sorghum	soya bean	wheat

Figure 1 shows the share of countries that selected a particular priority crop. Not surprisingly, the most important crops on the continent are grains, such as maize, rice, and sorghum, followed by a variety of other crops, such as groundnut, millet, and bean, that are less prevalent on the continent.

FIGURE 1: PRIORITY CROPS BY NUMBER OF COUNTRIES SELECTING EACH CROP



Data Collection

Following the training sessions, seed sector experts began data collection using Kobo Collect, an online data collection platform. During this period, TASAI and the regional seed sector experts were available to address any queries from the national seed sector experts. Once data collection was complete, seed sector experts submitted their data to TASAI for cleaning, validation, and analysis.

Phase 3: Data Cleaning, Analysis, and Validation

Data Cleaning

Once the national seed sector expert for each country had submitted their data, TASAI conducted a detailed review. All issues identified — such as outliers and missing data — were queried with the national and regional seed sector experts, and the final scores were determined in consultation with TASAI and the relevant experts. When necessary, data were returned to the seed sector experts for further clarification.

Data Analysis

The original country data from Kobo Collect were exported to a spreadsheet, where the data were formatted and all computations needed for scoring were performed. Any items requiring follow-up with the national seed sector experts were flagged and the spreadsheet shared with the relevant experts for their review. Once all data queries were resolved, a clean final version of the country data spreadsheet was produced. As a final step, all country data were collated into a new aggregate spreadsheet.

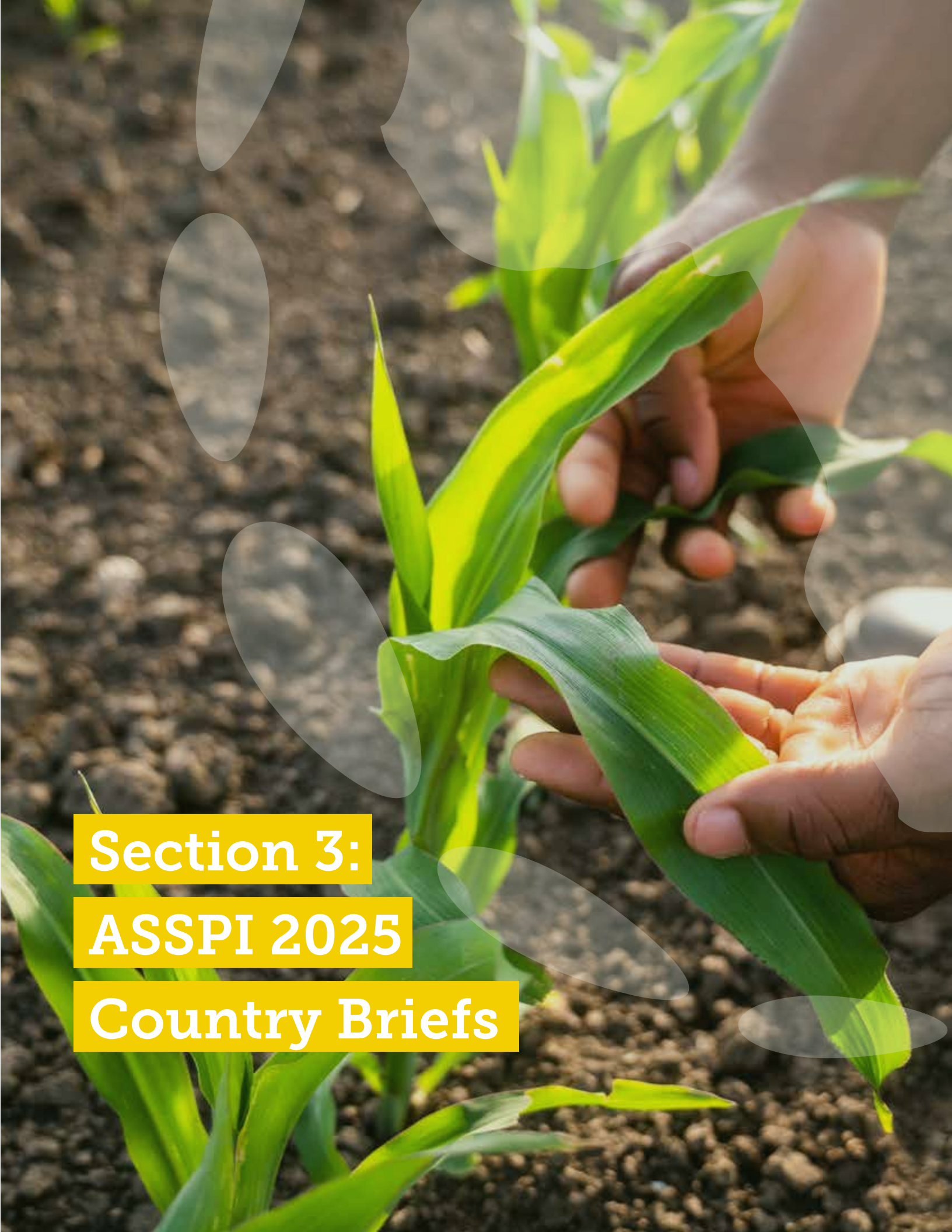
Data Validation

Following data analysis, the data were uploaded to the data visualization software Tableau to facilitate sharing and presentation. During September and October 2025, TASAI held two in-person and five virtual validation workshops. The first in-person meeting took place in Dakar, Senegal, on the margins of the African Food Systems Forum, where representatives from AGRA, the AUC, NEPAD, AFSTA, and national seed sector experts from Ghana, Côte d'Ivoire, and Senegal were present. The second in-person meeting was held during the 10th Statutory Meeting of the West Africa Seed and Seedlings Committee for ECOWAS-UEMOA-CILSS member states. This meeting was attended by all 15 ECOWAS member states, along with participants from the host organization, *Le Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles* (CORAF), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), *le Réseau des Organisations Paysannes et de Producteurs de l'Afrique de l'Ouest* (ROPPA) — the regional West African farmers' organization — and the *Organisation Africaine de la Propriété Intellectuelle* (OAPI). The five virtual workshops were each focused on a different Regional Economic Community (REC), allowing for more focused discussion in smaller groups. Table 8 provides details of all validation meetings.

TABLE 8: DATA VALIDATION MEETINGS BY REC

Date	REC focus	Meeting venue	Number of participants
September 3, 2025	general	Dakar, Senegal	13
September 16, 2025	ECOWAS	Accra, Ghana	30
October 14, 2025	COMESA	online	35
October 14, 2025	SADC	online	19
October 15, 2025	ECCAS	online	3
October 15, 2025	ECOWAS	online	8
October 16, 2025	UMA	online	8
Totals	**7**		**116**

In each session, the TASAI team presented preliminary findings of ASSPI 2025, focusing on scores by indicator and on changes since the 2023 data collection. Participants were invited to ask questions and comment on the findings. Following the meetings, the TASAI team collated revisions to the submitted data and relayed feedback to the relevant countries for further verification. All feedback received was incorporated into the final version of this report.



Section 3: ASSPI 2025 Country Briefs

Country Briefs Overview

This section of the report presents the data collected for each country in a concise summary format. Each brief commences with an overview of the country's seed sector, followed by comprehensive data on priority crops and relevant statistics profiling the broader agricultural sector. Table 9 below presents the 17 ASSPI indicator scores by country. Every indicator is accompanied by a color-coded score and a detailed explanation. Table 9 displays all indicator and overall country scores from the 50 countries surveyed. The conclusion of each brief includes recommendations and identifies critical priorities for intervention.

The country briefs reference stages of seed sector development based on a framework established by Ariga et al. (2019). This framework was designed to broadly classify formal seed sectors in sub-Saharan African (SSA) countries according to their varying levels of development. This framework is, however, biased towards maize, reflecting its predominance in formal seed sector sales. Maize typically leads formal sector development, followed by other grains; pulses and vegetatively propagated crops develop at a comparatively slower pace. Table 9 illustrates the progression of the formal seed sector as described by this framework. The classification has been adapted from the original version to incorporate recent changes. Researchers who contributed data and information for each country study are acknowledged at the end of each brief.

TABLE 9. ASSPI 2025 SCORES BY INDICATOR AND COUNTRY (SCORE OUT OF 10)

Country	1. Quality of the variety release and registration process	2. Number of varieties released in the last 3 years	3. Adequacy of National Agricultural Research Institutes' (NARIs) breeding programs	4. Status of the national program coordinating activities on Plant Genetic Resources for Food and Agriculture (PGRFA)	5. Adequacy of Early-Generation Seed (EGS)	6. Availability of crop varietal choice to farmers	7. Utilization of quality commercial seed by farmers	8.Clarity and enforcement of seed import regulations	9. Adequacy of agro-dealer networks	10. Availability of seed in small package sizes	11. Status of national seed policy instruments	12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	13. Status of adoption of national biosafety frameworks to guide plant breeding and seed production	14. Status of Farmer Managed Seed Systems (FMSS) in national seed policy instruments and institutional arrangements	15.Adequacy of seed inspection service	16. Adequacy of government efforts to combat counterfeit seed	17. Performance of the national seed trade association	Overall score
Angola	2.25	4.00	1.58	7.33	2.58	2.77	0.85	7.00	4.00	MD	10.00	7.00	0.00	5.50	1.33	3.50	0.00	3.73
Benin	6.75	4.14	5.67	5.67	8.50	3.05	0.42	8.50	6.00	0.81	8.82	8.00	7.50	6.50	6.00	8.50	6.92	5.98
Botswana	0.13	0.00	2.92	5.00	3.33	3.83	7.05	10.00	7.00	MD	5.00	7.00	1.50	1.50	5.00	5.00	0.00	4.02
Burkina Faso	6.25	8.29	5.67	4.33	7.08	4.54	4.11	8.00	5.50	0.42	8.54	5.00	9.00	1.50	4.33	7.00	7.83	5.73
Burundi	5.75	7.29	4.67	5.67	7.08	4.75	1.69	7.50	2.00	6.41	7.00	5.00	3.00	0.00	4.00	4.00	7.00	4.87
Cameroon	4.50	1.43	1.42	2.00	5.00	3.69	1.61	8.00	6.50	6.39	9.83	5.00	6.00	6.50	6.00	6.00	2.73	4.86
Cape Verde	1.00	0.00	0.83	3.33	0.00	2.20	3.43	8.50	1.50	0.00	9.00	7.00	0.00	0.00	4.33	5.00	0.00	2.71
Central African Republic	1.25	0.00	0.67	0.00	5.00	1.78	0.03	5.00	1.50	0.20	7.00	0.00	0.00	0.00	0.67	2.00	0.00	1.48
Chad	3.75	0.00	3.83	4.00	6.08	2.06	0.33	5.50	2.50	0.00	8.00	8.00	2.00	5.00	3.33	3.50	4.67	3.68
Comoros	1.00	0.00	3.67	0.00	6.08	1.64	0.02	4.00	4.00	0.00	7.25	2.00	0.00	7.00	2.67	1.50	0.00	2.40
Congo Republic	0.00	0.00	0.08	0.00	0.92	1.35	1.15	10.00	1.50	MD	4.50	2.00	1.00	0.00	0.00	2.50	0.00	1.56
Côte d'Ivoire	6.50	1.86	3.50	4.00	5.83	4.25	0.09	6.50	5.00	0.44	6.25	7.00	6.00	2.00	3.33	5.00	7.08	4.39
DRC	3.75	3.57	3.25	2.67	3.50	3.40	2.39	4.50	3.00	2.06	4.00	4.00	4.00	2.50	3.67	3.00	2.33	3.27
Djibouti	1.75	0.00	4.00	5.00	6.67	1.78	9.35	2.00	7.50	8.25	2.00	3.00	7.00	4.00	7.67	7.00	0.00	4.53
Egypt	10.00	8.78	5.50	7.33	9.17	10.00	6.08	8.50	9.00	10.00	10.00	10.00	8.00	0.50	8.00	8.00	9.33	8.13
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	7.50	1.57	6.42	3.33	7.08	2.41	0.48	8.00	0.00	0.00	8.33	3.00	0.00	8.00	4.67	8.00	0.00	4.05
Eswatini	7.75	7.57	3.00	6.67	6.00	4.32	5.39	8.00	7.00	3.40	8.00	9.00	8.00	6.50	5.00	8.00	4.83	6.38
Ethiopia	7.25	7.86	5.42	8.67	8.17	6.52	2.70	8.50	6.50	10.00	9.33	9.00	9.50	8.00	4.67	4.50	6.83	7.26
Gabon	1.00	0.00	1.00	0.00	0.83	0.00	0.00	4.50	3.00	MD	6.00	5.00	0.00	4.50	0.00	5.50	0.00	1.96
Gambia	4.75	2.43	1.17	0.00	4.42	5.17	2.79	8.50	6.50	0.00	9.00	7.00	0.00	6.50	2.67	6.50	3.67	4.18
Ghana	9.00	4.71	3.25	5.33	7.58	3.05	5.75	8.50	7.50	4.88	8.80	9.00	8.50	4.00	6.33	7.50	8.17	6.58
Guinea (Conakry)	4.25	2.29	1.50	1.00	3.83	1.28	0.13	6.00	0.00	0.00	5.75	4.00	0.00	0.00	2.00	0.00	0.00	1.88
Guinea-Bissau	2.00	1.43	2.67	4.00	3.67	1.92	5.49	6.00	0.00	0.00	7.00	5.00	3.00	0.00	2.33	3.00	5.00	3.09
Kenya	9.75	7.00	6.92	7.67	7.00	9.11	5.26	9.50	8.00	8.58	8.00	8.00	10.00	1.50	7.33	8.00	8.33	7.64
Lesotho	0.00	0.00	2.00	5.67	2.42	2.48	3.50	5.00	5.00	0.00	4.40	4.00	2.50	2.50	3.33	4.00	0.00	2.75

Country	1. Quality of the variety release and registration process	2. Number of varieties released in the last 3 years	3. Adequacy of National Agricultural Research Institutes' (NARIs) breeding programs	4. Status of the national program coordinating activities on Plant Genetic Resources for Food and Agriculture (PGRFA)	5. Adequacy of Early-Generation Seed (EGS)	6. Availability of crop varietal choice to farmers	7. Utilization of quality commercial seed by farmers	8.Clarity and enforcement of seed import regulations	9. Adequacy of agro-dealer networks	10. Availability of seed in small package sizes	11. Status of national seed policy instruments	12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	13. Status of adoption of national biosafety frameworks to guide plant breeding and seed production	14. Status of Farmer Managed Seed Systems (FMSS) in national seed policy instruments and institutional arrangements	15.Adequacy of seed inspection service	16. Adequacy of government efforts to combat counterfeit seed	17. Performance of the national seed trade association	Overall score
Liberia	4.25	0.00	4.00	3.00	5.67	2.98	0.71	7.00	5.00	2.32	8.00	7.00	7.00	4.00	0.00	6.00	0.00	3.94
Libya	6.75	4.00	4.25	4.33	7.75	1.64	0.00	8.00	0.00	MD	0.00	0.00	0.00	1.00	0.00	3.00	0.00	2.54
Madagascar	4.75	7.57	4.00	3.33	5.67	6.73	0.74	3.00	3.50	1.30	6.00	3.00	4.50	0.00	5.00	3.50	5.00	3.98
Malawi	8.00	4.71	4.08	6.33	6.17	4.54	6.57	10.00	5.00	3.81	10.00	9.00	8.00	2.50	4.33	8.00	8.33	6.43
Mali	7.75	8.16	5.83	5.33	5.17	8.40	1.00	7.50	4.50	0.50	9.80	9.00	7.50	2.00	6.67	4.00	6.33	5.85
Mauritania	2.75	0.00	2.08	4.33	1.58	1.99	1.26	5.50	6.00	0.00	7.00	4.00	7.00	0.00	1.00	3.00	7.50	3.24
Mozambique	5.50	1.29	3.17	6.00	6.67	3.05	1.08	7.50	5.00	4.82	6.67	7.00	6.50	4.50	6.00	2.00	4.83	4.80
Namibia	1.50	0.00	2.25	7.33	6.33	1.99	2.36	7.00	4.50	10.00	4.75	4.00	9.00	4.00	3.00	4.00	0.00	4.24
Niger	4.75	1.86	4.00	3.33	6.08	3.47	1.38	7.00	7.50	4.01	9.00	6.00	5.50	0.00	5.33	7.00	6.38	4.86
Nigeria	9.00	8.49	5.00	5.67	4.33	7.08	2.70	3.00	3.50	3.91	8.40	9.00	9.00	7.50	6.00	7.00	5.00	6.15
Rwanda	7.75	7.71	6.00	5.67	7.75	2.77	3.10	8.50	9.50	9.52	9.00	8.00	7.50	0.00	8.67	7.50	5.33	6.72
Senegal	3.50	1.43	3.00	2.67	5.42	8.28	7.69	4.00	7.00	10.00	8.00	6.00	7.00	0.00	2.00	3.00	7.67	5.10
Seychelles	0.00	0.00	0.00	6.00	0.00	1.57	0.00	8.00	7.50	0.74	3.40	5.00	5.00	8.50	7.67	8.00	0.00	3.61
Sierra Leone	6.00	3.86	3.50	3.00	5.75	2.34	2.50	7.00	3.00	0.00	7.67	9.00	0.00	5.00	2.33	3.00	0.00	3.76
Somalia	5.25	1.29	1.50	0.00	3.00	1.64	6.70	6.00	1.50	2.09	7.25	1.00	0.00	4.00	4.03	3.50	2.50	3.01
South Africa	9.75	10.00	9.00	8.33	9.00	10.00	5.48	10.00	8.50	10.00	8.75	7.00	9.50	6.00	9.00	7.50	9.00	8.64
South Sudan	4.25	1.86	2.50	1.33	4.33	1.85	2.76	2.50	2.00	3.11	5.00	5.00	0.00	6.50	1.67	1.00	5.33	3.00
Sudan	4.75	1.57	5.00	5.00	4.83	2.27	3.93	7.00	0.00	0.00	7.00	5.00	8.00	2.50	2.33	3.00	7.17	4.08
Tanzania	8.50	4.29	4.08	7.33	7.67	8.00	2.64	8.00	7.00	9.96	9.00	9.00	9.00	8.00	7.33	7.50	7.67	7.35
Togo	5.25	3.57	5.00	4.67	6.58	1.78	1.27	8.00	4.50	1.45	6.69	9.00	4.00	3.50	5.33	6.50	6.17	4.90
Tunisia	9.75	3.57	5.17	9.00	10.00	3.05	7.29	10.00	9.00	10.00	8.85	3.00	4.00	1.50	6.33	8.00	9.17	6.92
Uganda	7.75	2.43	6.17	6.33	7.25	5.31	3.02	6.00	5.00	6.15	8.00	9.00	6.00	8.50	5.00	5.00	7.17	6.12
Zambia	9.25	8.90	6.75	9.00	8.50	8.97	9.20	8.00	7.50	0.48	8.50	10.00	9.50	8.00	6.33	7.00	7.17	7.83
Zimbabwe	9.75	6.71	6.92	6.00	9.17	7.29	9.49	9.00	8.00	1.20	8.29	10.00	9.00	5.00	6.67	8.00	9.00	7.62

Score Legend:

Extremely Poor (0.0 – 1.9)	Poor (2.0 – 3.9)	Fair (4.0 – 5.9)	Good (6.0 – 7.9)	Excellent (8.0 – 10.0)	MD (Missing Data)

African Seed Sector Performance Index (ASSPI) Country Brief – ANGOLA

OVERVIEW OF THE SEED SECTOR

Angola's seed industry is in the nascent stage of growth. The country is in the early stages of implementing key seed policy instruments, including its first Seed Law, DL Nº7/05, adopted in 2005, and the accompanying Seed Regulations, adopted in 2016. The main government institutions in the seed sector are the National Seed Service (SENSE) under the Ministry of Agriculture and Forestry (MINAGRIF), and the Instituto de Investigação Agronómica (IIA), Angola's national agricultural research institute. SENSE oversees seed certification and seed quality assurance; over time, it is expected to be autonomous with the ability to generate its revenue through inspection and licensing fees, as well as fines. The four priority crops, as identified by local seed sector experts, are maize, bean, soya bean, and rice, which, combined, account for 83% of area harvested to field crops. Angola is a member of the Economic Community of Central African States (ECCAS) and the Southern African Development Community (SADC).

Overall country score (out of 10):	3.73

Focus crop	Area harvested (ha)	% of area harvested to cereals, pulses, and oils
Maize	2,819,479	65%
Bean	713,374	16%
Soya bean	41,261	1%
Rice	17,169	0.4%
Total		83%

Total arable land:	5.385 million ha
Population:	36,749,906
Number of farming households:	2,289,640
Contribution of agriculture to GDP:	22.1%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	1.00	2.25	Law No. 7/05 and Presidential Decree No. 93/16 set the framework for variety release and registration, with applications submitted to the National Seed Service (SENSE), which manages the process. DUS and ATV tests are conducted with the Instituto de Investigação Agronómica (IIA) according to SADC guidelines. Despite clear procedures, breeders often find them unclear, the national variety catalog is infrequently updated, and process costs remain undefined.
2. Number of varieties released in last 3 years	2.57	4.00	From 2022 to 2024, twenty-two new varieties were released: seven maize, six bean, and nine rice. This marks an increase from twelve varieties released between 2020 and 2022. No soya bean varieties were released in the latest period.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	2.17	1.58	By 2025, the IIA had eight breeders: five focused on maize, two on beans, and one on rice, with none for soya bean. Breeder adequacy scored 1/10 due to the civil war's lasting effects on research capacity. Funding was rated 0.5/10 as programs depend mainly on external sources. Infrastructure scored 3.25/10 because facilities are largely outdated or lacking. Appendix 1 provides crop-specific ratings.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	7.33	The Centro Nacional de Recursos Fitogenéticos (CNRF), founded in 1991, manages Angola's plant genetic resources with generally sufficient staff. Its main tasks—germplasm collection, maintenance, and characterization—are coordinated with MINAGRIF and IIA, as well as community seed banks. The CNRF gene bank contains 2,163 accessions: 1,326 maize, 766 bean, 19 soya bean, and 52 rice accessions. Out of the total accessions for the four crops only 28% accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	5.33	2.58	The IIA serves as the main EGS provider for maize and beans, while regional bodies focus on rice and soybeans. In Angola, a breeder shortage has resulted in low adequacy scores for EGS quantity, at 2.25/10. EGS quality received 2/10, and delivery timeliness was rated 3.5/10. Aside from maize, which generally meets quality requirements, the other three crops perform poorly in quality. The EGS supply faces constraints due to IIA's limited capacity, causing frequent shortages and delays. Furthermore, there is insufficient coordination between research institutions and seed multipliers. Detailed crop-specific ratings are found in Appendix 1.
6. Availability of crop varietal choice to farmers	1.07	2.77	In 2024, there were 26 varieties of the four crops on the market: 10 for maize, 5 for bean, 6 for soya bean, and 5 for rice. Though still very low, this is a significant increase from the two maize varieties in 2022.
7. Utilization of quality commercial seed by farmers	0.19	0.85	In 2024, production reached 2,757 MT of maize seed (4% hybrid) and 890 MT of bean seed, up from 182 MT and 1.5 MT in 2022. No rice or soya bean seed was reported. Including imports, available seed covers 9% of national maize requirements, 5% of bean, 4% of soya bean seed and 57% of rice seed demand.
8. Clarity and enforcement of seed import/export regulations	8.00	7.00	The Seed Law Nº 15/05 (7 October) and Decree No. 93/16 of 9 May offer straightforward rules for importing and exporting seeds, and these regulations are generally observed. In 2024, the imported quantities for the four main crops were: 1,807 MT of maize seed (with hybrids making up 90% of this total), 181 MT of bean seed, 34 MT of soya bean seed, and 136 MT of rice seed. There were no reported exports. It is notable that imports of maize, bean, and rice seeds have increased to more than double their 2022 levels.
9. Adequacy of agro-dealer networks	2.00	4.00	In 2024, Angola had 39 registered agro-dealers, with the majority situated in Luanda and its surroundings. There were only a few agro-dealers present in other urban centers, and even fewer in rural locations. In addition, some agro-dealers ran their operations informally without official registration.
10. Availability of seed in small package sizes	0.89	MD	This is missing data
11. Status of national seed policy instruments	10.00	10.00	All important policy instruments are in place, and include: Seed Law - No 7/05 of 11 August 2005; Seed Regulations - Presidential Decree No 93/16 of 9 May 2016; Executive Decree No 388/17 of 17 August 2017 – a technical regulation on the production and certification of cereal seed; Executive Decree No 574/17 of 4 October 2017 – a technical regulation for the production and certification of legumes, oil and fiber crop seed. However, these regulations need to be aligned with the SADC HRSR standards.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	7.00	Angola, as a member of SADC, has signed the Memorandum of Understanding for the SADC Harmonized Seed Regulatory System (HSRS) and has ratified the Plant Variety Protection Protocol (Resolution No. 35/24, May 3, 2024). However, Angola's principal seed legislation and regulations require further amendments to align fully with SADC HSRS requirements, particularly regarding seed certification and standards. Additionally, Angola has not yet signed the charter necessary for membership in the SADC Seed Centre.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	Angola does not have a national agricultural biosafety framework.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	5.00	5.50	FMSS in Angola are mentioned in agricultural policy documents but are not fully embedded in the legal frameworks. The Ministry of Agriculture and Forestry, SENSE, and provincial directorates occasionally support FMSS through initiatives such as village seed banks and exchange fairs. The International Fund for Agricultural Development (IFAD) and the Food and Agricultural Organization of the United Nations (FAO) also back FMSS to build seed producer group capacity.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	2.00	1.33	In 2024, the Serviço Nacional de Sementes (SENSE) employed 13 public inspectors, comprising eight men and five women. This staffing level is inadequate, particularly in key seed-producing provinces such as Bié, Malanje, Huambo, and Cuanza Sul. Furthermore, SENSE does not currently employ digital tools for inspection or certification purposes.
16. Adequacy of government efforts to combat counterfeit seed	2.00	3.50	Several legal instruments address counterfeit seed, including Executive Decree No. 42/06, Presidential Decree No. 93/16, and the SADC Protocol on Plant Variety Protection. However, enforcement remains weak due to limited resources, lack of monitoring systems, and poor institutional coordination.
17. Adequacy of national seed trade association	0.00	0.00	Angola does not have a national seed trade association.
FINAL ASSPI SCORE	**3.31**	**3.73**	Highest scores: in ECCAS: Burundi, 4.87 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Angola's seed sector is weak and faces significant challenges. Comprehensive reforms are required across key areas of the seed system. Positively, the government has enacted essential seed policy instruments, and Angola's membership in SADC facilitates the adoption of improved varieties successfully commercialized throughout the region. Additionally, demand for enhanced seed varieties is increasing. Key priorities for intervention in the seed sector include:

- Build local seed companies' production and quality assurance skills.
- Enhance SENSE and provincial directorates' capabilities in seed inspection, sampling, testing, and certification.
- Educate farmers on the value of certified seed.
- Promote improved seed use among farmers.

Data for the ASSPI Angola report was collected by:

Dr. Nginamau Dibanzilua

Senior Agricultural Research Scientist at the Agricultural Research Institute of Angola.

African Seed Sector Performance Index (ASSPI) Country Brief – BENIN

OVERVIEW OF THE SEED SECTOR

Benin's seed sector is in the early growth stage. It is characterized by a model in which two seed systems coexist. These are the informal unregulated system that provides more than 80% of the seeds used on farms and the more structured, well-organized and highly regulated formal system to guarantee the quality of seeds that provides less than 20% of the seeds used in Benin. Since Benin adopted the harmonized seed regulations for ECOWAS Member States in 2008, the formal system has been significantly reshaped. This transformation includes setting up management bodies and tools for the seed sub-sector, as well as routinely organizing seed production. The main government agencies active in the sub-sector include the Direction de la Production Végétale (DPV) in charge of seed quality assurance in collaboration with the Departmental Directorates of Agriculture, Livestock and Fisheries (DDAEP) and the Institut National de Recherche Agricole du Bénin (INRAB) in charge of research and varietal development. Seed production is undertaken by local seed companies, individual multipliers, and cooperatives. According to local seed sector experts, maize, rice, soya bean, and cassava have been identified as priority crops, collectively representing 75% of the total field crop area harvested. These crops are also the primary food crops subject to seed certification in Benin. Benin is a member of the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	5.98

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, roots and tubers
Maize	1,759,588	46%
Rice	128,501	3%
Soya bean	638,098	17%
Cassava	298,564	8%
Total		75%

Total arable land:	3.546 million ha
Population:	14,111,034
Number of farming households:	926,539
Contribution of agriculture to GDP:	24.2%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance 2025
1. Quality of variety release and registration process	8.50	6.75	Variety release in Benin is governed by the 2018 ministerial-approved *Manuel des procédures d'homologation et d'inscription des variétés au Catalogue Béninois des Espèces et Variétés végétales* (CaBEV). The *Comité National des Semences Végétales* (CNSV) manages this process, which lasts 12 months for vegetables and irrigated crops, and 24 months for rainfed crops. A published manual clarifies approval steps, and the CNSV reliably holds two sessions each year. Despite this, updates to the CaBEV are infrequent and often delayed. Government partially subsidizes the cost of variety release.
2. Number of varieties released in last 3 years	0.00	4.14	Between 2022 and 2024, a total of 23 varieties across the four priority crops were released: 22 maize varieties and 1 soya bean variety.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance 2025
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.00	5.67	In 2025, INRAB had 9 breeders across the four priority crops: three for maize, and two each for rice, soya bean, and cassava. Breeder adequacy scored 8/10 due to increased numbers since 2022. Funding was rated 6/10, as INRAB still relies on donor support despite some government funding. Infrastructure scored 3/10 because research facilities remain inadequate. Appendix 1 provides crop-specific details.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	5.67	INRAB is responsible for plant genetic conservation, documentation, and utilization. While staff levels are generally sufficient, limited funding restricts activities. Collaboration between the national program and Benin's community seed banks is only just beginning. The INRAB's gene bank contains 1,326 accessions: 342 maize, 756 rice, 115 soya bean, and 113 cassava accessions. Of the total accessions for the four crops, 87% have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	8.58	8.50	INRAB, the State Seed Farms in Alafiarou and Kétou, and private companies supply EGS for maize, soya bean, cassava, and rice in Benin. All providers including INRAB and the seed farms maintain their own EGS. Quality and quantity of EGS were rated 8/10 and 8.5/10, respectively, while delivery timeliness scored 9/10, showing that suppliers largely meet standards and demand for these crops. For crop-specific details, see Appendix 2.
6. Availability of crop varietal choice to farmers	1.92	3.05	In 2024, 30 crop varieties were available on the market for the four priority crops: 21 for maize, and three each for rice, soya bean, and cassava. This number is inadequate given the country's diverse agro-ecology and need for more locally adapted crops.
7. Utilization of quality commercial seed by farmers	0.52	0.42	In 2024, production volumes for maize, rice, and soya bean seed were as follows: 690 MT of maize seed, 268 MT of rice seed, and 666 MT of soya bean seed. After adjusting for imports and exports, these volumes fulfilled 4% of the national maize seed needs, 14% for rice seed, and 6% for soya bean seed.
8. Clarity and enforcement of seed import/export regulations	8.00	8.50	ECOWAS regulations specify the rules for seed imports and exports. In 2024, only 120 MT of maize seed were imported, and 0.5 MT of soya bean seed were exported. These regulations are consistently enforced at land, sea, and air control posts.
9. Adequacy of agro-dealer networks	5.00	6.00	In 2024, Benin had 27 agro-dealers, all located in urban areas. As a result, rural farmers did not have sufficient access to registered agro-dealers for their input needs. To address this gap, multipliers and projects support rural access to quality seed.
10. Availability of seed in small package sizes	0.50	0.81	Of the four crops, only maize seed were sold in packages of 2 kg or less; small packages accounted for 17% of the total maize seed sold.
11. Status of national seed policy instruments	9.00	8.82	All important seed policy instruments are in place, including: The National Seed Policy of 2015: this policy is under review. The Plant Seed Sub-Sector Development Strategy 2022-2026. Law No 91-004 of 11/02/1991 on phytosanitary legislation – the main law governing the seed sector Decree 2018-174 of May 16, 2018, establishing the National Committee for Plant Seeds (CNSV) in the Republic of Benin, and its implementing regulations; Decree 2018-173 of May 16, 2018, establishing the Beninese Catalog of Plant Species and Varieties and its implementing regulations; Decree No 92-258 of 18/09/1992 – procedures for the application of Law No 91-004 of 11/02/1991 Three Ministerial Orders and three decrees and regulations to operationalize different aspects of the seed law No 91-004 of 11/02/1991.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	8.00	Benin is a member of ECOWAS. The country's seed law was aligned with the ECOWAS regulations through Special Issue No 15 of Benin's Official Gazette, dated August 13, 2013. Support for the seed sector comes from the *Fonds National de Développement Agricole* (FNDA), which includes a specific facility dedicated to seeds. Despite this support, adequate funding for activities related to the implementation of regulations and the CNSV remains a recurring challenge in the seed sub-sector.
13. Status of national biosafety frameworks for plant breeding and seed production	7.50	7.50	Law No 2021-01 of 03/02/2021 established Benin's biosafety framework and created the *Conseil National de Biosécurité* (CNB) with a Scientific Committee. While systems are set up, no biotechnology products have been released in Benin.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance 2025
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	3.00	6.50	FMSS contribute approximately 80% of the seed supply within Benin's agricultural sector. While FMSS are acknowledged, they have not yet been integrated into policy frameworks. List C in the catalog is designated for traditional varieties that are broadly recognized and possess scientific and economic significance. Despite this recognition, promotion of FMSS remains limited to farmer organizations and NGOs.
15. Adequacy of seed inspection services	6.00	6.00	In 2022, Benin had 187 public seed inspectors, about two per municipality or border post. Although this number is insufficient, the quality of seed inspection is good. In order to improve the rate of coverage of the territory by inspectors, Order No. 2025-22 of 11 March 2025 authorizing the accreditation of private seed inspectors was issued. Public inspectors are provided with means of transport and receive allowances for the purchase of fuel and the maintenance of their vehicles. Seed inspectors use digital tools: inspectors collect data via KoboCollect on their smartphones, which are then processed at the national level.
16. Adequacy of government efforts to combat counterfeit seed	9.00	8.50	Law No 91-004 (1991) and Regulation No C/REG.4/05/2008 guide efforts against counterfeit seed. The government inspects distribution points and storage, samples seed for lab tests, uses coded labels on certified lots, and requires seed stock accounting. These measures are applied consistently.
17. Adequacy of the national seed trade association	6.83	6.92	*The National Seed Growers' Association of Benin* (ANaSeB) is the only national seed trade association in Benin affiliated with the African Seed Trade Association (AFSTA). ANaSeB received an overall score of 6.91/10, with the following ratings: value for members 8/10, sector activity 7/10, advocacy 7/10, resource mobilization 7.5/10, management 6/10, and governance 7/10.
FINAL ASSPI SCORE	**5.37**	**5.98**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Benin's seed sector is in the early growth stage. It is characterized by involvement of private seed companies and cooperatives, sufficient EGS supply, and an active agro-dealer network. However, to maintain growth, several issues must be addressed.

- Allocate increased funding to INRAB to enable the recruitment of additional breeders for the four priority crops and to support the development, refurbishment, and maintenance of breeding, variety development, and related infrastructure.
- Expand the production of certified seed by strengthening the capabilities of seed producers and fostering private sector investment within the industry.
- Improve farmer outreach initiatives to promote greater adoption of certified seed.

Data for the ASSPI Benin report was collected by:

Etienne Adango

Chef Service National Semencier, Benin.

African Seed Sector Performance Index (ASSPI) Country Brief – BOTSWANA

OVERVIEW OF THE SEED SECTOR

Botswana's seed sector is in the early growth stage of development. A few multinational private seed companies operate in the country and mainly distribute imported seed. The sector is mostly formal and regulated by the Seed Certification Act of 1976. The government's Seed Multiplication Unit (SMU) oversees seed production and certification. Seed production involves contract growers, who focus on crops which are not supplied by seed companies. The government often supports seed distribution through subsidy programs. Seed companies can market any variety without prior registration in the country. The four priority crops identified by local seed sector experts are maize, sorghum, cowpea, and millet, which, combined, account for 99% of the area harvested to field crops. Agriculture, particularly crop farming, contributes minimally to the national economy. Botswana is a member of the Southern African Development Community (SADC).

Overall country score (out of 10):	4.02

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oils
Maize	30,000	38%
Sorghum	22,646	29%
Cowpea	22,092	28%
Millet	3,338	4%
Total		99%

Total arable land:	0.26 million ha
Population:	2,480,244
Number of farming households:	1,669,000
Contribution of agriculture to GDP:	1.7%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	0.00	0.13	By 2025, there was no official policy for variety release and registration in the country. The former Department of Agricultural Research facilitated and managed the variety release system. Seeds Act No. 19 of 2023 includes a provision for variety registration; however, the implementing regulations remain under review by the Attorney General.
2. Number of varieties released in last 3 years	0.00	0.00	Between 2022 and 2024, no varieties of the four crops were released due to the absence of an established process for variety release and registration.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	6.00	2.92	By 2025, the National Agricultural Research and Development Institute (NARDI) employed three breeders for four crops: one manages all crops, another specializes in sorghum, and the third works on sorghum and pearl millet, and expanding to wheat and rice. The adequacy of the number of breeders was rated 1.25/10 indicating that the number of breeders was completely inadequate. The adequacy of funding was rated 4.5/10 signaling that funding was reasonably adequate. The adequacy of existing research facilities for breeding and variety development was rated 3/10 because the breeding facilities are largely inadequate due to their deteriorated condition. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	8.00	5.00	The National Plant Genetic Resource Centre (NPGRC) is affiliated with the SADC Plant Genetic Resource Center and adheres to its guidelines. Although it has only two staff members, it operates efficiently. The center manages the collection, multiplication, characterization, and preservation of germplasm. Currently, it works with two community seed banks that operate in Botswana. In 2025, the center maintained 2,272 accessions for four crops—all of which were duplicated: 60 maize accessions, 550 sorghum accessions, 1,498 cowpea accessions, and 164 millet accessions. However, only 15% of these accessions were being actively used.
5. Adequacy of Early Generation Seed (EGS)	6.75	3.33	NARDI is the main source of EGS for Botswana's four priority crops. NARDI produces and maintains EGS on its farms. Seed industry experts rated the adequacy of the quality and quantity of EGS at 1/10 each indicating that both are completely inadequate. The adequacy of delivery timeliness was rated at 8/10 indicating that delivery of the available quantities was consistently on time. Crop-specific ratings are available in Appendix 2.
6. Availability of crop varietal choice to farmers	1.99	3.83	In 2024, forty-one varieties of the four priority crops were available on the market: 30 maize varieties, seven sorghum varieties, one cowpea variety, and three millet varieties. This figure marks a substantial increase from the fifteen varieties that were available on the market in 2022.
7. Utilization of quality commercial seed by farmers	8.81	7.05	In 2024, production volumes reported for the four priority crops were 117 MT of maize seed and 31.5 MT of cowpea seed, with no local production reported for sorghum or millet seed. Taking both imports and exports into account, the country completely satisfies its domestic needs for maize and cowpea seeds. However, it only satisfies 5% of the national seed requirements for millet seed and none for sorghum seed.
8. Clarity and enforcement of seed import/export regulations	8.00	10.00	Botswana largely imports its seed, and the importation process is governed by the Plant Protection Act Cap 35:02. In 2024, volumes of seed imports were 835 MT of maize seed, 112 MT of cowpea seed, and 4.6 MT of millet seed. These volumes are much lower than those recorded in 2022: 1,831 MT of maize seed, 1,190 MT of cowpea seed, and 227 MT of millet seed.
9. Adequacy of agro-dealer networks	7.00	7.00	According to the Department of Crop Production, Botswana had 295 registered agro-dealers in 2024. Agro-dealers, also referred to as seed distribution agents, import and distribute most of the country's seed.
10. Availability of seed in small package sizes	6.56	MD	There is no data on the sale of seed in small packages.
11. Status of national seed policy instruments	6.00	5.00	Botswana's seed sector is guided by the Seed Certification Act of 1976. The Seed Act No.19 of 2023 is awaiting adoption and will replace the current Seed Certification Act of 1976. The Seed Bill 2023, currently under review, will replace the current Seed Act. The Regulations required for the implementation of the new Seed Act are currently under review by the Office of the Attorney General. The other important instrument is the Plant Protection Act Cap 35:02 of 2009.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	7.00	Botswana belongs to the SADC and has signed the Memorandum of Understanding aimed at aligning the national seed laws with the SADC's Harmonized Seed Regulatory System (HSRS). In addition, the SADC Protocol for Protection of New Plant Variety and the Charter establishing the SADC Seed Centre were both signed in June 2020. Further, the Seed Bill, which is yet to be passed, is harmonized with the SADC HSRS.
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	1.50	The government enacted the Biosafety Policy in 2013, and the Biosafety Bill 2022 is currently in the drafting phase. The Bill has been circulated to different ministries for comment and feedback.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	1.50	FMSS are accepted in Botswana but lack formal policy or legal recognition.

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
15. Adequacy of seed inspection services	8.00	5.00	In 2024, Botswana's 13 public seed inspectors were sufficient for the country's 69.4 hectares of seed production. However, during peak production season, the inspectors face limitations due to the lack of dedicated vehicles, as they are required to share transportation with other departments. In addition, digital tools have not been adopted for field inspections.
16. Adequacy of government efforts to combat counterfeit seed	7.00	5.00	Efforts to combat the production and sale of counterfeit seed are guided by the Seed Certification Act of 1976. The Act sets a fine not exceeding BWP 1,000 or imprisonment for the distribution of counterfeit seed. The government conducts regular monitoring and surveillance of seed retailers and at ports of entry into the country. It also holds workshops on the importance of seed certification for farmers and agro-dealers. However, the enforcement efforts are inadequate due to funding constraints.
17. Adequacy of the national seed trade association	6.50	0.00	There is no national seed association in Botswana. The Botswana Agro Suppliers Association (BASA), rated in 2023, now prioritizes agro-chemicals over seeds.
FINAL ASSPI SCORE	**5.57**	**4.02**	Highest scores: in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

With 70% of Botswana covered by desert, agriculture faces frequent droughts and low subsistence crop yields. Access to better agricultural technology could boost productivity and food security. The priorities for reform in the seed industry all pertain to the seed policy environment:

- The adoption of the Seeds Act No. 19 of 2023 incorporating the provisions of the SADC Harmonized Seed Regulatory System, should be accelerated.
- The new seed law should define variety release and registration guidelines, with details specified in the Seed Regulations.

Data for the ASSPI Botswana report was collected by:

Botsile Sabone

Department of Crop Production, Ministry of Lands and Agriculture.

African Seed Sector Performance Index (ASSPI) Country Brief – BURKINA FASO

OVERVIEW OF THE SEED SECTOR

The seed sector in Burkina Faso is in the early growth stage of development. The formal sector is regulated by the Ministère de l'Agriculture et des Aménagements Hydro-agricoles (MAAH), which oversees the implementation of the seed policy. Under the Ministry, the Direction Générale de la Production Végétale (DGPV) provides overall technical supervision, while the Service National des Semences (SNS) is in charge of seed quality control. The Institut de l'Environnement et de Recherche Agricole (INERA) oversees research and variety development. In the formal sector, seed production is undertaken by seed producers, a group that includes seed unions, seed cooperatives/ associations, and seed companies. The informal sector is characterized by seed trade among smallholder farmers and localized, informal markets. The four priority crops, as identified by the local seed sector expert, are maize, rice, sorghum, and millet. Combined, these four crops comprise 74% of the total area harvested to cereals, pulses, and oils in the country. Formerly a member of the Economic Community of West African States (ECOWAS). Burkina Faso left the organization in January 2025.

Overall country score (out of 10):	5.73

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Sorghum	1,900,000	32%
Maize	1,100,000	19%
Millet	1,097,359	19%
Rice	230,187	4%
Total		74%

Total arable land:	7.907 million ha
Population:	23,025,776
Number of farming households:	1,669,000
Contribution of agriculture to GDP:	20.9%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	8.00	6.25	The registration of crop varieties to be released in Burkina Faso is conducted by the *Sous-comité d'homologation des variétés* (SCHV) of the *Comité National des Semences* (CNS). The approval process is conducted by SCHV in accordance with Article 7 of Law No. 010-2006/AN. Breeders submitting applications for variety release need to provide reports on Distinctiveness, Uniformity and Stability (DUS), as well as Agronomic, Technological and Environmental Values (VATE). The breeder is responsible for the expenses associated with DUS and VATE testing, while meeting costs are funded by the Ministry. Overall, these procedures operate effectively. Nevertheless, the committee occasionally lacks sufficient resources to conduct field visits, which are an integral component of the application review process. The SCHV adheres to the meeting schedule, although minor delays may occur. The national variety catalog was last published in 2014, updated in 2023, and is currently being prepared for publication. The length of variety release process is 24 months.
2. Number of varieties released in last 3 years	1.14	8.29	During the 2022-2024 period, 58 varieties of the four crops were released: 16 sorghum varieties, 10 maize varieties, four millet, and 28 rice varieties. This is an increase from the 33 varieties released between 2020-2022.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	6.58	5.67	As of 2025, INERA had 29 active breeders for the four crops: eight for sorghum, five for maize, two for millet and 14 for rice. The adequacy of the number of breeders was rated 7/10, signalling that the number of breeders employed by INERA are adequate. Seed industry experts rated the adequacy of funding 3/10, indicating that funding for breeding activities is not adequate. Seed industry experts rated the adequacy of the research equipment and infrastructure at the breeding institutions 7/10 implying that the facilities were mostly adequate. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	8.00	4.33	The Secrétariat Permanent/*Commission Nationale de Gestion des Ressources Phytogénétiques* (SP/CONAGREP) is the entity in charge of plant genetic resource management. The CONAGREP works closely with farmers' organizations and NGOs in the establishment of community gene and seed banks. However, due to inadequate human resources, the implementation of its activities is quite low.
5. Adequacy of Early Generation Seed (EGS)	7.83	7.08	INERA is the main source of EGS in Burkina Faso. It produces and maintains its own EGS. The adequacy of the quantity of EGS supplied was rated 5.25/10. This is because the volumes are mostly adequate for millet seed, less for maize, sorghum and rice. The quality of EGS received was rated 8.0/10. This is because EGS is inspected and certified by the SNS before it is supplied to seed producers. The adequacy of the timeliness of delivery of seed was rated 8.0/10. INERA always supplies seeds in advance of the planting season through its storage centers in different regions or through annual seed fairs. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	4.25	4.54	In 2024, a total of 51 varieties of the four priority crops were available on the market: 13 maize varieties, 12 rice varieties, 15 sorghum varieties, and 11 millet varieties.
7. Utilization of quality commercial seed by farmers	1.17	4.11	In 2024, seed production for the four priority crops was: 5,273 MT of maize seed, 1,135 MT of rice seed, 745 MT of sorghum seed, and 475MT of millet seed. Adjusted for imports and exports below (Indicator 8), the total available seed meets 16% of national seed requirement for sorghum, 85% for maize, 37% for millets and 20% for rice.
8. Clarity and enforcement of seed import/export regulations	8.00	8.00	The seed importation process in Burkina Faso is clearly explained in Decree No. 2011-022/MAHRH/MEDD/MICPIPA/MRSI/CAB of March 15, 2011, and it is enforced consistently. In 2024, 67 MT of maize seed was imported, an increase from the 1 Mt of maize seed imported in 2022. There were no seed exports of the four priority crops, compared to the 138 MT of rice seed exported in 2022.
9. Adequacy of agro-dealer networks	5.00	5.50	In 2024, Burkina Faso had 74 licensed agro-dealers. The agro-dealers were mainly concentrated in the major cities of Ouagadougou, Bobo-Dioulasso, and Koudougou, and in major agricultural production centers such as Bagré in the Center-East region, Bama, and Banzon in the Hauts Bassins region.
10. Availability of seed in small package sizes	0.26	0.42	Of the four priority crops, only 5% of maize seed, 2% of rice seed, 2% sorghum seed, and 5% of millet seed are sold in small packages of 2 kg or less. The rest of the seed is mostly sold in large packages of 25 kg or more.
11. Status of national seed policy instruments	7.00	8.54	Burkina Faso's seed sector is guided by Loi N°10-2006/AN which regulates plant seeds. The Law is supported by multiple decrees including: Decree No. 2008-680/PRES/PM/MAHRH/MECV/MESSRS of October 27, 2008, on the powers, composition and functioning of the National Seed Committee Decree No. 2008-705/PRES/PM/MAHRH/MECV/ of November 17, 2008, on the operationalization of the seed sector support fund. Decree No. 2010-59/MAHRH/MESSRS of October 29, 2010, on the Technical Regulations for quality control and certification of agricultural seeds in the country.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	5.00	Although Burkina Faso left ECOWAS in 2024, it remains a member of the Comité permanent Inter-États de Lutte contre la Sécheresse dans le Sahel (CILSS) where the country continues to comply with ECOWAS and UEMOA seed regulations. The national seed regulations are harmonized with the ECOWAS Regional Seed Regulations and are implemented with reasonable consistency. The CNS was established following the adoption of Law No. 10-206/AN on March 31, 2006. Although the National Seed Fund has been created, it remains non-operational. Moreover, the National Variety Catalog of Species is not currently updated.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	9.00	9.00	*Agence national de biosécurité* (ANB) regulates biotechnology in Burkina Faso. The biosafety law and related frameworks have been adopted and operationalized. Cotton is widely adopted in the country.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	3.00	1.50	FMSS are not recognized by Burkina Faso's seed regulations. However, the National Commission for the Management of Plant Genetic Resources collects, characterizes, and conserves traditional farmer varieties.
15. Adequacy of seed inspection services	7.00	4.33	In 2025, there were 95 seed inspectors in Burkina Faso, an increase from the 73 seed inspectors in 2022. The Seed Act stipulates that all seed inspectors be employed by the government. Private seed inspectors are not authorized to operate in the country, although the CNS has proposed a change in the law to allow for the authorization of private seed inspectors. The main challenge faced by the seed inspectors is the inadequate means of transportation as only a few have access to vehicles, while others use motorcycles. In addition, only one third of the inspectors use digital tools
16. Adequacy of government efforts to combat counterfeit seed	7.00	7.00	Combating the production and sale of counterfeit seed is guided by Law No. 010-2006/AN, Decree No. 2011-017/MAHRH/MEDD/MEF of March 15, 2011, Decree No. 2011-019/MAHRH/MEDD/MEF/CAB of March 15, 2011, and Decree No. 2011-023/MAHRH/MICPIPA/MEDD of March 15, 2011. The measures taken include the registration of seed actors, inspection of seed, seed certification procedures, and labeling and sealing of seed packages. However, the main challenge pertains to the effective enforcement of these laws.
17. Adequacy of national seed trade association	6.83	7.83	*L'Union Nationale des sociétés coopératives des Producteurs de Semenciers du Burkina* (UNPS-B) consists of seed producer cooperatives at the regional and provincial unions and represents the seed sector in Burkina Faso. UNPS-B holds regular meetings; it renews its governance structures regularly and is active in the seed market. Seed industry experts' overall rating of UNPS-B was 7.83/10, comprising the following sub-scores: activities on important seed sector issues, (7/10), providing value to members, managerial ability, governance and democracy, effectiveness in advocacy, and ability to mobilize resources all rated at (8/10).
FINAL ASSPI SCORE	**5.77**	**5.73**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

In 2023, agriculture contributed 16% of Burkina Faso's GDP and was the source of livelihoods for 80% of the population.[14] However, the harsh semi-arid climate and low and erratic rainfall constrain productivity. For the seed sector to sustain the current growth momentum, the following priority issues need to be addressed:

- Enhancing SNS's human resources and logistics to better control seed quality, implement seed traceability systems, and address issues with counterfeit seeds.
- Strengthening the capabilities of seed producers to maintain high standards in their seed production processes.
- Increasing awareness of the benefits of certified seed among farmers.

Data for the ASSPI Burkina Faso report was collected by:

Mme ZIDOUEMBA Kadidiata

Director Generals, Service National des Semences (SNS)

14 https://www.fondazioneaurora.org/en/advancing-agrifood-production-in-burkina-faso/ Accessed 18 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – BURUNDI

OVERVIEW OF THE SEED SECTOR

The seed sector in Burundi is in the emerging stage of development. It is dominated by the informal sector, but there is also a growing and highly regulated formal system. The Office Nationale de Contrôle et de Certification des Semences (ONCCS) oversees seed certification and quality control, and the Institut des Sciences Agronomiques du Burundi (ISABU) is the national agricultural research institute mandated to conduct research and variety development. The four priority crops, as identified by the local seed sector experts, are bean, maize, rice, and Irish potato. Combined, these four crops account for 67% of area harvested to field crops. Burundi is a member of the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), and the Economic Community for Central African States (ECCAS).

Overall country score (out of 10):	4.87

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and roots and tubers
Bean	**747,771**	**37%**
Maize	**481,036**	**24%**
Rice	**99,419**	**5%**
Potato	**41,955**	**2%**
Total		**67%**

Total arable land:	**1.321 million ha**
Population:	**13,689,450**
Number of farming households:	**2,335,995**
Contribution of agriculture to GDP:	**34.9%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**6.00**	**5.75**	Applications for new variety release are submitted to the Director General of the ONCCS and approved by the Minister responsible for agriculture via the *Commission Nationale Semencière*. Approval requires the Distinctness, Uniformity and Stability (DUS) and (Agronomic and Technological Value) (VAT) tests; if the variety is already released in a COMESA or EAC member state, only one season of testing is needed, otherwise two seasons are required. The average release timeline is 12 months; however, delays may result from inadequate funding. The country is yet to set up a legal framework that defines the cost structure of the variety release process.
2. Number of varieties released in last 3 years	**8.71**	**7.29**	Between 2022 and 2024, 45 varieties across four crops were released: two bean varieties, 21 maize varieties, and 22 rice varieties. This is a modest decrease from the 55 varieties introduced between 2020 and 2022. The decline is partly attributable to insufficient funding for both ISABU and the International Rice Research Institute (IRRI), which limited their ability to release new varieties.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.00	4.67	By 2025, ISABU employed 10 active breeders across four crops: bean and maize each had two breeders, while rice and Irish potato each had three. The number of breeders was rated 3 out of 10, showing that ISABU's staffing is not sufficient. Funding for breeding programs received a score of only 4 out of 10. On the other hand, equipment and infrastructure quality scored 7 out of 10, largely due to recent improvements to laboratories and greenhouses. Specific scores for individual crops can be found in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	5.67	The Plant Genetic Resources Conservation Officer at ISABU is responsible for the conservation and utilization of plant genetic resources in Burundi. Human resources for these activities are considered sufficient, with operations overseen by three ISABU researchers. Community-based organizations receive training from ISABU, and there is an exchange of germplasm between the program and community seed banks. Currently, ISABU maintains 2,471 accessions across four crops: 2,239 bean accessions, 75 maize accessions, 138 rice accessions, and 19 potato accessions, all of which have been duplicated. Of these, 669 bean and 12 rice accessions have been utilized to date.
5. Adequacy of Early Generation Seed (EGS)	6.67	7.08	ISABU and the International Rice Research Institute (IRRI) are the main sources of Early Generation Seed (EGS) in Burundi, each maintaining their own supplies. Seed industry experts have rated the quantity of EGS available at 6.25 out of 10. Registered seed producers can obtain EGS through a pre-order system. The quality of the supplied EGS received a score of 7.5 out of 10. Before reaching seed growers, all seed is tested, packaged, and labeled. The delivery timeliness also scored 7.5 out of 10. A key challenge remains with early generation potato seed, which is often scarce. Specific crop ratings can be found in Appendix 1.
6. Availability of crop varietal choice to farmers	5.45	4.75	In 2024, there were 54 varieties of the four main crops on the market: 25 varieties of beans, nine varieties of maize, six varieties of rice, and 14 varieties of Irish potatoes. The total is lower than the 64 varieties reported in 2022.
7. Utilization of quality commercial seed by farmers	3.19	1.69	In 2024, seed production for four crops was as follows: bean seed reached 2,047 MT, up from 1,177 MT in 2022; maize seed production was 4,214 MT (55% hybrid), a notable drop from 7,790 MT in 2022; rice seed amounted to 151 MT (20% hybrid), decreasing from 260 MT in 2022; Irish potato seed production soared to 13,665 MT, a significant increase from 1,999 MT in 2022. After adjusting for imports (see Indicator 8), total available seed meets 5% of national requirements for beans, 58% for maize, 8% for rice, and 17% for Irish potatoes.
8. Clarity and enforcement of seed import/export regulations	7.00	7.50	Seed imports follow Articles 29 and 30 of the Seed Law. In 2024, maize seed imports reached 2,312 MT, up from 1,400 MT in 2022.
9. Adequacy of agro-dealer networks	2.00	2.00	The number of agro-dealers operating in Burundi is not known due to the absence of an official registration system. However, a 2020 TASAI report cites 56 agro-dealers in the country at that time.
10. Availability of seed in small package sizes	5.76	6.41	Out of the four priority crops, half of all bean seed and 70% of maize seed are sold in packages of 2 kg or smaller, whereas rice seed is not available in small packages.
11. Status of national seed policy instruments	10.00	7.00	Burundi's seed sector operates under Seed Law No. 1/08 from April 23, 2012. This law is implemented through Decree No. 100/251 (2012), which created the National Seed Sector Commission (CNS) responsible for overseeing and regulating the industry. Several ordinances further define the sector: Ordinance No. 710/450 (2016) addresses seed certification; Ordinance No. 710/339 (2016) sets the criteria for certifying seed producers; Ordinance No. 710/449 (2016) outlines how varieties are added to the National Variety Catalog; and Ordinance No. 710/338 (2016) governs the marketing of certified seeds, among others.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	5.00	Burundi is part of COMESA, and its government is currently working to align the country's seed law with the COMESA Seed Trade Harmonization Regulations. Several seed policy instruments are being revised to align with the harmonized regulations.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	3.00	Burundi has no national biosafety framework.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS in Burundi are not recognized in any seed policy instrument.
15. Adequacy of seed inspection services	6.00	4.00	By 2024, there were nine public seed inspectors and 32 private seed inspectors, down from a total of 56 inspectors (seven public and 49 private) in 2022. The ONCCS inspects all declared seed production fields, unless funding limitations prevent inspectors from doing so.
16. Adequacy of government efforts to combat counterfeit seed	7.00	4.00	Efforts to address the production and distribution of counterfeit seed are regulated by *La loi N° 1/08 du 23 avril 2012* governing the seed sector, *Ordonnance N° 710/338 du 09 mars 2016* concerning the marketing of certified seeds in Burundi, *Décret N° 100/55 du 23 mars 2016* on plant variety protection, and *Ordonnance N° 710/451 du 04 avril 2016* regarding phytosanitary control and quarantine measures for plants and plant products. These regulations mandate procedures such as monitoring seed storage facilities and employing secure labeling on seed packaging. Legal penalties for importing or distributing counterfeit seed include imprisonment ranging from six months to one year and/or fines between 200,000 and 1,000,000 Burundian francs. Nevertheless, implementation of these measures remains limited due to capacity constraints at ONCCS since 2023 as shown in indicator 15 above.
17. Adequacy of national seed trade association	6.50	7.00	The *Collectif des Compagnies et Coopératives de Production des Semences du Burundi* (COPROSEBU) serves as the main association representing private seed sector stakeholders in Burundi. According to a seed industry expert, COPROSEBU received an overall score of 7/10. This rating included sub-scores: 7/10 for areas such as member value, management skill, governance, democracy, and resource mobilization; 6/10 for addressing key seed sector challenges; and 8/10 for advocacy effectiveness.
FINAL ASSPI SCORE	**5.78**	**4.87**	Highest scores: in EAC: Kenya, 7.64 in ECCAS: Burundi, 4.87 in COMESA: Egypt, 8.13 in Africa: South Africa,8.64

PRIORITY INTERVENTIONS

Burundi's agro-ecological zones offer favorable conditions for agricultural production. The nation's seed policy instruments are current and largely harmonized with the COMESA Seed Trade Harmonization Regulations. To maintain progress within the seed sector, the following key priorities should be addressed:

- Development of a seed laboratory capable of conducting testing and analysis to international standards.
- Recruitment and training of ONCCS personnel in seed inspection, sampling, and testing. Furthermore, ONCCS requires increased funding to support comprehensive seed quality assurance services nationwide.
- Enhanced initiatives to inform farmers about the advantages of certified seeds.
- Strengthening the capacity of domestic seed companies in implementing effective internal quality assurance measures during seed production and processing.

Data for the ASSPI Burundi report was collected by:

Gahungu Fidèle

Chef, Office National de Contrôle et de Certification des Semences, Burundi.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

African Seed Sector Performance Index (ASSPI) Country Brief – CAMEROON

OVERVIEW OF THE SEED SECTOR

Cameroon's seed sector is in the early growth stage of development. The government recognizes the coexistence of the informal and formal seed systems. At the national level, the formal seed system is regulated by the Ministry of Agriculture and Rural Development. It includes the Directorate of Regulation and Quality Control of Agricultural Inputs and Products, which is in charge of variety release and registration. The Institut de Recherche Agricole pour le Développement (IRAD) is the country's national agricultural research institute. Cameroon has several categories of private seed enterprises, including companies (multinational and local), cooperatives, and individual producers. The four priority crops, as identified by local seed sector experts, are maize, sorghum, rice, and cassava. Combined, these four crops account for 68% of area harvested to field crops. Cameroon is a member of the Economic Community for Central African States (ECCAS).

Overall country score (out of 10):	4.86

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and roots and tuber
Maize	1,200,000	32%
Sorghum	740,000	20%
Rice	160,000	4%
Cassava	466,886	12%
Total		68%

Total arable land:	6.2 million ha
Population:	28,372,687
Number of farming households:	2,750,000
Contribution of agriculture to GDP:	18.5%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	7.00	4.50	The Directorate of Regulation and Quality Control oversees the variety release process. New varieties must pass Distinctness, Uniformity, and Stability (DUS) and Value for Cultivation and Use (VCU) tests before registration in the National Catalog. The Commission d'homologation des espèces et variétés (CHEV) reviews results and adds approved varieties to Cameroon's Catalog of Plant Varieties, established in 2018. CHEV has not set official fees; testing costs are determined by individual partners.
2. Number of varieties released in last 3 years	0.00	1.43	Between 2022 and 2024, four maize varieties were released, all in 2024. The varieties released in 2024 mark the first releases for any of the four priority crops since 2018.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.83	1.42	By 2025, IRAD has only one active maize breeder and none for the other three crops, compared to three maize breeders in 2023. One breeder retired and another left the country to pursue further studies. The remaining maize breeder is assisted by two PhD students in Plant Biotechnology and Agroecology, along with several support staff members. Experts from the seed industry rated the number of breeders at just 0.25 out of 10, clearly indicating severe inadequacy. Funding for breeding programs scored 2 out of

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
			10, suggesting that, except for major cash crops like coffee or cocoa, most crops receive insufficient financial support. Equipment and infrastructure also received a score of 2 out of 10, highlighting the poor state of many facilities. More detailed crop-specific ratings can be found in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	2.00	The collection, characterization, and conservation of plant genetic resources in Cameroon is the responsibility of IRAD. However, IRAD does not have a gene bank, and consequently these activities are not conducted. In recent years, several NGOs have supported the establishment of community seed banks, though this effort remains at an early stage.
5. Adequacy of Early Generation Seed (EGS)	5.00	5.00	IRAD serves as the primary source of EGS for all four crops, with the International Institute for Tropical Agriculture (IITA) playing a significant role in providing EGS for cassava. State seed projects and companies such as Rainfed Rice Development by Reinforcing the Value Chain (PRODERIP), Upper Noun Valley Development Authority (UNDVA), and *Société d'Expansion et de Modernisation de la Riziculture de Yagoua* (SEMRY) are key suppliers of EGS seed for rice. The adequacy of EGS production was assessed at 5 out of 10, indicating that output is insufficient to meet national demand. Both the quality of EGS and timeliness of delivery also received ratings of 5 out of 10, reflecting that supply volumes do not consistently align with the needs of seed companies. Notably, farmers in the southern zone do not have reliable access to EGS, while deliveries in the northern regions appear to be more consistent. Crop-specific ratings can be found in Appendix 1.
6. Availability of crop varietal choice to farmers	7.29	3.69	In 2024, there were 39 crop varieties on the market for the four priority crops: 14 for cassava, 14 for maize, 7 for rice, and 4 for sorghum.
7. Utilization of quality commercial seed by farmers	3.98	1.61	In 2024, seed production included 7,000,000 cassava cuttings, 720 MT rice seed, 1,376 MT maize seed, and 630 MT sorghum seed. Rice and sorghum output tripled compared to 2022. With imports included, 2024 seed supply met 17% of the maize, 12% of the sorghum, 79% of the rice, and 1% of the cassava national seed requirements.
8. Clarity and enforcement of seed import/export regulations	8.00	8.00	In 2024, the total volume of maize seed imported among the four crops was 75 MT (all hybrid), a figure comparable to the 81 MT imported in 2022. The Directorate of Regulation and Quality Control within MINADER oversees the importation process. Importers are required to obtain an import permit by submitting various documents, including an application form, proforma invoice, certificate of seed activity, and proof of payment for the pest risk analysis fee. MINADER routinely issues circulars to all importers to ensure comprehensive awareness of the import regulations.
9. Adequacy of agro-dealer networks	6.00	6.50	As of 2024, Cameroon maintained 30 agro-dealer outlets, the majority of which are located in principal urban centers such as Douala, Yaoundé, and Bafoussam. However, many of these outlets expand their reach into rural areas by collaborating with cooperatives, community groups, or individuals.
10. Availability of seed in small package sizes	2.50	6.39	According to MINADER, an estimated 60% of maize and sorghum seeds and 75% of rice seeds are sold in small packages containing 2kg or less.
11. Status of national seed policy instruments	10.00	9.83	All important policy instruments are in place, including: Law N° 2001/014 of 23 July 2001, relating to seed activities. National Plant Seed Policy of 2018, *Arrêté N°068/PM* of 28 August 2019, Manual of Procedures granting subsidies to agricultural inputs. *Le décret N° 2005/153* of 04 May 2005 on the creation, organization, and functioning of the National Council on Seeds and Plants (CONSOV). *Decree N° 2005/3091 of 29 August 2005* setting guidelines for seed production, quality control, and commercialization of varieties. *Le décret N° 2005/169* of 26 May 2005 on the creation and organization of the Seed Fund. However, the state no longer provides money for the Seed Fund, which has impeded the implementation of key aspects of the laws and regulations.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	5.00	5.00	Cameroon is a member of the Economic Community of Central African States (ECCAS). Efforts to harmonize seed regulations began through the Regional Center for Applied Research for the Development of Central African Systems (PRASAC) project, which was launched by the Central Africa Monetary and Economic Community (CEMAC). CEMAC adopted these regulations on October 20, 2014, but Cameroon has not yet adopted them.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
			In 2025, MINADER initiated a review of the Seed Law, which is expected to include several amendments, such as aligning with the CEMAC Seed Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	6.00	Law No. 2025/006, enacted on April 25, 2025, sets out regulations for Biosafety in Cameroon. Overseen by the Ministry of the Environment, its implementation will involve cooperation with other technical agencies like MINADER. However, the Ministry has not yet issued the necessary Regulations to enforce this Law.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	7.00	6.50	FMSS are referenced within the National Plant Seed Policy of 2018. The Policy recognizes both traditional seed systems and farm-saved seeds, although it does not provide explicit legal provisions concerning the regulation or certification of FMSS. The government is actively promoting awareness among farmers regarding the conservation and management of farm seeds, supported by seed fairs conducted in collaboration with non-governmental organizations.
15. Adequacy of seed inspection services	5.00	6.00	In 2024, MINADER employed 94 seed inspectors, including 37 women. While this number is generally sufficient, improvements can still be made to the logistical resources available for seed inspection. To address this, MINADER acquired all-terrain vehicles and motorcycles from the International Committee of the Red Cross (ICRC) and the *Projet d'Appui au Développement des Filières Agricoles* (PADFA) project. The seed inspection service also received GPS devices to help geolocate seed fields. These upgrades are part of an effort to digitize seed control and certification, for which dedicated software has been purchased.
16. Adequacy of government efforts to combat counterfeit seed	7.00	6.00	Law N° 2001/014 of July 23, 2001 penalizes counterfeiting seed with one to three months in prison and fines from 50,000 to 2,000,000 FCFA. Offenses include not keeping transaction records, avoiding seed quality checks, selling low-standard seed, trading unlisted varieties, and falsifying variety information. Government efforts include inspecting seed stores each season, monitoring seed imports and exports, training agents and operators, and raising awareness. While not comprehensive, these steps help restrict the spread of low-quality seeds.
17. Adequacy of national seed trade association	3.00	2.73	The Association of Seed Traders of Cameroon (ACOSEC), founded on May 21, 1999, is the national seed association and a founding member of the African Seed Trade Association (AFSTA). ACOSEC began restructuring with external support in 2025 but has not held any elective meetings. Its overall rating is 2.7/10, with sub-scores including value to members (3/10), activities (2.8/10), advocacy (2.8/10), resource mobilization (3/10), management (2.6/10), and governance (2.2/10).
FINAL ASSPI SCORE	**5.45**	**4.86**	Highest scores: in ECCAS: Burundi, 4.87 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Agriculture is a key growth driver in Cameroon and employs about 60% of the workforce (AfDB 2022). Despite its potential, its economic and social impact remains limited. Seed industry reform priorities include:

- Raising awareness among farmers about improved varieties.
- Enhancing IRAD's breeding programs to develop and sustain new varieties.
- Expanding capacity for national seed certification (logistics and staff).
- Aligning Cameroon's legal framework with ECCAS regional regulations.
- Strengthening the national seed association through member engagement and improved governance.

Data for the ASSPI Cameroon report was collected by:

Stanislas Bila

Deputy Director of Seed Regulation and Végé Quarantine, MINADER.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

African Seed Sector Performance Index (ASSPI) Country Brief – CAPE VERDE

OVERVIEW OF THE SEED SECTOR

Overall country score (out of 10):	2.71

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses, vegetables, roots and tubers
Tomato	418	8%
Sweet potato	163	3%
Banana	240	5%
Sugarcane	3,114	60%
Total		76%

Total arable land:	0.05 million ha
Population:	522,331
Number of farming households:	45,399
Contribution of agriculture to GDP:	4.9%

Cape Verde's seed industry is in the nascent stage of growth, dominated by the informal seed system. The country is a small island nation with an agricultural area of 36,456 hectares, of which 31,347 hectares is used for rain-fed farming, mainly producing maize, beans, and several root and tuber crops, and 3,776 hectares is under irrigation, where various vegetable crops, fruit trees, and some root and tuber crops are grown. The National Institute for Agricultural Research and Development (INIDA) is the main government institution in the seed sector with multiple mandates including research and variety development, variety release and registration, and seed production and certification. INIDA is the only entity that produces seed in Cape Verde, from pre-basic to certified. There are no private seed producers in the country. Seed production is mainly for open pollinated varieties of priority horticultural species, such as tomatoes, peppers, and onions, as well as vegetatively propagated crops such as sweet potato and cassava. There is no seed for production of maize and bean, even though these crops are widely consumed by households. Farmers mostly use retained seed from previous harvests and not certified seed. The Directorate General for Agriculture, Forestry and Livestock (DGASP) is the other relevant government institution in the seed sector and is responsible for the importation and exportation of agricultural products, including planting material. The four priority crops for Cape Verde are tomato, sweet potato, banana, and sugar cane. Combined, they account for 76% of the area harvested. Cape Verde is a member of the Economic Community of West African States (ECOWAS). Cape Verde did not participate in the ASSPI 2023 data collection round.

ASSPI PERFORMANCE

Indicator	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	1.00	Cape Verde's process for certifying new plant varieties is clearly defined by government decree but has yet to be implemented. On July 14, 2022, Cape Verde became a full member of the *African Regional Intellectual Property Organization* (ARIPO) and acceded to the Arusha Protocol on the Protection of New Plant Varieties through Resolution No. 43/X/2022. However, clear regulations, standard procedures, and step-by-step guidance are needed for the variety release process. There is no variety release committee, and the list of varieties is outdated.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2025 Score (out of 10)	Description of performance
2. Number of varieties released in last 3 years	0.00	During the 2022-2024 period, no varieties of the four priority crops were released.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	0.83	In 2024, INIDA had no breeders for any of the four priority crops. There are no breeding programs for the four crops. The adequacy of breeders was rated 0/10. The adequacy of funding was rated 0.25/10. The adequacy of existing research facilities was rated 2.25/10. Although the facilities remain inadequate, INIDA has upgraded its laboratory infrastructure and enhanced the conditions at field trial stations.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	3.33	INIDA oversees national plant genetic resources activities and coordinates both *ex situ* (seed and gene banks) and *in situ* (traditional variety protection and revitalization) conservation. INIDA's efforts to collect, characterize, and conserve plant genetic resources are constrained by insufficient human, material, and financial resources. The gene bank operates with limited staff and insufficient facilities. INIDA's collaboration with the community seed bank in Sto Antão is limited. However, INIDA, in collaboration with DGASP, recently helped set up two seed banks on the islands of Fogo and Santiago (Santa Catarina).
5. Adequacy of Early Generation Seed (EGS)	0.00	In 2024, INIDA did not produce any EGS.
6. Availability of crop varietal choice to farmers	2.20	There were 18 varieties of the four priority crops available on the market in 2024: seven tomato varieties, nine sweet potato varieties and two banana varieties. There were no varieties of sugar cane.
7. Utilization of quality commercial seed by farmers	3.43	Seed utilization could not be calculated for any of the four priority crops because the area under each crop was unclear. In 2024, 0.01 MT of tomato seed and 24.3 MT of sweet potato seed were produced. After adjusting for imports (see Indicator 8), total available seed meets 100% of national requirements for tomato seed and sweet potato seedling, and six percent for banana plantlets.
8. Clarity and enforcement of seed import/export regulations	8.50	Seed importation is regulated by Decree-law No. 4/2023. In addition, the government uses a digital platform to manage import and export permits for seeds, plants, and animals. All seed importers and exporters are expected to use this platform. In 2024, the country imported 0.08 MT of tomato seed and 18,000 in-vitro banana plantlets.
9. Adequacy of agro-dealer networks	1.50	In 2024, Cape Verde had no registered agro-dealers due to the informal nature of the seed sector. In major municipalities, licensed vendors—mostly women—sell small amounts of agricultural produce seed in markets and on the street.
10. Availability of seed in small package sizes	0.00	It is hard to determine the proportion of seed sold in small packages.
11. Status of national seed policy instruments	9.00	The main seed policy instruments in Cape Verde are: Decree-Law No. 5/2016 of January 16, which regulates the production, certification, marketing, import, export, and inspection of seeds and plants on national territory; and its amendments in Decree-Law 4/2023. Decree 6/2018, of March 12, approving the ECOWAS Regional Seed Regulation C/REG.4/05/2008, on the harmonization of rules governing the quality control, certification and marketing of vegetable and plant seeds in the ECOWAS, UEMOA and CILSS regions.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	Decree 6/2018, published in the Official Gazette (BO) No. 17, Series I, of March 12, 2018, approves the ECOWAS Regional Seed Regulation C/REG.4/05/2008/ Official Journal, Series I No. 106 of October 12, 2023 – Ordinances No. 43, 44, and 45/2023 - Approves the forms for import authorization and quality control certification, and operation of the National Committee for Seeds and Plants, in alignment with the ECOWAS Regional Seed Regulation. However, the government is yet to fully align with several clauses in the ECOWAS Regional Seed Regulations including development of a National Variety Catalog and establishing a National Seed Fund.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	The country does not have a National Biosafety framework.

Indicator	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	FMSS are not recognized in national seed policy or legal instruments
15. Adequacy of seed inspection services	4.33	All seed production takes place at government-operated seed farms. Seed plot inspections are carried out by government seed technicians. The number of seed technicians is adequate for the scale of work. The government has recently adopted the Epicollet 5 Application (open-source mobile and web application) to collect information at the seed production plot level. This allows for better management of the data, leading to more efficient decision-making
16. Adequacy of government efforts to combat counterfeit seed	5.00	Most horticulture seed used in the country is imported with the authorization of the DGASP. Therefore, counterfeit seed does not pose a significant challenge. Nonetheless, certain horticultural seeds are imported into the country through informal channels. The government's efforts to tackle this problem with border checks and monitoring are hindered by inadequate resources and inspection facilities.
17. Adequacy of national seed trade association	0.00	There is no national seed association in Cape Verde.
FINAL ASSPI SCORE	**2.71**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Cape Verde's seed sector is at the nascent stage of growth and is dominated by government across the seed value chain. On the plus side, all the relevant seed policy instruments are in place providing a regulatory framework on which to grow the sector. Given the size of the sector and stage of development, the priority areas for interventions would be:

- Promoting private sector participation in seed production, complemented by the provision of specialized technical expertise in seed production and quality control.
- Enhancing INIDA's capacity for seed quality assurance, including sampling, inspection, testing, and certification.
- Establishing breeding programs in INIDA leading to the development of more productive and pest-resistant varieties which are adapted to the local environment to complement importation of varieties into the country.
- Raise farmer awareness about the value of certified improved crop varieties.

Data for the ASSPI Cape Verde report was collected by:

Eneida Rodrigues Silva

Seed Expert

African Seed Sector Performance Index (ASSPI) Country Brief – CENTRAL AFRICAN REPUBLIC

OVERVIEW OF THE SEED SECTOR

The formal seed sector in the Central African Republic (CAR) is in the nascent stage of development. The primary source of seed in the country is the informal seed system, which is unregulated. The formal sector is limited to a few isolated, unequipped seed producers and cooperatives that produce seed used by NGO-sponsored programs. Otherwise, the private sector is not actively involved in the sector. The activities of research, seed production, multiplication, and marketing are mostly undertaken by the government. The two main institutions in the seed sector are the Institut Centrafricain de Recherche Agronomique (ICRA), in charge of research and variety development, and Office National de Semences (ONASEM), responsible for variety release, registration, and seed inspection and certification. The four priority crops, as identified by the local seed sector experts, are maize, groundnut, bean, and sorghum. Combined, these four crops account for 85% of area harvested to field crops. The Central African Republic is a member of the Economic Community for Central African States (ECCAS) and of the Community of Sahel–Saharan States (CEN-SAD).

Overall country score (out of 10):	1.48

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	270,000	45.92%
Groundnut	184,312	31.34%
Bean	2,935	0.50%
Sorghum	40,000	6.80%
Total		85%

Total arable land:	1.8 million ha
Population:	5,152,421
Number of farming households:	45,500
Contribution of agriculture to GDP:	27.9%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	1.00	1.25	A variety registration and certification process was initiated in 2022. This process mainly consists of conducting multi-location tests on varieties introduced into the country, for inclusion into the Catalog. Decree 005/MARDR/DIRCAB establishes a technical committee for the certification and management of the national seed catalog. However, the committee rarely meets. In addition, the Decree does not define a cost structure for variety release. As such, costs are set arbitrarily.
2. Number of varieties released in last 3 years	0.00	0.00	There are no active breeders in the country. As such, there are no varieties that have been developed over the last three years for the four priority crops.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	0.00	0.67	The country does not have any active breeders and breeding programs. The government does not fund breeding work, and ICRA's basic research infrastructure is old and dilapidated, no longer meeting the research needs of the country.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	0.00	0.00	There is no national institute responsible for the management of PGRFA in the CAR.
5. Adequacy of Early Generation Seed (EGS)	5.00	5.00	The two main sources of EGS in the CAR are the INERA in Burkina Faso and the *Institut de Recherche Agricole pour le Développement* (IRAD) in Cameroon. Since most of the EGS comes from NARIs outside the country, the maximum score for this indicator may not exceed 5/10. All seed imports undergo laboratory testing to check phytosanitary quality and minimize environmental risks. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	1.99	1.78	In 2024, the number of varieties available on the market for the four crops was 12, a slight decrease from the 15 varieties available in 2022. By crop there were four maize varieties, one sorghum variety, one groundnut variety, and six bean varieties. All the varieties were imported.
7. Utilization of quality commercial seed by farmers	1.47	0.03	In 2024, seed production for the four crops was: 6.32 MT of maize seed, 0.49 MT of sorghum seed, 1.83 MT of groundnut seed, and 7.51 MT of bean seed. These volumes account for 0.27% of the national maize seed requirements, 0.72% of the national sorghum seed requirements, 0.06% of the national groundnut seed requirements, and 19% of the national bean seed requirements.
8. Clarity and enforcement of seed import/export regulations	6.00	5.00	There were no recorded seed imports or exports of the four crops in 2024. However, the Regulations on seed imports are relatively clear. The Seed Law of 2015 empowers the Minister of Agriculture and Rural Development to decide on matters related to seed importation. Despite this process being followed, there are cases of unrecorded informal imports of seed.
9. Adequacy of agro-dealer networks	2.00	1.50	In 2024, the CAR did not have any registered agro-dealers, although there are a few shops that sell seed. These shops are mostly around the capital city, Bangui, leaving the rural areas largely unserved.
10. Availability of seed in small package sizes	2.10	0.20	Of the four priority crops, only 5% of the maize seed is sold in small packages of 2kg or less.
11. Status of national seed policy instruments	8.00	7.00	The CAR's seed sector is guided by *Loi N°15/001 du 8 Decembre 2015*, which established and operationalized the ONASEM as the main seed sector regulatory entity. Other instruments are the *Décret 16/351 du 19 Octobre 2017*, which approved the statutes of the ONASEM, and *Arrêté N° 025/MDRA/DIF/DGAR/ICRA/DG*, the technical regulations on the approval and registration of newly released varieties in the national catalog. The main challenge is the lack of a national seed policy or national seed plan that outlines the government vision or direction for the seed sector.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	0.00	0.00	The CAR is a member of ECCAS and CEMAC. The CEMAC zone has developed regional seed regulations. However, the CAR has not yet initiated the harmonization of the national seed regulations with the regional regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	4.00	0.00	The country does not have any national biosafety laws or frameworks.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	4.00	0.00	FMSS are not recognized in the seed policy instruments. However, the intention is for FMSS to be formally acknowledged once the country has a national seed policy.
15. Adequacy of seed inspection services	0.00	0.67	There are five seed inspectors under the National Seed Office (ONASEM). However, the number is inadequate. In addition, the inspectors do not have means of transport to facilitate their movement to seed production areas. In addition, the inspectors have not adopted any digital tools for seed inspection.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	2.00	2.00	Chapter II of the seed law, *Loi N°15/001 du 8 Decembre 2015*, outlines penalties and sanctions against those found guilty of adulterating certified seed or distribution of seeds without approval. The punishment includes imprisonment for one-to-four months and a fine of between 100,000 to 2,000,000 CFA. However, the measures are not being implemented by government.
17. Adequacy of national seed trade association	0.00	0.00	There is no national seed trade association in CAR.
FINAL ASSPI SCORE	**2.21**	**1.48**	Highest scores: in ECCAS: Burundi, 4.87 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

The Central African Republic ranked 191 out of 192 countries on the Human Development Index in 2022. Almost 80% of the population is vulnerable to chronic poverty, and 69% of them live below the poverty line[15]. Reflecting the country's low level of agricultural development, the seed industry in CAR is in the nascent stage of development. As such, the priorities for developing the seed sector span the whole sector. The most urgent priorities, identified by local ASSPI experts, include:

- Development of a national seed policy to outline the overall strategy for seed sector development in the country.
- Strengthening the national breeding programs to develop and maintain varieties suitable to local agro-ecologies and making them available to seed producers.
- Strengthening ONASEM to implement all aspects of Loi N°15/001 du 8 Decembre 2015 especially aspects related to seed control and certification.
- Encouraging private sector participation in the seed sector through the creation of an enabling environment for a competitive seed system.

Data for the ASSPI Central African Republic report was collected by:

Jean Bedel Mandago

seed industry expert

15 https://documents1.worldbank.org/curated/en/099111323121515851/pdf/P17739108d680e074088b608a00615bcba3.pdf

African Seed Sector Performance Index (ASSPI) Country Brief – CHAD

OVERVIEW OF THE SEED SECTOR

The seed sector in Chad is in the early growth stage. Chad's national seed system is dominated by the informal system. In 2008, the ministry in charge of agriculture, in collaboration with other stakeholders, set out to improve the structure and functioning of the seed sector. The process led to the formulation of a National Seed Policy in 2015. Since then, the sector has experienced rapid growth. The two main institutions in the formal sector are the Comité National des Semences et Plants (CNSP), which oversees variety release and registration, and Instituts Nationaux de Recherche Agricole (ITRAD), the National Agricultural Research Institute. The four priority crops, as identified by the local seed sector experts, are sorghum, millet, groundnut, and sesame. Combined, these four crops account for 80% of the area harvested to field crops. Chad is a member of the Economic Community for Central African States (ECCAS).

Overall country score (out of 10):	3.68

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Millet	1,156,072	27%
Sorghum	1,005,413	23%
Groundnut	756,261	17%
Sesame	572,153	13%
Total		80%

Total arable land:	5.3 million ha
Population:	19,319,064
Number of farming households:	6,700,000
Contribution of agriculture to GDP:	37.7%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	4.00	3.75	The permanent secretariat of the CNSP receives seed certification applications from breeders, verifies their completeness, and submits them to the *Sous-Comité d'Admission au Catalogue des Variétés* (SCACV). The SCACV evaluates the applications and, following trials, submits a report to the CNSP. The CNSP reviews and validates the report, then issues a decree registering the approved varieties in the catalog. This decree is subsequently signed by the Minister of Agriculture. While some aspects of the certification process, such as the establishment of the subcommittee, the development of the procedure's manual, and the catalog, have been reviewed, the structure of certification costs has not been determined, and the CNSP has not received any applications.
2. Number of varieties released in last 3 years	1.14	0.00	Between 2022 and 2024, no varieties of the four priority crops were released. In fact, breeders have not submitted varieties for registration since the promulgation of *Loi 016/PR/2016* on seeds and seedlings of plant origin. However, several varieties have undergone adaptation trials in different agro-ecologies.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.08	3.83	As of 2024, ITRAD had five active breeders for the four priority crops: two for millet, one for sorghum, one for groundnut and one for sesame. Seed industry experts rated satisfaction with the number of breeders as 3.5/10, reflecting a modest increase in the number of active breeders from two in 2023. Seed industry experts rated the adequacy of funding for the breeding programs as 4/10, pointing to insufficient funding for research activities. The adequacy of research infrastructure received a rating of 4.00/10, because infrastructure is unevenly distributed among the research centers and is dilapidated. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	0.00	4.00	ITRAD coordinate activities related to PGRFA but has insufficient human resources. Currently, there is no collaborative community seed bank since the system for establishing seed banks is still being developed. In 2025, ITRAD maintained 1,151 accessions: 104 millet accessions, 684 sorghum accessions, 152 groundnut accessions, and 211 sesame accessions. Out of the total accessions for the four crops 63% have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	5.67	6.08	The main source of EGS in Chad is ITRAD. Seed industry experts rated the quality of EGS supplied 7/10, reflecting that plots of pre-basic and basic seed are checked systematically by the official seed control and certification services. The adequacy of the quantity of EGS supplied was rated 5.25/10, pointing to the fact that requests for EGS are often untimely, making it hard for ITRAD to always supply the required quantities. For cereals, the quantities produced meet the needs of seed producers. For oilseeds, the quantities supplied are insufficient. The adequacy of the timeliness of delivery of EGSs was rated 6/10, based on the fact that entities that have an agreement with breeding programs receive their EGS on time. Crop-specific ratings for this indicator are available in Appendix 2.
6. Availability of crop varietal choice to farmers	2.13	2.06	In 2024, the number of varieties available on the market for the four crops was 16: three sorghum varieties, four millet varieties, six groundnut varieties, and three sesame varieties.
7. Utilization of quality commercial seed by farmers	2.73	0.33	In 2024, seed production for the four priority crops was: 125 MT of millet seed, 159 MT of sorghum seed, 217 MT of groundnut seed, and 100 MT of sesame seed. There were no imports or exports. Those volumes met 2% of the national requirements for sorghum seed, 6% for millet seed, 2% for groundnut seed, and 2% for sesame seed.
8. Clarity and enforcement of seed import/export regulations	6.00	5.50	Importers and exporters largely adhere to regulatory mandates. However, the seed import and export procedures and regulations are not clear to all seed companies and enforcement agencies, resulting in inconsistent enforcement. The regulations have not been applied of late since some countries have imposed restrictions on seed imports.
9. Adequacy of agro-dealer networks	4.00	2.50	In 2024, Chad had six agro-dealers. They were concentrated in the capital city, with minimal presence in the rural areas. Agricultural entrepreneurship is not very attractive due to the high risk nature of the sector and limited financing opportunities.
10. Availability of seed in small package sizes	0.00	0.00	None of the seed of the four priority crops is sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	9.00	8.00	The seed sector in Chad is guided by *Politique Nationale Semencière 2015*. This recent and comprehensive policy is operationalized through *Loi 016/PR/2016* with general and specific technical regulations.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	8.00	Chad is a member of ECOWAS. All seed policy instruments that were developed after 2015 have been adapted to the ECOWAS harmonized seed regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	2.00	Chad has a draft national biosafety framework. It was developed in 2008 with support from the United Nations Environmental Program (UNEP). It covers agriculture, health, wildlife, and the environment. However, draft framework has not yet been adopted.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	4.00	5.00	FMSS are recognized in Chad; specifically, the *Loi 016/PR/2016* on seeds and seedlings of plant origin includes mention of local or traditional seeds. While FMSSs are recognized on paper, in practice, they have received little support.
15. Adequacy of seed inspection services	6.00	3.33	In 2024, Chad had 34 public seed inspectors. However, more than 90% of the inspectors are concentrated in the capital city and cannot conduct inspections around the country on time. Logistical resources are very inadequate and do not allow for the effective deployment of the service. The control service uses a monitoring service to feed a database. GPS devices and tablets are used for this purpose.
16. Adequacy of government efforts to combat counterfeit seed	6.00	3.50	Combating the production and sale of counterfeit seed is guided by *Loi 016/PR/2016*. Measures used to control counterfeit seeds are conformity checks for institutional seed markets and the use of labels on seed packages issued by the official inspection and certification service. Penalties for infringement are three months-to-two years imprisonment and fines ranging from 50,000 to 5,000,000 CFA francs. However, the seed inspectors do not have the resources to carry out their mandate.
17. Adequacy of national seed trade association	0.00	4.67	In Chad, the Alliance of Seed Companies has been formed as the national seed association and is in the process of recruiting members. The overall performance of the association was rated 4.67/10 and comprised of the following sub-scores: effectiveness in advocacy – 3/10, managerial ability -5/10, providing value to members – 4/10, governance and democracy – 4/10, ability to mobilize resources – 7/10, and activities on important seed sector issues – 5/10.
FINAL ASSPI SCORE	**4.04**	**3.68**	Highest scores: in ECCAS: Burundi, 4.87 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Chad's economy has faced several challenges in recent years, including a contraction, which has impacted poverty reduction and development efforts since 2015. The World Bank highlights the need to develop stronger agricultural and livestock value chains as part of the solution for economic diversification, greater food security, and sustainable growth. Despite considerable progress in creating the requisite policy and regulatory instruments for seed sector reform, the agricultural sector lacks sufficient investment to eliminate existing bottlenecks and promote a vibrant, private sector-led industry. For the seed sector to address the existing challenges and to grow, the following priority issues need to be addressed:

- Enhancing financing for seed sector actors.
- Improving awareness and understanding of the variety release and registration process among public and private breeders.
- Increasing efforts to improve the distribution of seed to farmers.
- Establishing a national seed trade association to champion sector reform.

Data for the ASSPI Chad report was collected by:

Mahamat Nour Maï

Comité National des Semences et Plants (CNSP), Chad

African Seed Sector Performance Index (ASSPI) Country Brief – COMOROS

OVERVIEW OF THE SEED SECTOR

The Comoros' seed sector is in the nascent stage of development. The country does not have a national seed legislation. Seed production and marketing are mostly informal and conducted by a few agricultural cooperatives, individual seed producers, and non-governmental organizations. The key seed sector institutions include the Institut National de Recherche pour l'Agriculture, la Pêche et l'Environnement (INRAPE), in charge of variety release, registration, and seed certification, and the Direction Nationale Stratégique de l'Agriculture et de l'Elevage (DNSAE)/ National Strategic Directorate of Agriculture and Livestock, in charge of research and variety development. The four priority crops, as identified by local ASSPI experts, are banana, cassava, maize, and pigeon pea, which, combined, account for 82% of area harvested to field crops. The country is a member of the African Intellectual Property Organization (since 2013), the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) (since 2017).

Overall country score (out of 10):	2.40

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and roots and tubers
Banana	14,533	33%
Cassava	9,831	22%
Maize	11,691	26%
Pigeon pea	522	1%
Total		82%

Total arable land:	0.065 million ha
Population:	850,387
Number of farming households:	61,816
Contribution of agriculture to GDP:	36.6%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	4.00	1.00	In the Comoros, the system for approving new crop varieties is still developing and lacks formal structure. Since there are no specific laws or an official national variety catalog, INRAPE, DNSAE, and various projects introduce and assess new varieties through informal approaches. Variety trials take place in the field on an experimental basis, but do not follow standard DUS (Distinctness, Uniformity, Stability) or VATE (Agronomic, Technological, and Environmental Value) evaluation procedures.
2. Number of varieties released in last 3 years	0.00	0.00	No new varieties of the four crops were released between 2022 and 2024.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	1.83	3.67	In 2025, DNSAE did not employ scientists with PhD-level expertise in plant breeding. The current staff comprises agricultural engineers with specializations in seed production and certification, as well as professionals holding master's degrees in Agricultural Sciences, Life Sciences, and Plant Biotechnology. Seed industry experts assessed both the number of qualified breeders and the adequacy of funding at 3 out of 10. In contrast, research infrastructure received a higher rating of 5 out of 10, attributed to recent enhancements at INRAPE's experimental sites, including the establishment of a new greenhouse complex and laboratories dedicated to biotechnology, soil analysis, and plant pathology. Detailed crop-specific ratings are provided in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	4.00	0.00	The Comoros lacks a coordinating body for plant genetic resource management.
5. Adequacy of Early Generation Seed (EGS)	2.33	6.08	Key sources of EGS in The Comoros include INRAPE, IITA, FAO, FOFIFA (from Madagascar), and local suppliers. The adequacy of EGS supply was rated at 4.75 out of 10, reflecting the sector's early developmental stage, while quality earned a score of 6 out of 10 as private and public multipliers are not yet fully established. Delivery timeliness received a rating of 7.5 out of 10. Most EGS for banana and cassava were readily accessible, whereas maize EGS was predominantly imported.
6. Availability of crop varietal choice to farmers	0.00	1.64	In 2024, 10 varieties were available for the four crops, including five varieties each for maize and pigeon pea.
7. Utilization of quality commercial seed by farmers	MD	0.02	In 2024, no certified seed was produced for the four crops. Imports provided just 3.9% of the national seed requirement for maize seed and 0.5% of the same for pigeon pea seed.
8. Clarity and enforcement of seed import/export regulations	4.00	4.00	In 2024, 0.85 MT of maize seed and 0.5 MT of pigeon pea seed were imported. Seed import regulations, including phytosanitary rules and required authorizations, are available, and all importers must be authorized by INRAPE. However, limited capacity and poor coordination allow some imports to bypass procedures.
9. Adequacy of agro-dealer networks	4.00	4.00	In 2024, Comoros had 26 agro-dealers registered with INRAPE, most concentrated near the capital. This number is insufficient to serve producers outside the capital, who must travel to access inputs.
10. Availability of seed in small package sizes	MD	0.00	In 2024, no seed was sold in packages of 2 kg or smaller.
11. Status of national seed policy instruments	3.00	7.25	In 2024, three significant seed policy instruments were enacted: the National Agricultural Input Subsidy Policy, the National Plan on Agricultural Inputs, and the draft Law on Agricultural Inputs. The regulations required to implement this law have not yet been established. Additionally, a Presidential Decree issued in 2017 provides exemptions from taxes and customs duties for agricultural inputs, as well as those related to livestock and fisheries.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	3.00	2.00	The Comoros belongs to SADC and COMESA but has not signed the SADC Harmonized Seed Regulatory System memorandum yet. Its seed law is not harmonized with the 2014 COMESA Harmonized Seed Trade Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	4.00	0.00	The Comoros has no national biosafety framework.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	7.00	FMSS in Comoros are formally recognized under Decree No. 13-015/PR, a Presidential Decree that establishes and outlines the statutes of Centres Ruraux de Développement Économique (CRDE), mandated to advance rural development, safeguard ecosystems, and provide advisory services, training, and support to both farmers and the agricultural sector.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
15. Adequacy of seed inspection services	0.00	2.67	INRAPE employs two seed inspectors who face major challenges due to limited transportation and the absence of digital inspection tools.
16. Adequacy of government efforts to combat counterfeit seed	2.00	1.50	The Seed Law was enacted in 2024, but the implementing regulations are still being developed under the Strengthening Emergency Preparedness and Response to Food Crisis (SEPAREF) project, which is funded by the African Development Bank. Consequently, penalties for selling or distributing counterfeit seeds have not yet been enforced. Additionally, the phytosanitary inspection service conducts checks on imported seeds at border entry points.
17. Adequacy of national seed trade association	0.00	0.00	The Comoros does not have a national seed association.
FINAL ASSPI SCORE	**2.14**	**2.40**	Highest scores: in COMESA: Egypt, 8.13 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

The seed sector in the Comoros is in the nascent stage and faces several key challenges, as highlighted by the ASSPI study:

- Finalize regulations to implement the new Seed Law.
- Provide funding to INRAPE for research and crop variety development.
- Train seed producers in production and marketing.
- Increase farmer awareness of certified seed benefits.

Data for the ASSPI Comoros report were collected by:

Dr. Moilim Fahad

Head of Variety Registration and Release at Institut National de Recherche pour l'Agriculture, la Pêche et l'Environnement (INRAPE).

African Seed Sector Performance Index (ASSPI) Country Brief – CONGO REPUBLIC

OVERVIEW OF THE SEED SECTOR

The formal seed sector in the Republic of the Congo[16] (also known as Congo-Brazzaville) is in the nascent stage of development. The key government institutions in the seed sector are L'Institut National de Recherche Agronomique, (IRA) which is responsible for research and variety development, and Centre National des Semences Améliorées, (CNSA) which is responsible for seed inspection and certification. The national seed policy instruments have not been adopted by Parliament and hence are not operational. With no formal regulation, the seed sector remains predominantly informal and unregulated. There are no private seed companies in the country, but there are efforts to support agricultural cooperatives that can serve as seed multipliers under a formal structure. The four priority crops, as identified by the local experts for the ASSPI report, are cassava, maize, groundnut, and banana. Combined, these four crops account for 83% of the area harvested to field crops. The Republic of the Congo is a member of the Economic Community of Central African States (ECCAS).

Overall country score (out of 10):	1.56

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, oil crops, roots and tubers
Cassava	**162,292**	**59%**
Maize	**13,000**	**5%**
Groundnut	**49,569**	**18%**
Banana	**12,695**	**5%**
Total		**86%**

Total arable land:	**0.55 million ha**
Population:	**6,182,885**
Number of farming households:	**1,532,018**
Contribution of agriculture to GDP:	**9.4%**

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	**0.00**	**0.00**	There is no system for variety release and registration in the Republic of the Congo
2. Number of varieties released in last 3 years	**0.00**	**0.00**	During the 2022-2024 period, no varieties of the four crops were released.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**2.67**	**0.08**	As of 2025, the National Institute for Agricultural Research (IRA) had only one maize breeder, among the four priority crops. The adequacy of breeders was rated 0.25/10 due to shortage of breeders. The adequacy with the funding of breeding programs was rated 0/10 due to the inadequate funding allocated to IRA. The adequacy of research infrastructure was rated 0/10 due to the lack of facilities for variety development.

16 In tables and figures throughout this report, this country is referred to as "Congo Republic" for space reasons.

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	4.00	0.00	There is no national gene bank in the country. As such, there is no coordinated effort on plant genetic resource management.
5. Adequacy of Early Generation Seed (EGS)	2.00	0.92	The International Institute for Tropical Agriculture (IITA), INERA in the Democratic Republic of the Congo and CNRA in Côte d'Ivoire are the main sources of EGS for the four priority crops. The adequacy of the quality of EGS was rated 1.00/10, justified largely by the absence of a seed quality control system. The adequacy of the quantity of EGS was rated 1.25/10, reflecting that severe shortage of EGS for groundnut and cassava and moderate availability of EGS for maize, and banana. The adequacy of timeliness of EGS delivery was rated 0.50/10, as there are major delays in meeting orders. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	1.78	1.35	In 2025, the number of varieties available on the market for the four crops was six: three maize varieties and three cassava varieties.
7. Utilization of quality commercial seed by farmers	0.07	1.15	There was no production of certified seed of the four crops in 2024. Adjusting for imports and exports, the total available seed meets 4% of the national seed requirements for cassava, 40% of maize seed, and 6% of groundnut seed requirements.
8. Clarity and enforcement of seed import/export regulations	5.00	10.00	Seed importation in the Republic of the Congo is monitored closely. All importers are required to obtain an import permit. This is provided after submission of the proforma invoice, supplier details, and mode of transport. Imports must undergo phytosanitary inspection at the border point of entry. In 2024, the volume of seed imported was 0.95 MT of cassava planting materials, 161 MT of maize seed, and 14 MT of groundnut seed.
9. Adequacy of agro-dealer networks	5.00	1.50	In 2024, the Republic of the Congo had 28 agro-dealers. Agricultural input distributors are mainly located in the large cities of Brazzaville and Pointe Noire. Their presence is weaker in smaller towns and seed production areas.
10. Availability of seed in small package sizes	0.00	MD	None of the maize or groundnut seed is sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	5.00	4.50	The National Seed Policy of 2020 has been validated by a technical team of seed experts but is yet to be passed by Parliament. The Seed Law and specific Technical Regulations for maize, cassava, and soya bean have been developed but are still being reviewed by the Cabinet.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	6.00	2.00	The Republic of the Congo is a member of the ECCAS and the Economic and Monetary Community of Central Africa (CEMAC). CEMAC has a regional program on seed sector development that aims to formalize collaboration between member countries and harmonization of seed policies and regulations. CEMAC has adopted Regulation No. 10/14-UEAC-224-CM-27 on the harmonization of rules governing the production, quality control, certification, and marketing of seeds in the CEMAC zone. The government has participated in the adoption of these regulations by the Ad Hoc Committee of Ministers of the Agricultural Sector. However, the national instruments are yet to be aligned with the regional Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	2.00	1.00	The National Biosafety Framework which includes the aspects related to agricultural biotechnology has been drafted but has not been adopted.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS are not recognized in the seed policy instruments.
15. Adequacy of seed inspection services	0.00	0.00	There are no seed inspectors in the country.

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	0.00	2.50	The Seed Law, which is yet to be passed, contains several clauses to address the challenge of counterfeit seed. The Law will penalize those who sell or distribute seed without the proper authorization, those who sell or distribute seed that has not been approved, or those who intentionally mislabel seed.
17. Adequacy of national seed trade association	0.00	0.00	There is no national seed trade association in the Republic of the Congo.
FINAL ASSPI SCORE	**1.97**	**1.56**	Highest scores: in ECCAS: Burundi, 4.87 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Congo Republic is witnessing a gradual economic recovery, with a real GDP growth of 3.2% in 2022, bolstered by both the energy (oil) and other sectors. Despite this, economic diversification remains a critical challenge due to the country's heavy reliance on oil revenues and the underdevelopment of its agricultural sector. With only a small fraction of arable land under cultivation, the agriculture sector has substantial potential for expansion, which will improve food security and reduce poverty. The seed sector is nascent and needs support through policy reform and public investment across the system. Some priority areas that need urgent attention are:

- Approval and implementation of the national seed policy and national seed strategy.
- Developing the necessary legal and regulatory instruments to regulate the actors and key activities in the formal seed sector.
- Building the capacity of all key actors in the industry, including seed producers, seed inspection and certification officers, and breeders, to undertake their respective mandates across the seed value chain, as specified in the national seed policy.

Data for Congo Republic ASSPI report were collected by:

Dr. Guy Romain Aimé Kombo

Director, National Center for Improved Seeds in the Ministry of Agriculture, Livestock and Fisheries.

African Seed Sector Performance Index (ASSPI) Country Brief – CÔTE D'IVOIRE

OVERVIEW OF THE SEED SECTOR

The seed sector in Côte d'Ivoire is in the early growth stage of development. The formal seed sector focuses on perennial and annual food crops. While the system for perennial crops is well-structured, the system for annual food crops is in the early growth stage of development. The Direction des Semences Engrais et Produits Assimilés oversees the seed inspection and certification. The Laboratoire National d'Analyse des Semences conducts laboratory testing of seeds, while the Centre National de Recherche Agronomique (CNRA) is the national agricultural research institution. These institutions are all under the Ministère d'Etat, ministère de l'Agriculture et du Développement Rural (MEMINADER). The four priority crops, as identified by local seed sector experts, are rice, maize, yam, and cassava. Combined, they account for 90% of the area harvested to field crops. Seed for yam, cassava, rice and maize is produced by private seed producers, and the planting material for yam is produced by research institutions. Côte d'Ivoire is a member of Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	4.39

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, roots and tubers
Yam	1,498,407	32%
Cassava	1,394,159	30%
Rice	811,177	18%
Maize	640,000	14%
Total		94%

Total arable land:	4.803 million ha
Population:	31,165,654
Number of farming households:	1,734,941
Contribution of agriculture to GDP:	15.9%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	5.00	6.50	In Côte d'Ivoire, variety release and registration follow technical guides, requiring DUS and VATE tests by CNRA. On paper, CONASEM reviews the results, and approved varieties are listed in the National Variety Catalog, published by ministerial decree. However, the catalog is outdated; the last edition was published in 2014. Approval fees are set by Interministerial Decree No. 252 MINAGRI/MPMEF/MPMB (June 19, 2014) under the Ministry of Agriculture.
2. Number of varieties released in last 3 years	2.14	1.86	Between 2022 and 2024, seven new varieties of four priority crops were introduced: six for rice and one for maize. No new cassava or yam varieties were released during this period.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	5.00	3.50	In 2025, the CNRA had eight active breeders for four priority crops: rice (3), cassava (3), maize (1), and yam (1). Breeder adequacy scored 3/10, down from a baseline of two yam and three maize breeders in 2023, and remains below sector needs. Funding for breeding programs was rated 3.5/10, largely covering salaries and basic operations, with most research supported by external sources. The score declined from 5 out of 10 in 2023, indicating a reduction in available funding. Infrastructure received a 4/10, reflecting basic but outdated facilities. The score fell significantly from 7/10 in 2023, suggesting a decline in the quality of the infrastructure over time. Crop-specific ratings are in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	4.00	The CNRA is responsible for conserving and utilizing plant genetic resources in Côte d'Ivoire, using both in-situ and ex-situ methods. It operates two gene banks—one located in Abidjan and another in Bouaké— and does not collaborate with community seed banks. The two gene banks together hold a total of 3,200 accessions spanning four crops: 585 yam, 767 cassava, 860 rice, and 988 maize accessions.
5. Adequacy of Early Generation Seed (EGS)	6.33	5.83	The CNRA and AfricaRice are the primary EGS sources in Côte d'Ivoire, with some private companies producing their own basic seed. EGS quantity is rated 3.75/10 as supply from CNRA falls short due to infrastructure and forecasting issues. EGS quality scores 7.75/10, meeting standards set by MEMINADER, though basic yam seed occasionally faces quality problems. Delivery timeliness is rated 6/10, with most orders arriving as scheduled. Crop-specific details are in Appendix 1.
6. Availability of crop varietal choice to farmers	3.69	4.25	By 2025, there were 47 different varieties of the four main crops available on the market, compared to 39 varieties in 2022. The breakdown includes 22 varieties of rice, 15 varieties of maize, and five each of yam and cassava.
7. Utilization of quality commercial seed by farmers	0.23	0.09	In 2024, only 128 MT of rice seed was officially produced in Côte d'Ivoire. There was no certified seed production of the other three crops. However, adjusted for imports and exports (Indicator 8 below), the total volume of seed available (through local production or imports) meets 2% of the national seed requirement for rice seed and maize seed. There was neither local production nor imports of the other two crops, yam and cassava.
8. Clarity and enforcement of seed import/export regulations	6.00	6.50	Seed import and export procedures and regulations follow the ECOWAS-UEMOA-CILSS harmonized Seed Regulations. Imported seed is required to carry a phytosanitary certificate in addition to other documents. However, the phytosanitary checks are visual due to the lack of a quarantine station. In 2024, 39 MT of rice seed and 142 MT of maize seed were imported. There were no exports of the four crops.
9. Adequacy of agro-dealer networks	7.00	5.00	By 2025, Côte d'Ivoire had 20 officially approved agro-input distributors, primarily based in Abidjan and other large cities. In addition, many smaller, unapproved distributors and vendors operated throughout the country.
10. Availability of seed in small package sizes	2.50	0.44	Among the four priority crops, 3% of rice seeds and 6% of maize seeds were distributed in small packages weighing 2 kilograms or less.
11. Status of national seed policy instruments	7.00	6.25	C/REG. 4/05/2008 of ECOWAS, also known as the ECOWAS-UEMOA-CILSS seed regulation, serves as Côte d'Ivoire's primary framework for seed regulation. This regulation is complemented by additional decrees, such as Decree No. 2013-678 from October 2, 2013, which established both the National Committee for Seeds and Plants and the National Catalog of Plant Species and Varieties. Currently, the government is working on new measures, including a National Seed Policy, National Seed Law, National Seed Strategy, and specific decrees related to seed importation, exportation, and plant variety protection.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	7.00	The ECOWAS Harmonized Regulations, C/REG. 4/05/2008, were published in Côte d'Ivoire's Official Gazette on April 15, 2013. Following this, Decree N° 2013-678 (dated October 2, 2013) set up the National Catalog of Plant Species and Varieties cultivated in Côte d'Ivoire, while Decree N° 2013-679 (issued the same day) formed the National Seed Committee and outlined its responsibilities. Ministerial Order N° 25/MINAGRI/MPMEF/MPMB, enacted on June 19, 2014, listed the actions and duties to be performed by the Ministry of Agriculture. Nevertheless, several aspects needed for complete harmonization remain unaddressed, such as creating a support fund for the seed sector.
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	6.00	Biosafety in Côte d'Ivoire is regulated by *Loi n°2016-553 du 26 juillet 2016*. As the *Commission Nationale de Biosécurité et de Biosûreté* (CNBIOS) and *Observatoire National de Biosécurité* (ONBIOS) are not yet operational, the *Ministère de l'Environnement* currently serves as the Permanent Secretariat. It handles applications and appoints inter-ministerial commissions to assess and manage risks.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	2.00	FMSS are not formally acknowledged within the national seed policy framework. Nevertheless, several organizations operating in the country actively promote FMSS initiatives.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	3.00	3.33	By 2025, Côte d'Ivoire's public seed inspector corps had grown from 43 to 226. However, inspectors lack adequate transportation resources, and digital tools have not yet been adopted for field inspections.
16. Adequacy of government efforts to combat counterfeit seed	3.00	5.00	Efforts to prevent the production and sale of counterfeit seeds are supported by Loi N°88-650 du 07/07/88, which lays out penalties for agricultural trade offenses. This law, as modified by Loi N° 89-521 du 11/05/89 and Loi N° 63-301 du 26/06/1963, also addresses fraud prevention. Measures against counterfeit seeds include secure labeling and phytosanitary seed inspections. Violations can result in prison sentences of 5 to 10 years, fines ranging from 1 to 5 million CFA francs, and revocation of professional or producer licenses. Despite these measures, enforcement remains weak due to inadequate resources.
17. Adequacy of national seed trade association	2.50	7.08	There are three national seed associations in Côte d'Ivoire: *Association Nationale des Semenciers de Côte d'Ivoire* (ANASEMCI), Union des Sociétés Semencières de Côte d'Ivoire (USSEM-CI) and Seed Life Côte d'Ivoire. USSEM-CI, established in 2023, is the most active and is rated here. USSEM-CI received an overall rating of 7.08/10, comprised of the following sub-scores: activities on important seed sector issues – 6.5/10, providing value to members -7.3/10, ability to mobilize resources – 5.8/10, advocacy on seed sector issues – 6.5/10, managerial ability – 7.2/10, governance, and democracy – 9.2/10.
FINAL ASSPI SCORE	**4.32**	**4.39**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Côte d'Ivoire's seed sector features a robust public sector presence alongside a modest but expanding involvement of private entities in seed production and marketing. The sector demonstrates significant development potential, as reflected by increasing engagement from both domestic and international seed companies. With favorable growing conditions for various crops and a tradition of innovative breeding, the sector stands to gain from enhanced public-private partnerships. In order to maintain its current growth trajectory, several priority areas require attention:

- Strengthening CNRA's ability to produce high-quality Early Generation Seed (EGS) for commercial purposes through increased funding for breeders and improvements in breeding infrastructure, variety development, and maintenance.
- Completing seed policy instruments currently under development by MEMINADER, including the National Seed Policy, National Seed Law, and National Seed Strategy.
- Building the capacity of the Directorate of Seeds within MEMINADER across all facets of seed quality control, such as field and laboratory inspection and seed certification in line with national and ECOWAS standards.
- Promoting awareness among farmers regarding the benefits of certified seed to encourage higher adoption rates.

Data for the ASSPI Côte d'Ivoire report was collected by:

Ya née Silue Naminata

Direction des Semences Engrais et Produits Assimilés, Côte d'Ivoire.

African Seed Sector Performance Index (ASSPI) Country Brief – DEMOCRATIC REPUBLIC OF THE CONGO

OVERVIEW OF THE SEED SECTOR

The seed sector in the Democratic Republic of the Congo (DRC)[17] is in the emerging stage of development. It has minimal legal and regulatory frameworks to guide its activities. The Service National de Semences (SENASEM) is mandated to coordinate seed sector activities. The Technical Regulations for the Production, Control, and Certification of Seeds guide quality control in the seed sector. Seed producers comprise local and foreign seed companies, agri-multipliers, farmers' organizations, and seed cooperatives. The Institut National pour l'Etude et Recherche Agronomique (INERA) is the national agricultural research institution (NARI) in charge of research and variety development. The four priority crops identified by the local seed sector experts are maize, rice, bean, and soya bean. Combined, these four crops account for 95% of area harvested to field crops. The Democratic Republic of the Congo is a member of the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Economic Community for Central African States (ECCAS), and the Southern African Development Community (SADC).

Overall country score (out of 10):	3.27

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	3,105,142	49%
Rice	1,844,898	29%
Bean	513,001	8%
Soya bean	51,000	1%
Total		87%

Total arable land:	14.898 million ha
Population:	105,789,731
Number of farming households:	16,030,758
Contribution of agriculture to GDP:	9.6%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	5.00	3.75	The variety release process falls under the *Commission de la technologie pour l'admission au catalogue* (CTAC) at SENASEM. Candidate varieties must pass Distinctness, Uniformity, and Stability (DUS) and Value for Cultivation and Use (VCU) tests. Approved varieties are listed in the Catalogue of Plant Varieties of Species, which is updated every three years by Ministerial Decree. The catalogue has not been updated since 2019 due to a lack of funding; in the interim, newly released varieties are entered on a provisional list.
2. Number of varieties released in last 3 years	3.71	3.57	Between 2022 and 2024, a total of 19 new varieties were introduced across four crops: eight types of maize, six types of rice, and five types of soya bean. These varieties have been placed on a provisional list as they wait for the Catalog to be updated.

17 Throughout this report, this country is referred to as the 'Democratic Republic of the Congo' or 'DRC' interchangeably.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.67	3.25	By 2025, INERA had 13 breeders working on four different crops: maize and rice each had four breeders, beans had three, and soya bean had two. The adequacy of the number of breeders was rated 5.25 out of 10. Funding for breeding programs scored low, at 2.5 out of 10, reflecting minimal government backing and the end of some projects. Infrastructure for basic research was given a score of just 2 out of 10, mainly because of a lack of seed labs, storage space, and necessary equipment. For more detailed ratings by crop, refer to Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	2.67	INERA manages PGRFA activities but has not collected plant genetic resources since 1987. The institute holds 276 accessions—2 maize, 170 rice, 21 bean, and 83 soya bean—but only 4% are currently used.
5. Adequacy of Early Generation Seed (EGS)	4.33	3.50	Sources of EGS for the four priority crops include INERA (all four crops), the University of Lubumbashi (UNILU) (maize), Harvest Plus (bean and soya bean), the International Maize and Wheat Improvement Center (CIMMYT) (maize), Quali Basic Seed (maize), Africa Rice and the International Rice Research Institute (rice), CIAT (bean), and several private seed companies. The adequacy of EGS quantity received a rating of 5.25/10, while the quality of EGS produced was rated at 2.25/10. Timeliness of EGS delivery was assessed at 3/10. These ratings indicate that INERA faces challenges in meeting high seed quality standards and demonstrates limited capacity in seed production, maintenance, and storage. Additionally, EGS supply is impacted by delayed payments from seed producers and logistical obstacles affecting seed distribution. Detailed crop-specific ratings can be found in Appendix 1.
6. Availability of crop varietal choice to farmers	6.37	3.40	In 2025, there were a total of 35 varieties of the four crops available on the market: 10 maize varieties, four rice varieties, 12 bean varieties, and nine soya bean varieties.
7. Utilization of quality commercial seed by farmers	0.76	2.39	In 2024, seed production volumes were 6,412 MT (maize), 2,058 MT (rice), 2,936 MT (bean), and 243 MT (soya bean), meeting 25% of maize, 18% of rice, 24% of bean, and 20% of soya bean national requirements.
8. Clarity and enforcement of seed import/export regulations	5.00	4.50	The importation of seed into the DRC requires phytosanitary and tax-exemption certificates. Additionally, all imported seed is subject to inspection by the quarantine service and subsequent testing by the seed laboratory. While regulations governing seed imports are generally well-defined, ongoing efforts aim to enhance and align them with the COMESA Seed Trade Regulations of 2014. SENASEM reported that there were no recorded seed imports or exports for the four priority crops in 2024, making it impossible to evaluate the enforcement of seed import regulations.
9. Adequacy of agro-dealer networks	3.00	3.00	Reliable statistics on the number of agro-dealers in the DRC are unavailable, largely because this extensive sector operates mainly informally. Information is kept at the provincial level and is rarely published in a systematic way. The new draft law, still under development, includes provisions for registering seed sellers.
10. Availability of seed in small package sizes	2.80	2.06	Of the four priority crops, 30% of maize seed, and 9% of the seed produced for the other three crops was sold in small packages of 2kg or less.
11. Status of national seed policy instruments	3.00	4.00	The DRC currently lacks a formal seed law, with a draft bill still pending. Relevant regulations include *L'arrêté ministériel n°042/CAB/MIN/AGRI/06* (National Seed Policy) and *L'arrêté ministériel n°003 du 1990*, which established SENASEM.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	5.00	4.00	The DRC belongs to several regional organizations: COMESA, ECCAS, EAC, and SADC. Since it does not have a seed law, the DRC has aligned its local seed policies with regional standards, though these updates are still awaiting official approval. Meanwhile, the country is moving towards harmonizing its domestic regulations with the COMESA Seed Regulations. The country also plans to register some national crop varieties in both the COMESA and SADC regional catalogs and aims to use similar certification standards domestically. The DRC is yet to sign the Memorandum of Understanding for the SADC Harmonized Seed Regulatory System.

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	4.00	*Conseil National de Semences* (CONASEM) and *Conseil Provincial de Semences* (COPROSEM) act as consultative bodies for national biosafety but are currently only operational in North Kivu, South Kivu, Haut-Katanga, and Kasaï Oriental provinces.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	1.00	2.50	Currently, FMSS are acknowledged in principle, as the DRC's seed policy instruments remain in draft status. However, development partners and NGOs continue to actively support initiatives associated with FMSS.
15. Adequacy of seed inspection services	5.00	3.67	SENASEM estimates there were 235 public seed inspectors in 2024, but the exact number is unclear due to decentralized provincial services. Inspectors generally lack technical skills and transportation needed for effective inspections.
16. Adequacy of government efforts to combat counterfeit seed	3.00	3.00	Counterfeit seed is common in the DRC. SENASEM needs to be strengthened so it can carry out necessary inspections and consistently monitor seed activities throughout the country. Additionally, the new Seed Bill—which is still being drafted—will introduce penalties for anyone involved in producing or selling fake seeds.
17. Adequacy of national seed trade association	1.17	2.33	The *Union Nationale des Producteurs Agricoles du Congo* (UNAGRICO) serves as the national seed association in the DRC but has limited activity in seed sector matters and is not widely recognized across provinces. Seed industry professionals gave UNAGRICO an overall score of 2.33 out of 10, broken down as follows: activity on significant seed sector issues (4/10), advocacy effectiveness (3/10), value provided to members (2/10), managerial capability (2/10), democracy in elections and governance (2/10), and resource mobilization ability (1/10). Meanwhile, several provinces with stronger seed production have established their own local seed associations. For instance, South Kivu's *Association de Producteurs et de Distributeurs d'Intrants Agricoles du Congo* (APDIAC) and Haut-Katanga's *Association de Producteurs Semenciers du Katanga* (APSKA) are both very active within their regions. Additionally, seed producers from eastern DRC have formed another national group, the *Union Nationale de Producteurs de Semences du Congo* (UNAPSCO), which is headquartered in North Kivu province.
FINAL ASSPI SCORE	**3.81**	**3.27**	Highest scores: in COMESA: Egypt, 8.13 in ECCAS: Burundi, 4.87 in EAC: Kenya, 7.64 in SADC and Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Despite vast arable land, water resources, and a varied climate, agriculture in the Democratic Republic of the Congo remains underdeveloped and mostly subsistence-based, with limited commercial crop production. Political instability has impeded sector growth. Key seed sector reform priorities are:

- Finalizing the Seed Bill.
- Drafting decrees to enforce the Seed Policy and Law.
- Increasing support for INERA to produce early-generation seed.
- Strengthening SENASEM's capacity for quality control.
- Expanding and improving the provincial agro-dealer network.

Data for the ASSPI Democratic Republic of the Congo report was collected by:

André Wutezi Bofengo

Seed Inspector, Service National de Semences (SENASEM)

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

African Seed Sector Performance Index (ASSPI) Country Brief – DJIBOUTI

OVERVIEW OF THE SEED SECTOR

Djibouti's seed sector is in the nascent stage of development. Djibouti's agricultural sector faces significant structural challenges, with limited access to fresh water being the most prominent. Consequently, the country relies on imports for approximately 90% of its food supply. The seed sector is currently in the nascent stage of development, and the government is formulating key policy frameworks, including a National Seed Policy and National Seed Law, both of which are in draft status. Although national seed regulations have yet to be established, Djibouti has ratified several international legal instruments pertaining to seed production. Oversight of the seed sector is provided by the Department of Agriculture and Forests (DAF) within the Ministry of Agriculture. The Institut des Sciences de la Vie (ISV) - Centre d'Études et de Recherche de Djibouti (CERD) is integral to variety maintenance and supports seed inspection and certification efforts. Local experts have identified tomato, onion, chili pepper, and okra as the four priority crops, collectively accounting for roughly 99% of the area harvested for vegetables. Djibouti is a member of both the Common Market for Eastern and Southern Africa (COMESA) and the Intergovernmental Authority on Development (IGAD).

Overall country score (out of 10):	4.53

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses and vegetables
Tomato	358	54%
Onion	8	1%
Chili Pepper	285	43%
Okra	4	1%
Total		99%

Total arable land:	0.003 million ha
Population:	1,152,944
Number of farming households:	3,200
Contribution of agriculture to GDP:	2.5%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	0.00	1.75	Djibouti currently lacks a regulatory framework for the variety release and registration process. However, the Ministry of Agriculture, in partnership with ISV/CERD and with support from the BREFONS project, is developing draft seed legislation and accompanying regulations. These initiatives will establish both the National Variety Release Committee and the national catalog of plant varieties.
2. Number of varieties released in last 3 years	0.00	0.00	Currently, Djibouti does not have an established process for variety release. Nevertheless, a number of promising tomato, okra, and chili varieties have been evaluated through pre-release trials and demonstration plots as part of several ongoing projects.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	0.00	4.00	The country has eight breeders, with two working on each of the four priority crops. They focus solely on variety evaluations rather than actual breeding work. Although this is an improvement from zero breeders in 2023, the number is considered insufficient for the country's seed sector, receiving a rating of 4/10. Similarly, funding for breeding programs is rated 4/10 due to inadequate public support, making the programs largely dependent on external funders like the World Bank. Research infrastructure also received a rating of 4/10. While some key facilities exist—such as experimental field stations, a screenhouse, irrigated plots, and a soil and seed analysis laboratory— additional resources, including climate-controlled greenhouses, seed processing units, and advanced data-driven breeding tools— are needed. Crop-specific ratings can be found in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	0.00	5.00	ISV - CERD, with the Ministry of Agriculture, has worked to collect and conserve local plant genetic resources, focusing on traditional varieties of tomato, okra, onion, and chili pepper through the BREFONS project. There is infrastructure for *ex situ* conservation, but improvements are needed in storage and digital databases. More staff and funding are required for optimal performance. The center currently maintains 10 crop accessions: 4 tomato, 3 onion, 2 chili pepper, and 1 okra.
5. Adequacy of Early Generation Seed (EGS)	0.00	6.67	The quality of Early Generation Seed (EGS) provided in Djibouti is generally satisfactory, with ongoing efforts to align with international and regional seed standards. The ISV-CERD, in partnership with the Ministry of Agriculture and international organizations such as the World Vegetable Center, has undertaken the production and evaluation of pre-basic and basic seeds through controlled trials and greenhouse methodologies. Consequently, both the quality and quantity of EGS supplied received a rating of 6 out of 10. Delivery timeliness was rated 8 out of 10, reflecting ISV-CERD's implementation of a system for assessing EGS requirements. The increase in scores observed in 2025 is attributed to the set-up of breeding programs for the four priority crops. Detailed crop-specific ratings are included in Appendix 1.
6. Availability of crop varietal choice to farmers	1.14	1.78	In 2024, a total of 12 varieties were available in the market across four crops: five tomato varieties, four onion varieties, two chili pepper varieties, and one okra variety.
7. Utilization of quality commercial seed by farmers	3.63	9.35	In 2024, seed production for the four specified crops amounted to 20 MT of tomato seed, 18 MT of onion seed, 0.10 MT of chili pepper seed, and 0.02 MT of okra seed. After accounting for imports as referenced in Indicator 8, the total available seed fulfills 100% of the national seed requirements for tomato, onion, and chili pepper, and 54% of the national requirement for okra seed.
8. Clarity and enforcement of seed import/export regulations	0.00	2.00	Djibouti lacks a Seed Law or Seed Regulations, but the Directorate of Plant Protection sets import procedures for phytosanitary and customs requirements. The Ministry of Agriculture issues import permits and phytosanitary certificates. Although the process is generally understood, formal written procedures and guidelines are still being developed, sometimes causing delays or confusion—especially for private sector actors or new importers. In 2024, there were 0.25 MT of tomato seed imports and 0.3 MT of onion seed, 0.2 MT of chili seed and 0.12 MT of okra seed imports. This is a significant increase from the 3 MT of imports of each crop in 2022.
9. Adequacy of agro-dealer networks	4.00	7.50	As of 2025, only two agro-dealers were officially registered in the country, although others operate in the principal agricultural regions of Tadjourah, Ali Sabieh, and Dikhil. Ongoing initiatives are designed to encourage the establishment of more rural-based agro-dealers. Although the current number of agro-dealers remains limited, it is considered sufficient relative to the scale of agricultural activity within the country.
10. Availability of seed in small package sizes	0.12	8.25	Most seed from these four crops is sold in packages of 2 kg or less, typical for vegetable seeds. Such small package sales account for 85% of tomato seed, 80% of onion seed, and 75% for both chili pepper and okra seed. The overall score changed in 2025 because seed production data became available for all crops, and citrus fruits and melon were replaced by chili and okra, which have seeds in small packages.
11. Status of national seed policy instruments	3.00	2.00	Djibouti currently lacks a national seed law or regulatory framework. In response, the country has developed a draft national seed policy in collaboration with ISV-CERD and international partners such as World Veg. This draft establishes the strategic objectives for creating a sustainable seed sector, integrating both formal and farmer-managed systems, fostering public-private partnerships, and enhancing smallholder farmers' access to high-quality seeds.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	3.00	3.00	Djibouti is a member of COMESA. The country has convened multiple meetings related to the COMESA Seed Trade Harmonization Regulations and has followed the procedures detailed in the COMESA Seed Harmonization Implementation Plan (COMSHIP). Nevertheless, due to the absence of relevant national policy instruments, full harmonization with regional standards has not yet been achieved.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	7.00	Djibouti's National Biosafety Framework, governed by Law No. 117/AN/11/6ème and Decree No. 2012-0039/PR/MERN, regulates biosafety measures for plant breeding, GMOs, and seed biotechnology. Supported by national and international stakeholders, including the United Nations Environment Programme (UNEP), the strategy is overseen by a national biosafety committee under the Ministry of Environment. Ongoing efforts focus on raising stakeholder awareness and building capacity.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	4.00	Djibouti has no national seed policy, so FMSS lack explicit policy support. Still, the government backs Farmer-Managed Seed Systems by promoting community seed production in arid areas, aiding local cooperatives and advisors to preserve varieties, and including FMSS in extension services that encourage seed recycling, on-farm selection, and seed fairs.
15. Adequacy of seed inspection services	1.00	7.67	In 2025, Djibouti had 12 public seed inspectors, up from five in 2022, five working under the Department of Agriculture and seven private inspectors. Although the number of inspectors increased since 2023, this number is sufficient for the country's current seed production activities. Seed inspection teams in Djibouti have adequate, though not optimal, means of transport. Inspectors use tablets and online data collection software for increased efficiency.
16. Adequacy of government efforts to combat counterfeit seed	7.00	7.00	The Plant Protection Directorate and national seed service combat counterfeit seed by: (i) conducting regular surveillance and inspections in fields and at borders; (ii) running awareness campaigns for agro-dealers and farmers; and (iii) adding security features like seals and QR codes to seed packages.
17. Adequacy of national seed trade association	0.00	0.00	Djibouti has no national seed trade association.
FINAL ASSPI SCORE	**1.35**	**4.53**	Highest scores: in COMESA: Egypt, 8.13 in IGAD: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Djibouti faces ongoing agricultural challenges due to its harsh climate, limited water, and scarce arable land. While traditionally dependent on food imports, it is now pursuing self-sufficiency. The seed sector is underdeveloped and requires reforms throughout the system. Key priorities are:

- Completing a national seed policy, law, and related instruments to establish a formal sector.
- Creating a variety release and registration process.
- Training seed producers and officials on quality control in production, processing, storage, and certification.

Data for the ASSPI Djibouti report was collected by:

Dr. Chiek Sougueh

Head of the Agronomy and Ecology Laboratory in the Institute of Life Sciences at the Centre d'Études et de Recherche de Djibouti (CERD).

African Seed Sector Performance Index (ASSPI) Country Brief – EGYPT

OVERVIEW OF THE SEED SECTOR

Egypt's seed sector is in the growth stage of development, with significant advances since its early foundations in 1924 focused on cotton seed. Today, certified seed production and marketing are primarily handled by private companies, both domestic and international. The government mainly produces seeds for cotton and essential crops such as wheat, maize, and rice, aiming to regulate prices for farmers' benefit. Two key governmental agencies are involved: the Central Agency for Seed Certification (CASC), which manages seed control and certification, and the Agricultural Research Centre (ARC), dedicated to breeding and developing new varieties. According to local experts, wheat, rice, maize, and broad bean are the top priority crops, making up 93% of Egypt's harvested field crop area. Egypt is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Community of Sahel–Saharan States (CEN-SAD).

Overall country score (out of 10):	8.13

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Wheat	1,386,892	42%
Rice	704,158	21%
Maize	950,000	29%
Broad bean	33,752	1%
Total		93%

Total arable land:	3.103 million ha
Population:	114,535,772
Number of farming households:	7,600,000
Contribution of agriculture to GDP:	14.5%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	7.00	10.00	The Agricultural Seed Crops Registration and Release Committee oversees variety release under the Ministry of Agriculture. The Central Agency for Seed Certification (CASC) conducts two-year DUS tests per UPOV standards. VCU tests are done by the Field Crop Research Institute, with disease and insect evaluations handled by the Pathological Research Institute and the Plant Protection Research Institute, respectively. The Committee holds scheduled meetings; ad hoc meetings may also be held. The variety list is regularly updated and sent to clients. CASC states the process takes 24 months.
2. Number of varieties released in last 3 years	5.14	8.78	Between 2022 and 2024, 70 new varieties were released across four priority crops—more than double the 30 varieties released from 2000 to 2022. Specifically, there were 52 maize varieties, nine wheat varieties, five broad bean varieties, and four rice varieties.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	7.58	5.50	In 2024, ARC had 355 scientists for the four crops: 110 for wheat, 126 for rice, 70 for maize, and 49 for broad bean. The scientists include breeders (and PhD and Masters' levels) and other researchers/ technical officers who support the main breeders. The adequacy of the number of breeders was rated 8/10 as the numbers are adequate. However, the adequacy of funding for breeding programs was rated 2.5/10, because some of the projects supporting breeding programs came to an end. The quality of research infrastructure was rated 6/10. Crop specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	10.00	7.33	Established in 2004 under the ARC, the National Gene Bank conserves plant genetic resources collected throughout Egypt and from international gene banks. The National Gene Bank lacks sufficient human resources. Collaboration between the National Gene Bank and the Community Seed Bank is generally adequate. As of 2025, it stores 4,766 accessions—4,000 wheat, 49 rice, 245 maize, and 472 broad bean. While none are currently utilized, all samples have been duplicated and conserved with the Desert Research Center under Egypt's Ministry of Agriculture and Land Reclamation.
5. Adequacy of Early Generation Seed (EGS)	8.50	9.17	EGS mainly comes from the Field Crop Research Institute of the ARC, the Central Administration for Seed Production, and private seed companies. Quantity received a 9/10 rating, quality an 8.5/10 due to strict inspection standards, and delivery timeliness scored 10/10 thanks to scheduled irrigation-based production. See Appendix 1 for crop-specific ratings.
6. Availability of crop varietal choice to farmers	7.51	10.00	In 2024, there were 294 varieties of four crops on the market, up significantly from 93 in 2022: 217 maize, 36 wheat, 21 broad bean, and 20 rice varieties.
7. Utilization of quality commercial seed by farmers	6.36	6.08	In 2024, production volumes for the four designated priority crops were as follows: wheat seed—138,416 MT; rice seed—19,255 MT (including 5% hybrid); maize seed—17,589 MT (entirely hybrid); and broad bean seed—2,940 MT. According to government calculations, which consider variables such as available irrigation water in each governorate, these production figures represent 75% of the national seed requirement for wheat, 50% for maize, 47% for rice, and 63% for broad bean.
8. Clarity and enforcement of seed import/export regulations	8.00	8.5	A Ministry of Agriculture-affiliated committee approves imports and exports at weekly meetings. In 2024, Egypt imported 2,082 MT of hybrid maize seed and 16 MT of wheat seed, and exported 808 MT of wheat seed, 258 MT of maize seed, and 2 MT of broad bean seed to Libya, Mauritania, Oman, the UAE, and Iraq.
9. Adequacy of agro-dealer networks	7.00	9.00	In 2025, Egypt had 7,482 licensed seed traders, up from 4,500 in 2023. These agro-dealers operate in all 27 governorates except the newly reclaimed areas.
10. Availability of seed in small package sizes	0.00	10.00	Based on small-scale farmers' needs in Egypt, the government set a 5kg minimum package for four priority crops, so smaller packages of 2kg or less were not offered due to lack of demand. The score is high because available seed packages are suitable for Egypt's smallholder farmers.
11. Status of national seed policy instruments	10.00	10.00	Key policy instruments include: Agriculture Law N° 53 of 1966 (under review) Ministerial Decree N° 368 of 1998 (and amendments): criteria for seed lab examination Ministerial Decree N° 1550 of 1994 (and amendments): field inspection guidelines and seed lot acceptance criteria Ministerial Decree N° 82 of 1998 (and amendments): crop variety registration protocol Ministerial Decree N° 1733 of 2018: regulation of seed trading in the COMESA region
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	10.00	10.00	Ministerial Decree No. 1733 of 2018 formally endorsed the COMESA Seed Trade Harmonization Regulations of 2014, which are currently in effect.
13. Status of national biosafety frameworks for plant breeding and seed production	5.00	8.00	The Egyptian Association for Biosafety was established in 2009, and Ministerial Decree No 368 /2017 was passed in 2017. The Biosafety Law was approved by the Prime Minster in 2024.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	5.00	0.50	FMSS are not included in official seed policy documents. The government's policy emphasizes using seeds that have passed government approval processes. Farmers are encouraged to choose these approved seeds to boost their crop yields and productivity.
15. Adequacy of seed inspection services	8.00	8.00	In 2023, the CASC had 809 seed inspectors (406 men, 403 women) and operated 22 seed testing departments, 11 regional laboratories, and one ISTA-accredited central laboratory. Egypt employs no private seed inspectors.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	8.00	8.00	Ministerial Decree N° 829 of 2011 specifies the penalties associated with trading counterfeit seed, including a six-month suspension of the operating license for a first offense and permanent revocation for repeated violations. Counterfeit seeds are either destroyed or, in the case of imports, returned to their source. Offenders may be subject to fines and required to compensate based on damages assessed by the economic court. In 2024, authorities seized a total of 22 commercial cases involving counterfeit seeds.
17. Adequacy of national seed trade association	7.83	9.33	Egypt is home to a number of seed associations. Among them, the Egypt Association for the Seed Industry was evaluated by ASSPI and achieved an overall rating of 9.33 out of 10, comprised of the following sub-scores: governance and democracy, 10/10; effectiveness in advocacy, 10/10; value provided to members, 9/10; managerial ability, 9/10; resource mobilization capacity, 10/10; and engagement with key seed sector issues, 8/10.
FINAL ASSPI SCORE	**7.11**	**8.13**	Highest scores: in COMESA: Egypt, 8.13 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Egypt, though largely desert with only 4% arable land along the Nile[18], has one of Africa's leading seed sectors. Agriculture contributes 14.5% of GDP and employs about a third of the workforce. To sustain growth in the seed sector, the government should prioritize:

- Expanding cultivation of approved seed varieties to boost certified seed production,
- Increasing government and private investment in local vegetable seed production,
- Developing new high-yield and drought-tolerant varieties through ARC, private sector, and CGIAR collaboration, and sourcing and testing foreign varieties for local suitability.

Data collection for the ASSPI Egypt report was by:

Shymaa Aboshosha

Secretariat of Seed Registration Committee, Central Administration for Seed Testing and Certification (CASC).

18 https://www.croptrust.org/pgrfa-hub/crops-countries-and-genebanks/countries/egypt/ Accessed 19 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – EQUATORIAL GUINEA

OVERVIEW OF THE SEED SECTOR

Equatorial Guinea has no seed sector. With a land size of 28,050 square kilometers, Equatorial Guinea is the 11th smallest country in Africa. The country consists of 86% forest with only 530 square kilometers (1.9%) being arable land. Agriculture is not one of the key sectors of the economy, as it only contributes 3.1% to GDP. The country's main source of income is from petroleum, natural gas and forestry. In addition, most people (74%) are employed in urban areas. Equatorial Guinea does not have a formal seed sector. The Ministry of Agriculture, Livestock, Forestry, Fisheries, and Environment is the government entity in charge of all matters pertaining to agriculture in the country, but it has not fostered any developments related to the seed sector. As such, the existing seed system is informal and unregulated. There are no seed policy instruments, no systems for seed quality control and certification, and no private sector (local or foreign) involved in production, commercialization or distribution of seeds. The main food crops in the country are cassava, maize, groundnuts, banana, and plantain, which collectively account for 97% of the total arable land. Equatorial Guinea is a member of ECCAS. The country did not participate in the 2023 ASSPI data collection round.

Overall country score (out of 10):	0.00

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, oil crops, roots and tubers
Cassava	**24,356**	**4%**
Banana	**6,574**	**1%**
Groundnut	**350,000**	**61%**
Maize	**175,000**	**30%**
Total		**97%**

Total arable land:	**0.053 million ha**
Population:	**1,600,000**
Number of farming households:	**243,715**
Contribution of agriculture to GDP:	**3.1%**

ASSPI PERFORMANCE

Indicator	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**0.00**	There is no system for variety release in Equatorial Guinea
2. Number of varieties released in last 3 years	**0.00**	Due to the lack of a variety release system, there were no varieties released between 2022 and 2024.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**0.00**	There are no plant breeding programs in Equatorial Guinea and there is no national agricultural research institution

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	0.00	There is no entity in charge of the management of plant genetic resources for food and agriculture.
5. Adequacy of Early Generation Seed (EGS)	0.00	There is no production or supply of early generation seed in the country.
6. Availability of crop varietal choice to farmers	0.00	There is no seed production in the country, as there is no functional seed system.
7. Utilization of quality commercial seed by farmers	0.00	There is no seed production in the country.
8. Clarity and enforcement of seed import/export regulations	0.00	There were no imports or exports of seed in 2024, as there is no formal seed system.
9. Adequacy of agro-dealer networks	0.00	There are no agro-dealers, and no system for distribution of seed in the country.
10. Availability of seed in small package sizes	0.00	There is neither any seed production or seed sales in the country.
11. Status of national seed policy instruments	0.00	There are no seed policy instruments in the country.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	0.00	Equatorial Guinea is a member of the Economic Community of Central African States (ECCAS) and the Central Africa Monetary and Economic Union (CEMAC). However, in the absence of any national seed policy instruments, there is no effort towards alignment with the CEMAC seed regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	There are no Biosafety frameworks in the country
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	FMSS are not recognized in the country as there is no seed policy framework in the country.
15. Adequacy of seed inspection services	0.00	There are no seed inspection services in the country, as there is neither a government agency in charge of seed, nor a seed policy framework on which to anchor seed inspectors.
16. Adequacy of government efforts to combat counterfeit seed	0.00	There are no efforts to address the challenge of counterfeit seed as there is no functioning seed system in the country.
17. Adequacy of national seed trade association	0.00	There is no national seed trade association in the country, as there is no private sector activity in the seed sector.
FINAL ASSPI SCORE	**0.00**	Highest scores: in ECCAS: Burundi, 4.87 in Africa: South Africa, 8.64

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

PRIORITY INTERVENTIONS

There is no formal seed system in Equatorial Guinea. The establishment of a functioning system would entail interventions across the seed value chain. However, the priority intervention would be to define a seed policy for the country, which would be anchored on the country's overall agricultural policy. A national seed policy would articulate the direction that the country intends to take. This would be complemented by:

- Introduction of varieties from the region to conduct adaptation trials in the country. This goes hand-in-hand with training farmers and agricultural extension officers on seed production.
- Encouraging the private sector to engage in the seed business through seed production, seed distribution and marketing of seed importation.
- Developing a legal and regulatory framework that aligns with the CEMAC Seed Regulations.

Data for the ASSPI Equatorial Guinea report was collected by:

Aquiles Serafín Choni Bolopo

National Coordinator of Statistics Projects, Ministry of Agriculture, Livestock, Forestry, Fisheries, and Environment (MAGBOPEMA)

African Seed Sector Performance Index (ASSPI) Country Brief – ERITREA

OVERVIEW OF THE SEED SECTOR

Eritrea's seed sector is in the nascent stage of development. It is largely informal, with no private seed companies registered. The Ministry of Agriculture (MoA) leads the formal sector by contracting large farmers to produce certified and early generation seed (EGS), while the National Agricultural Research Institute (NARI) manages research, variety development, and EGS production. Sorghum, wheat, millet, and chickpea are the four priority crops identified by local seed experts, comprising 84% of harvested field crop area. Eritrea belongs to Inter-governmental Authority on Development (IGAD) and the Common Market for Eastern and Southern Africa (COMESA).

Overall country score (out of 10):	4.05

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Sorghum	270,000	60%
Wheat	25,000	6%
Millet	75,000	17%
Chickpea	8,666	2%
Total		84%

Total arable land:	0.69 million ha
Population:	3,470,390
Number of farming households:	2,372,500
Contribution of agriculture to GDP:	14.1%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	6.00	7.50	Established in 2011, the National Variety Release Committee (NVRC) comprises MoA and Hamelmalo Agricultural College staff. Using the Technical Guidelines for the Release of Varieties and their Packages for Field Crops (2014), the NVRC approves new crop varieties after Distinctness, Uniformity, and Stability (DUS) and Value for Cultivation and Use (VCU) tests. The release process, clearly outlined and typically followed, adds approved varieties to a national list. As variety development is public sector-led, and no payment is required for the release process.
2. Number of varieties released in last 3 years	0.00	1.57	During the 2022–2024 period, a total of five varieties were released across the four crops; all varieties were wheat.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.00	6.42	In 2025, NARI had three breeders for four crops—one each for sorghum, wheat, and millet. The breeder count was rated 2.25/10, a clear sign that the current number of breeders is far from meeting the sector's needs. Funding and infrastructure were rated 9/10 and 8/10, respectively, showing they are sufficient. The problem is with skilled manpower not the facilities. The research sites, working offices, and laboratories are adequate. In addition, an additional seed cleaning machine has been installed. Crop-specific ratings appear in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	8.00	3.33	The Genetic Resources Division under the NARI is responsible for the collection, characterization, and conservation of plant genetic resources. The number of staff at the institute is inadequate. However, they need specialized training. There are no established community seed banks in the country.
5. Adequacy of Early Generation Seed (EGS)	7.42	7.08	NARI is the only provider of EGS for four crops in Eritrea. The supply quantity was rated 6.25/10, quality 6/10, and delivery timeliness 9/10, showing reasonable sufficiency, government-managed quality, and prompt delivery. Crop-specific ratings are in Appendix 1.
6. Availability of crop varietal choice to farmers	1.78	2.41	In 2024, there were 21 varieties of four crops on the market—up from 12 in 2022: five sorghum, eight wheat, five millet, and three chickpea varieties.
7. Utilization of quality commercial seed by farmers	3.69	0.48	In 2024, reported seed production included 24 MT of sorghum, 300 MT of wheat, 4 MT of chickpea, and 3 MT of millet. The government calculates national seed needs based on a per capita food consumption of 1.9 quintals/year. Following the ASSPI methodology outlined in the methods section, and given the absence of seed imports and exports for the four priority crops, domestic production met 3% of the national sorghum seed requirements, 27% for wheat, 1% for millet, and 2% for chickpea.
8. Clarity and enforcement of seed import/export regulations	5.00	8.00	The procedures for importing and exporting seeds and seedlings are well-documented and clearly defined. Designated staff are assigned at all points of entry to oversee these activities. In both 2023 and 2025, the country did not trade seed for the four main crops.
9. Adequacy of agro-dealer networks	0.00	0.00	Eritrea has no agro-dealers.
10. Availability of seed in small package sizes	0.00	0.00	None of the seeds of the four crops are sold in small packages of 2kg or less.
11. Status of national seed policy instruments	3.00	8.33	Eritrea's seed sector is guided by the National Seed Policy of 2023. The Seed Proclamation is still a draft, while the Technical Guidelines for the Release of Varieties and their packages for field crops (2014) are being implemented.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	2.00	3.00	Eritrea is a member of COMESA. Efforts to align the national seed policy with the COMESA Seed Trade Harmonization Regulations commenced in 2014 and remain ongoing.
13. Status of national biosafety frameworks for plant breeding and seed production	1.00	0.00	Eritrea has no biosafety frameworks.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	5.00	8.00	FMSS is acknowledged by the National Seed Policy, and it also appears in multiple technical guidelines.
15. Adequacy of seed inspection services	8.00	4.67	In 2025, Eritrea had 10 public seed inspectors, down from 15 in 2023. They are stationed at headquarters, regional, and sub-regional levels for efficient distribution for monitoring, but face limited transport and lack digital tools.
16. Adequacy of government efforts to combat counterfeit seed	7.00	8.00	Eritrea is not at risk for counterfeit seed, as the Ministry of Agriculture (MoA) closely oversees every part of seed production, storage, and distribution.
17. Adequacy of national seed trade association	0.00	0.00	Eritrea has no national seed trade association.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
FINAL ASSPI SCORE	**3.64**	**4.05**	Highest scores: in COMESA: Egypt, 8.13 in IGAD: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Agriculture in Eritrea, while showing some progress, faces several challenges. On the positive side, the government has taken steps towards improving food security and agricultural productivity, including revising the seed policy. However, progress is tempered by structural and environmental constraints. The seed sector in Eritrea is in the nascent stage of growth; as such, it needs significant public sector investment in plant breeding and the creation and maintenance of an enabling environment for the private seed sector. Some key priorities include:

- Insufficient capacity of the seed stores: there is a need to encourage private sector participation in seed distribution.
- Inadequate number of skilled personnel across the seed value chain.
- Shortage of agricultural machinery like harvesters, threshers, and other equipment.

Data for the ASSPI Eritrea report was collected by:

Mussie Weldetsion

Researcher at the National Agricultural Research Institution in the Ministry of Agriculture.

African Seed Sector Performance Index (ASSPI) Country Brief – ESWATINI

OVERVIEW OF THE SEED SECTOR

Eswatini's seed sector is in the early growth stage, with smallholder farmers producing mainly open-pollinated maize and legumes under community schemes, which are inspected and certified by the government. Most hybrid maize seed is imported. The Department of Agricultural Research and Specialist Services (DARSS) handles breeding, the Seed Registrar's Office manages variety registration, and Seed Quality Control Services (SQCS) oversees inspection and certification. Maize, groundnut, bean, and sweet potato are the priority crops identified by local seed sector experts; they comprise a combined 86% of the area harvested to field crops. Eswatini is a member of the Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA).

Overall country score (out of 10):	6.38

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, oil crops and roots and tubers
Maize	70,000	77%
Groundnut	4,935	5%
Bean	1,514	2%
Sweet Potato	1,505	2%
Total		86%

Total arable land:	0.177 million ha
Population:	1,230,506
Number of farming households:	155,780
Contribution of agriculture to GDP:	6.5%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	8.00	7.75	The country follows SADC and COMESA variety release procedures, requiring two seasons for approval. The Seeds and Plant Varieties Amendments Regulations 2019 comply with both sets of regulations. Enacted in 2000, the Seed Law governs these processes. The Variety Release Committee meets regularly, and the National Variety List is published annually. Costs are generally applied consistently, with the average release taking 24 months.
2. Number of varieties released in last 3 years	5.29	7.57	From 2022 to 2024, 47 varieties of four priority crops were released, up from 31 in 2020-2022. The releases included 20 maize, six bean, 10 sweet potato, and 11 groundnut varieties, with most maize and bean types added to the national list from regional catalogs.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	1.00	3.00	In 2025, DARSS had no qualified breeders engaged in breeding. Breeder adequacy was rated 0/10, indicating no active breeders. Funding for NARIs scored 3/10, and infrastructure received 6/10 due to ongoing upgrades. Crop-specific ratings are in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	6.67	The Eswatini National Plant Genetic Resource Centre (NPGRC) manages PGRFA but is understaffed. With help from the Taiwan Africa Vegetable Initiative (TAVI), it has begun collecting and characterizing plant genetic resources. By 2025, 2,675 crop accessions were held: 2,086 maize, 27 groundnut, 401 bean, and 161 sweet potato, with 82% in use. The Gene bank works with an NGO to run Community Seed Banks.
5. Adequacy of Early Generation Seed (EGS)	4.33	6.00	The Crops, Legumes, and Roots and Tubers sections of the DARSS are the main EGS sources in Eswatini. In 2025, EGS quantity and quality each scored 5.5/10, and timeliness 7/10, raising the overall score to 6.00 from 4.33 in 2023. This improvement is due to DARSS outsourcing EGS production and supply for legumes and root and tuber crops to private enterprises, resulting in increased volumes and reliability. Crop-specific ratings are in Appendix 1.
6. Availability of crop varietal choice to farmers	3.90	4.32	In 2024, there were 48 different varieties of the four crops on the market, up slightly from 42 varieties in 2022. Specifically, there were 33 maize varieties, six bean varieties, six sweet potato varieties, and three groundnut varieties.
7. Utilization of quality commercial seed by farmers	9.68	5.39	Seed production for 2024 included 40 MT of maize seed, 5 MT of groundnut seed, 72 MT of bean seed, and 12 MT of sweet potato planting material. Compared to 2022, when only 1 MT of maize seed and 10 MT of bean seed were produced, these figures show substantial growth. After accounting for imports (see Indicator 8), the supply meets 57% of the national requirement for maize seed, 17% for groundnut seed, 100% for bean seed, and only 1% for sweet potato planting material.
8. Clarity and enforcement of seed import/export regulations	7.00	8.00	The importation and exportation of seeds are governed by the Plant Health Protection Act of 2021. This legislation aims to prevent the introduction and dissemination of plant pests and provides regulatory guidance for the trade of plants and plant products in accordance with the International Plant Protection Convention. Inspectors are stationed at border entry points to enforce compliance with import procedures. In 2025, Eswatini imported a total of 950 MT of maize seed—63% of which comprised maize hybrids—along with 55 MT of groundnut seed and 565 MT of bean seed.
9. Adequacy of agro-dealer networks	5.00	7.00	In 2025, the country had 78 agro-dealers: 41 (52%) in rural areas and 37 (48%) in urban and peri-urban districts.
10. Availability of seed in small package sizes	2.01	3.40	Among the four crops, 30% of maize, 15% of groundnut, and 42% of bean seeds were sold in packages of 2 kg or less.
11. Status of national seed policy instruments	10.00	8.00	The seed sector in Eswatini operates under these main frameworks: National Seed Policy (1993) Seeds and Plant Varieties Act (2000): Covers variety release, seed certification, and the regulation of seed control, sales, import/export. Seed and Plant Varieties Regulations (2002) Plant Health Protection Act (2021): Enforces quarantine and phytosanitary measures in line with the International Plant Protection Convention.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	9.00	Eswatini is a member of both COMESA and SADC. The Seeds and Plant Varieties (Amendments) Regulations of 2019 ensure that variety release and seed certification processes align with both the SADC Harmonized Seed Regulatory System and the COMESA Seed Trade Harmonization Regulations. Parliament approved these regulations in November 2023, and they will be implemented once published. Regarding quarantine and phytosanitary rules for seeds, the Plant Health Protection Act of 2021 complies with SADC and COMESA standards and is already in effect. Additionally, in June 2022, the government signed a Charter to establish the SADC Seed Centre, adopt the SADC Harmonized Seed Regulatory System (SHRSS), and the Protocol on Plant Variety Protection (PVP).
13. Status of national biosafety frameworks for plant breeding and seed production	9.00	8.00	Eswatini enforces the Biotechnology Policy, Biosafety Act of 2012 (amended in 2020), and draft Biosafety Regulations to regulate living modified organisms and protect the environment and human health. Seed imports are tested for GMOs as part of these measures.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	8.00	6.50	In Eswatini, FMSS are recognized through two main channels: community-based seed producers have their seeds inspected and certified by the government, and legume farmers use saved seed as basic seed, which is accepted as Quality Declared Seed (QDS). However, there is no specific regulation for QDS.
15. Adequacy of seed inspection services	5.00	5.00	As of 2025, Eswatini had only three seed inspectors—a figure that has remained unchanged since 2022. Although the country is small, this number is inadequate for providing effective seed inspection services. Additionally, limited transportation and the absence of digital tools further hinder inspection efforts.
16. Adequacy of government efforts to combat counterfeit seed	7.00	8.00	The Seeds and Plant Varieties Act of 2000, together with the Regulations of 2002, provides a legal framework to address the issue of counterfeit seed. Section 24 of the Act grants Seed Quality Control Services inspectors the authority to seize and remove counterfeit seeds. Additional measures include regular spot checks conducted by seed inspectors and the application of secure labeling on seed packages.
17. Adequacy of national seed trade association	6.33	4.83	The Eswatini National Seed Trade Association (ENSTA) serves as an industry interest group and plays a key role in liaising with the government. At present, ENSTA is not affiliated with the Africa Seed Trade Association (AFSTA). The organization received an overall score of 4.83 out of 10, consisting of a rating of 5 out of 10 for its effectiveness in advocacy, election democracy, managerial capacity, member value provision, and resource mobilization; however, it achieved a score of 4 out of 10 regarding activity within key seed sector matters.
FINAL ASSPI SCORE	**6.15**	**6.38**	Highest scores: in COMESA: Egypt, 8.13 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Eswatini is a relatively small nation in terms of land area, population, and economic size. Its proximity to South Africa—home to the continent's most developed seed industry—enables Eswatini to import much of the certified seed it requires. To grow the domestic seed sector, the country has made notable strides in updating policies and regulations to support its seed sector. However, the country's own public institutions for plant breeding and seed inspection face significant resource constraints. To maintain current growth and boost domestic seed production, the government should:

- Enhance the Department for Agriculture Research and Specialist Services so that it can produce and supply high-quality early generation seed (EGS) for cereal and legume crops, which involves upgrading or building facilities and equipment for breeding, variety development, and maintenance.
- Develop seed producer capacity, including among community-based groups and seed companies, to expand certified seed production and gradually lessen dependence on imported seed.
- Strengthen both human resources and infrastructure within the private sector—including community-based producers and seed companies—to ensure compliance with seed quality standards from production through post-production stages.

Data for the ASSPI Eswatini report were collected by:

Christopher Mthethwa

Head of Seed Quality Control Services, Ministry of Agriculture, Eswatini.

African Seed Sector Performance Index (ASSPI) Country Brief – ETHIOPIA

OVERVIEW OF THE SEED SECTOR

Overall country score (out of 10):	7.26

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Teff	**2,932,670**	**22%**
Maize	**3,397,928**	**26%**
Wheat	**2,129,952**	**16%**
Sorghum	**1,650,000**	**13%**
Total		**77%**

Total arable land:	**16.34 million ha**
Population:	**128,691,692**
Number of farming households:	**12,000,000**
Contribution of agriculture to GDP:	**34.8%**

The seed industry in Ethiopia is in the growth stage of development. The country has a pluralistic seed system that includes the formal, informal, and intermediate systems. The formal system is largely driven by the public sector across the entire seed value chain, from breeding to seed distribution. The key government institutions are the Federal Ministry of Agriculture, Ethiopian Agricultural Authority (EAA) and the Ethiopian Institute for Agricultural Research (EIAR). The regional states are autonomous and make their own decisions. They have their own research institutes, regulatory system and bureau of agriculture. The EAA was established in 2022 and oversees variety release, registration and seed quality assurance. The EIAR is a federal research institute and it has research centers. Likewise, there are many regional state research institutes with their own research centers. The EIAR and the regional research institutes are responsible for research, variety development, and the production of Early Generation Seed (EGS). In addition, several public seed enterprises, private companies and cooperative unions produce and market certified seed. The four priority crops, as identified by the local seed sector experts, are teff, maize, wheat, and sorghum. Combined, these four crops account for 77% of the area harvested to field crops. Ethiopia is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Intergovernmental Authority on Development (IGAD).

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	**7.00**	**7.25**	Ethiopia's variety release and registration process is governed by the updated Seed Proclamation 1288/2023, enacted in July 2023. Candidate varieties are required to pass both Distinctness, Uniformity and Stability (DUS) tests as well as Value for Cultivation and Use (VCU)/National Performance Trials (NPT), all managed by the Ethiopian Agricultural Authority (EAA). At present, this process applies solely to wheat and barley under pilot testing and was contracted to a third party. In 2025, wheat varieties were released through this system. However, EAA is not undertaking the trials directly mainly due to personnel constraints and the regulation to guide collect service fee is not yet in place. Additional crops are expected to be included over time. Since the system is still new, there are currently no fees for the DUS and VCU tests.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
2. Number of varieties released in last 3 years	6.71	7.86	From 2022 to 2024, 49 new crop varieties were released—eight teff, 13 maize, 22 wheat, and six sorghum varieties, an increase from the 41 varieties released in 2020-2022.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	7.17	5.42	In 2025, EIAR had 123 breeders for four crops: teff (24), maize (43), wheat (31), and sorghum (25). Breeder numbers were rated mostly adequate (7.25/10), except for a shortage of junior scientists in teff. Funding adequacy was moderate (5/10), indicating a general shortage, while infrastructure was rated poor (4/10), particularly for wheat, which lacks greenhouses, cold storage, irrigation, and a molecular lab. Crop-specific ratings are detailed in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	8.67	Established in 1998, the Ethiopian Biodiversity Institute (EBI) oversees PGRFA activities nationwide. EBI manages both *in-situ* and *ex-situ* conservation sites, including a facility in Addis Ababa, and works mainly on a project basis with community seed banks. The national gene bank holds 37,596 accessions—6,731 for teff, 1,881 for maize, 17,837 for wheat, and 11,147 for sorghum—with 73% currently utilized.
5. Adequacy of Early Generation Seed (EGS)	7.42	8.17	In Ethiopia, EGS is produced and maintained by the EIAR, regional research institutes, Ethiopian Agricultural Business Corporation, private seed companies and public seed enterprises. Across the four priority crops, EGS supply quality received an average rating of 8.25/10, quantity 8.00/10, and delivery timeliness 8.25/10. Crop-specific ratings are in Appendix 1.
6. Availability of crop varietal choice to farmers	3.33	6.52	In 2024, there were 79 different varieties of the four major crops on the market, up significantly from just 41 in 2022. Breaking it down by crop: teff had 11 varieties, maize had 21, wheat accounted for 38, and sorghum featured nine varieties.
7. Utilization of quality commercial seed by farmers	1.96	2.70	In 2024, seed production reached 984 MT for teff, 18,938 MT for maize, 56,148 MT for wheat, and 536 MT for sorghum—all higher than in 2022. The government estimates annual seed needs through local data collection that moves up from kebele to federal level, considering previous consumption, development plans, and available seed. Using the ASSPI method, 2024's production met 8% of teff, 32% of maize, 60% of wheat, and 12% of sorghum requirements.
8. Clarity and enforcement of seed import/export regulations	8.00	8.50	The Seed Proclamation (1288/2023) details Ethiopia's seed import procedures, requiring a Certificate of Conformity and compliance with quarantine, biosafety, and GMO regulations. In 2024, no seed imports occurred for the four priority crops.
9. Adequacy of agro-dealer networks	8.00	6.50	As of 2025, Ethiopia has 1,992 agro-dealers, also referred to as agents, located primarily in the high-production regions of the country.
10. Availability of seed in small package sizes	0.24	10.00	In Ethiopia, seed is typically distributed in quantities suited for planting half a hectare, which leads to package sizes larger than the 2 kg (small) package size tracked by ASSPI: 12.5 kg for maize, 50 kg for wheat, 15 kg for teff, and 10 kg for sorghum. However, these package sizes are adequate to meet the needs of the country's farmers.
11. Status of national seed policy instruments	9.00	9.33	Ethiopia's seed sector is guided by the following instruments: National Seed Policy of 2022 Plant Variety Release and Registration Directive (1065/2025) Provision and Administration of Seed Business Certificate of Competence Directive number 1097/2025 Quality Declared Seed Directive Number 1098/2025 Seed Proclamation (1288/2023) Plant Breeders' Proclamation (1068/2017) - yet to be implemented Plant Breeder's Directive (769/2021) - yet to be implemented.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	6.00	9.00	Ethiopia, a member of COMESA, has aligned its Seed Proclamation 1288/2023 with the COMESA Seed Trade Harmonization Regulations of 2014 regarding variety release and seed certification. The quarantine and protection proclamation is approved by the council of ministers and pending parliamentary ratification.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	9.50	Ethiopia's biosafety framework includes the Biosafety Proclamation (No. 655/2009), Amended Proclamation (No. 896/2015), and the National Biosafety Advisory Committee Establishment Regulation (No. 411/2017). The National Biosafety Advisory Committee advises the government on biosafety and fulfills its duties. TELA maize and Bt-GT cotton have been approved for commercial release under this system.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	8.00	8.00	FMSS are included in both the Seed Sector Development and the updated Seed Proclamation 1288/2023, which allows farmers' varieties to be registered. Additionally, the government supports FMSS by using the Quality Declared Seed (QDS) system.
15. Adequacy of seed inspection services	6.00	4.67	By 2025, EAA employed 60 seed inspectors, with 19 experienced laboratory experts also conducting field inspections in some regions. Five EAA inspectors focus on import and export checks for vegetable crops. Regional regulatory authorities employ their own inspectors. AGRA is supporting a digital Seed Inspection and Tracking System, nearing completion. There are no privately authorized seed inspectors, and inadequate transport remains a major challenge for field inspections.
16. Adequacy of government efforts to combat counterfeit seed	3.00	4.50	The Seed Proclamation 1288/2023 is the primary policy for combating counterfeit seeds, with the Ministry close to approving a more targeted Illegal Seed Trade Control Directive. Efforts include secure package labeling, surveillance, and an ATI national survey on counterfeit seed impact.
17. Adequacy of national seed trade association	7.50	6.83	The Ethiopian Seed Association (ESA) advocates for Ethiopia's seed sector and was rated 6.83/10 by industry experts, with most categories scoring 7/10 except resource mobilization at 6/10. Until December 2024, ESA operated with one staff member, before hiring a second officer.
FINAL ASSPI SCORE	**6.08**	**7.26**	Highest scores: in IGAD: Kenya, 7.64 in COMESA: Egypt, 8.13 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Ethiopia's formal seed sector is in the growth stage of development, characterized by a dominant public sector presence across the seed value chain, a nascent private sector, established breeding programs, and an evolving policy landscape. Most seed companies produce and sell a limited range of staple crops. The government and NGOs remain major actors, with an expanding agro-dealer network increasing smallholder farmers' access to seed. To maintain progress, the government should prioritize:

- Enhancing local private seed companies' capabilities in production, marketing, and internal quality assurance so they can engage more actively in the industry and serve farmers nationwide.
- Improving both public and private seed enterprises' ability to produce and maintain early generation seed (EGS).

Data for the ASSPI Ethiopia report were collected by:

Dawit Tsegaye Sisay

Senior Technical Expert, Ethiopian Agricultural Transformation Institute

African Seed Sector Performance Index (ASSPI) Country Brief – GABON

OVERVIEW OF THE SEED SECTOR

Gabon's seed sector is in the nascent stage of development. It is mainly informal, with farmers producing, exchanging, and storing seeds themselves. The formal and semi-formal systems remain underdeveloped. The Ministère de l'Agriculture, de l' Élevage et du Développement Rural (MAEDR) manages the sector, and its Seed Directorate handles variety registration and quality. The Institute of Research and Agroforestry (IRAF) leads research and variety development. Although MAEDR recently created an institutional framework for the seed sector, Gabon lacks local certified seed production; most certified seeds, especially for vegetables, maize, and rice, are imported. Cassava, banana, maize, and vegetables are the primary food crops, accounting for 67% of the area harvested to food crops. Gabon is a member of ECCAS. Gabon did not participate in the 2023 ASSPI data collection round.

Overall country score (out of 10):	1.96

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, roots and tubers and vegetables
Cassava	**58,031**	**43%**
Banana	**2,280**	**1.7%**
Maize	**29,446**	**22%**
Vegetables	**76**	**0.06%**
Total		**67%**

Total arable land:	**0.325 million ha**
Population:	**2,484,789**
Number of farming households:	**160,000**
Contribution of agriculture to GDP:	**6.6%**

ASSPI PERFORMANCE

Indicator	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**1.00**	Gabon currently lacks a formal variety release process as seed regulations are still in development. Although a seed code was established in 2020 (Orders No. 004/PR/2009 and No. 00003/PR/2020), crop-specific decrees remain undefined, and laboratories are not yet operational. The approval process for seed import and marketing also lacks transparency.
2. Number of varieties released in last 3 years	**0.00**	No releases of the four crops occurred during the period from 2022 to 2024.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**1.00**	Gabon lacks breeding programs, and the Institute of Research and Agroforestry (IRAF) faces insufficient government funding and needs better equipment and facilities for research and variety development.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	**0.00**	Gabon lacks a national body overseeing plant genetic resource management.
5. Adequacy of Early Generation Seed (EGS)	**0.83**	Currently, local seed production is not available. In addition, IRAF does not produce early generation seed (EGS). In 2024, IRAF sourced 270,000 cassava cuttings from the International Institute for Tropical Agriculture (IITA) in Nigeria. The EGS quality was rated at 2.5 out of 10, while both its supply quantity and delivery timeliness received scores of 0 out of 10.
6. Availability of crop varietal choice to farmers	**0.00**	The cassava and banana varieties sourced through the IITA remain under evaluation and have not yet been released to the market. Information regarding imported hybrid maize varieties is limited, as seed packaging lacks specific varietal details.
7. Utilization of quality commercial seed by farmers	**0.00**	This indicator is unavailable due to the absence of local seed production data and attendant attributes such as seeding rates, replacement rates.
8. Clarity and enforcement of seed import/export regulations	**4.50**	Seed import standards are defined by statutory decree, but the approval timeline needs clarification to ensure consistent processing. In 2024, 93,000 cassava cuttings were imported. While official data on maize seed imports is unavailable, major agro-dealers import and sell hybrid varieties in 1 kg packs.
9. Adequacy of agro-dealer networks	**3.00**	Numerous agro-dealers operate nationwide, but their exact number is unknown, and they are not registered by the government.
10. Availability of seed in small package sizes	**MD**	There is no local production of seed in Gabon, therefore this indicator cannot be computed.
11. Status of national seed policy instruments	**6.00**	At present, Gabon's seed sector is regulated by the following policy instruments: Law N° 014/2021 of 11 August 2021 on the plant seed policy Decree n° 0058/PR/MAEP of 21 November 2023 Decree n° 0029/PR/MAEPA of 2 April 2023 Ordinance N° 00003/PR/2020 du 31/01/2020 establishing the Plant Seed Policy in Gabon Order N° 016/MAEPA/MER of 6 August 2020 Ordinance N° 004/PR/2009 of 16 July 2009 on the seed policy in the agricultural sector. Yet to be developed are the Ministerial Decrees/ Orders on the establishment of a Seed Fund and clarity on the institutional roles and responsibilities in the sector.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	**5.00**	Gabon is a member of the Economic Community of Central African States (ECCAS) and the Central Africa Economic and Monetary Community (CEMAC). However, the country is yet to harmonize the national seed policy instruments with the CEMAC Seed Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	**0.00**	Gabon lacks a national biosafety framework.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	**4.50**	Law No. 014/2021 does not require farmer-saved seeds to be certified, treating them as national heritage. Aside from being referenced in the seed law, the government has not taken further action to support FMSS.
15. Adequacy of seed inspection services	**0.00**	Gabon does not have any seed inspectors.
16. Adequacy of government efforts to combat counterfeit seed	**5.50**	Law N° 014/2021 and Decrees N° 0029/PR/MAEPA and N° 0058/PR/MAEP penalize counterfeit seed with prison terms, fines from 100,000 to 1,000,000 FCFA, seizure of products, and closure of premises. However, enforcement remains limited.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2025 Score (out of 10)	Description of performance
17. Adequacy of national seed trade association	0.00	Gabon lacks a national seed association.
FINAL ASSPI SCORE	**1.96**	Highest scores: in ECCAS: Burundi, 4.87 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Gabon's formal seed sector is in the nascent stage of development. It lacks essential elements like breeding programs, private seed production, and services for variety registration. To catalyze growth of the sector, the government should implement targeted programs for priority crops (cassava, maize, banana, vegetables) taking into account budgetary constraints and existing operational capacities. Priority actions include:

- Reactivation of the variety registration committee, simplification of registration procedures, and piloting of a pre-certification system for priority crops by the Seed Department (MAEDR),
- Continuation by AGASA of phytosanitary control of imports while supporting the gradual certification of local seeds with adapted protocols,
- Development of varieties suited to local conditions and provide seeds to pilot farmers by IRAF and other institutions engaged in scientific research,
- Strengthening of semi-formal distribution channels to facilitate access to certified seeds and improve storage and use practices by private partners and cooperatives.

Data for the ASSPI Gabon report was collected by:

Ms. Nelly Sandrine Ada Menie

Chargée d'Etudes, Directorate of Agricultural Training and Research, Ministry of Agriculture

African Seed Sector Performance Index (ASSPI) Country Brief – GAMBIA

OVERVIEW OF THE SEED SECTOR

The Gambia's seed sector is in the early growth stage of development. It is dominated by the informal sector. The key entities in the formal seed sector are the National Agricultural Research Institute (NARI), responsible for breeding and variety development, the Variety Release Committee (VRC), in charge of variety release and registration, and the National Seed Secretariat (NSS), overseeing seed inspection and certification and the production of foundation seed. At present, the Gambia has one active private seed company, and several small, private entrepreneurs are showing interest in seed production and marketing. The country's staple food is rice, grown using four different systems: upland rainfed, lowland rainfed, lowland irrigated (pump and tidal), and mangrove swamps. Besides rice, the other three priority crops, as identified by local seed sector experts, are groundnut, maize, and millet. The four priority crops, combined, account for 93% of area harvested to field crops. The Gambia is a member of the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	4.18

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Rice	**49,811**	**28%**
Millet	**38,425**	**21%**
Groundnut	**51,463**	**29%**
Maize	**27,688**	**15%**
Total		**93%**

Total arable land:	**0.44 million ha**
Population:	**2,697,845**
Number of farming households:	**297,581**
Contribution of agriculture to GDP:	**20.4%**

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	**5.00**	**4.75**	A Variety Release Committee (VRC), under the National Seed Council, is responsible for variety registration and release. The VRC follows the ECOWAS' harmonized varietal release procedures. The process includes both Distinctness, Uniformity, and Stability (DUS) and Value for Cultivation and Use (VCU) tests conducted by the breeder. Released varieties are added to the National Catalog of Plant Species of The Gambia. However, reliance on rainfed adaptive trails of varieties from neighboring NARIs often extends the research timeline, thereby delaying both varietal registration and the subsequent updating of the catalog. The NSC approves fees set by the committee for the registration of varieties.
2. Number of varieties released in last 3 years	**2.57**	**2.43**	During the 2022-2024 period, 11 varieties of the four crops were registered: eight rice varieties, two groundnut varieties, and one maize variety. There were no releases of millet varieties.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.67	1.17	As of 2025, the NARI had no active breeder for the four priority crops. The adequacy of the number of breeders was rated 0/10. The adequacy of funding for breeding programs was rated 2.25/10, due to funding being limited to externally funded ongoing projects including the Gambia Inclusive Resilience Agricultural Value Chain (GIRAV), a project funded by the World Bank which supports maize and rice, and KOIPA and China Aid which supports rice research. The adequacy of the research infrastructure for the breeding programs was rated 1.25/10. The only research facilities comprise of a 15-ha rice irrigation scheme and a 40-ha upland rice crop research area. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	0.00	There is no entity that coordinates plant genetic resources activities in The Gambia. There is no national gene bank in the country.
5. Adequacy of Early Generation Seed (EGS)	5.00	4.42	The main sources of EGS in the Gambia are the NARI and the NSS, through the foundation seed unit. EGS for rice is readily available as it is produced twice a year within the tidal and irrigated production areas. Volumes of EGS are usually adequate to meet demand of certified seed production. EGS for maize is also adequate following the introduction of high-yielding varieties. As such, the country has not recorded any maize seed importation for the 2025 production season. However, EGS for groundnut is only emerging due to the recent release of two groundnut varieties by NARI. There is no EGS production for millet. The adequacy of the quality of EGS was rated 3.75/10, because only rice had fully adequate quality EGS while maize had reasonable quality. The adequacy of the quality of millet and groundnut was extremely poor. The adequacy of quantities supplied was rated 5/10. The adequacy of the timelines of delivery of EGS was rated 4.5/10.
6. Availability of crop varietal choice to farmers	1.71	5.17	In 2024, 60 varieties were available on the market for the four crops: 32 rice varieties, 12 groundnut varieties, 13 maize varieties, and three millet varieties. This was a significant increase from the 11 varieties available in 2022.
7. Utilization of quality commercial seed by farmers	1.77	2.79	In 2024, the reported production volumes for the four priority crops were 209 MT of rice seed, 28 MT of groundnut seed, and 95 MT of maize seed. No millet seed was produced. Adjusted for imports below (Indicator 8), these volumes meet 40% of national seed requirement for rice, and 5% for groundnut.
8. Clarity and enforcement of seed import/export regulations	10.00	8.50	Seed importers are aware of, and follow the requirements for importation, which include import permits (obtained from the Plant Protection Services (PPS)) and other clearance documents. In 2022, the imports comprised 50 MT of rice seed, 60 MT of maize seed, and 0.01 MT of groundnut seed.
9. Adequacy of agro-dealer networks	5.00	6.50	In 2025, the Gambia had 25 agro-dealers, a significant increase from the 6 agro-dealers in 2022. While the number is mostly adequate, most of them are concentrated in the urban areas with limited reach in rural areas.
10. Availability of seed in small package sizes	0.00	0.00	None of the seed was sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	9.00	9.00	Most of the important policy documents are in place, including: Seed Quality Control and Marketing Act (2014) which provides overall guidance to the sector and established the NSS as a seed quality control and certification agency. National Seed Policy of The Gambia (2018) and the accompanying seed plan to guide implementation. Seed Quality Control and Marketing Regulation (2016) Plant Importation and Regulatory Act (1936) Seed Quality Control and Certification Manual (2016)
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	7.00	The Gambia is a member of ECOWAS. The Seed Quality Control and Marketing Act of 2014 aligns with the key provisions of the ECOWAS Regional Seed Regulations. The outstanding elements are the lack of an updated national variety catalog and the seed fund which is not yet operational.

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	The Gambia has no national biosafety/biotechnology framework.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	7.00	6.50	The National Seed Policy and the National Seed Plan recognize FMSS. Since most farmers in The Gambia depend on FMSS for their seed requirement, the Policy and Plan acknowledge that, even as the seed sector becomes more formal, the government acknowledges the importance of FMSS.
15. Adequacy of seed inspection services	7.00	2.67	Seed inspectors are under the NSS. In 2025, the NSS had 30 seed inspectors spread across the country. This is a significant increase from the 15 inspectors in 2022 and is due to the enlisting and training of 15 extension workers from the Department of Agriculture. These officers provide supplementary support to NSS field inspectors. While the numbers signal an improvement, NSS is significantly constrained by a shortage of vehicles and motorcycles affecting their capacity for field work. In addition, the inspectors are dependent on only two GPS devices to map the seed fields.
16. Adequacy of government efforts to combat counterfeit seed	7.00	6.50	Two policy instruments include provisions to counter the production and sale of counterfeit seed: the Seed Quality Control and Marketing Act, 2014 and the Seed Quality Control and Marketing Regulations, 2016. The instruments prescribe a range of penalties including fines (minimum of USD 700), prison terms, and confiscation of products, among others. However, the implementation of these instruments is constrained by inadequate staff and insufficient means of transport.
17. Adequacy of national seed trade association	4.00	3.67	The National Seed Growers Cooperative Society is the umbrella organization for seed growers in The Gambia. The Society received an overall rating of 3.67/10, comprised of the following sub-scores: democracy in elections - 6/10, ability to mobilize resources - 5/10, providing value to members – 4/10, activity on important seed sector issues – 3/10, effectiveness in advocacy – 2/10, and managerial capacity – 2/10.
FINAL ASSPI SCORE	**4.87**	**4.18**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

The seed sector in The Gambia is in the early stages of growth. For the sector to continue to grow, the following issues need to be addressed:

- Establishing seed production and processing infrastructure and facilities at the NARI and NSS.
- Strengthening the technical capacity for the production and maintenance of EGS.
- Enhancing the participation of the emerging local private sector in seed production and marketing.
- Increasing seed field inspection and seed testing capacity of NSS field and laboratory technicians.
- Increasing the number of breeders and seed scientists for NARI and NSS.

Data for the ASSPI report for The Gambia was collected by:

Demba Jallow

Seeds Officer, National Seed Secretariat

African Seed Sector Performance Index (ASSPI) Country Brief – GHANA

OVERVIEW OF THE SEED SECTOR

Ghana's seed industry is in the early growth stage of development. It comprises both the formal and informal seed systems. The former is regulated by the Plant Protection and Regulatory Services Directorate (PPRSD) of the Ministry of Food and Agriculture (MoFA). Seed production in the formal sector is undertaken by local seed companies, seed growers, and multi-national companies, which mostly specialize in hybrid maize varieties. The number of seed producers has increased significantly over the last five years due to the government's agricultural input subsidy program, Planting for Food and Jobs (PFJ). Other government institutions working in the sector include the National Seed Council (NSC), which is responsible for the overall coordination of the sector; the Directorate for Crop Services (DCS), and the Savanna Agricultural Research Institute (SARI) and the Crop Research Institute (CRI), the two main research institutions for food crops. The four priority crops, as identified by local seed sector experts, are maize, rice, soya bean, and sorghum. Combined, they account for 74% of area harvested to field crops. Ghana is a member of the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	6.58

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	1,368,623	43%
Rice	472,900	15%
Soya Bean	145,000	5%
Sorghum	380,192	12%
Total		74%

Total arable land:	4.71 million ha
Population:	33,787,914
Number of farming households:	2,568,146
Contribution of agriculture to GDP:	20.9%

ASSPI PERFORMANCE

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	8.00	9.00	The National Variety Release and Registration Committee (NVRRC), which operates under the PPRSD, manages the process of releasing new varieties. Once the Distinctness, Uniformity, and Stability (DUS) tests and the National Performance Trials are completed, NVRRC recommends varieties for approval by the NSC. The committee holds regular meetings, and the NSC consistently registers newly approved varieties. The latest Variety Catalog was published in 2019 and has not yet been updated to add the 58 new crop varieties released since then. Proponents are responsible for all expenses associated with the release and registration of these varieties. On average, the process to release a variety takes around 24 months and not more than six months when the NSC is in place.
2. Number of varieties released in last 3 years	6.14	4.71	During the 2022 - 2024 period, a total of 27 varieties were released for the four priority crops: 17 maize varieties, eight rice varieties and two sorghum varieties. There were no soya bean varieties released during this period. The 27 varieties are a drop from the 37 varieties released between 2020 and 2022.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.33	3.25	In 2024, the SARI and the CRI had 20 breeders for the four priority crops: six for maize, seven for rice, five for soya bean, and two for sorghum. Adequacy of the number of breeders was rated 3.5/10 across the four crops. This is because the actual number of active breeders is largely inadequate. The funding for research was given a rating of 3.25/10 because most programs were highly dependent on donor funding. Adequacy of infrastructure for breeding was rated 3.00/10 due to the need to improve the available infrastructure and equipment at the research centers. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	5.33	The Plant Genetic Resource Research Institute (PGRRI) is responsible for plant genetic conservation in the country. 3,016 accessions of the four crops are being conserved: 1,066 of maize, 1,022 of rice, 516 of soya bean, and 412 of sorghum. Of these, 28% of the accessions are being utilized. Due to shortage of funds, PGRRI does not have adequate capacity for *in-situ conservation* and molecular characterization. In addition, collaboration with community seed banks is often disjointed and is primarily limited to specific projects.
5. Adequacy of Early Generation Seed (EGS)	7.42	7.58	CRI, SARI, the Grains and Legumes Development Board (GLDB) and private seed enterprises are the main sources of EGS in Ghana. The adequacy of the quality of EGS supplied was rated 8.75/10 because most of the breeders provide quality seed consistently, and all classes of EGS are certified by GSID. The adequacy of the quantity of EGS supplied was rated 7.25/10 because the supply occasionally falls short of demand. The adequacy of the timeliness of delivery of EGS supplied was rated 6.75/10 due to the occasional incidences of late deliveries of basic seed to seed growers. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	2.41	3.05	In 2024, 30 varieties of the four priority crops were available on the market: 18 for maize, five for rice, four for soya bean, and three for sorghum. This was an increase from the 21 varieties available for the four crops in 2022.
7. Utilization of quality commercial seed by farmers	9.91	5.75	In 2024, seed production for the four priority crops was: 11,766 MT of maize seed (of which 30% was hybrid maize seed), 10,629 MT of rice seed, 1,860 MT of soya bean seed, and 157 MT of sorghum seed. Adjusted for imports and exports, these volumes met 62% of the national maize seed and soya bean seed requirements, 67% for rice, and 17% for sorghum. The seed production volumes for maize and rice in 2024 were slightly higher than the volumes produced in 2022. Seed production volumes for soya bean and sorghum were lower in 2024 compared to 2022.
8. Clarity and enforcement of seed import/export regulations	7.00	8.50	Seed import and export procedures are clearly outlined in policy instruments and are well understood by the industry. In 2024, 4,148 MT of maize seed (all hybrid), 1.5 MT of rice seed (all hybrid), and 130 MT of soya bean seed were imported. The main challenge in the importation process is the lack of staff and equipment needed for effective inspection at all border entry points. There were no seed exports in 2024.
9. Adequacy of agro-dealer networks	6.00	7.50	In 2024, there were 7,887 agro-dealers in Ghana. Agro-dealers are licensed by the Ghana Seed Inspection Division of PPRSD and the Environmental Protection Agency (EPA). This figure represents a notable rise from 2,258 agro-dealers in 2022. The majority of agro-dealers are concentrated in southern regions and urban centers. Conversely, the northern region and most rural areas experience significantly lower levels of service.
10. Availability of seed in small package sizes	2.52	4.88	PPRSD and the National Seed Trade Association of Ghana (NASTAG) estimate that, in 2024, 80% of maize seed, 10% of rice seed, 10% of soya bean seed and 5% of sorghum seed was sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	8.00	8.80	Ghana's seed sector is guided by the Plant and Fertilizer Act of 2010 (Act 803), the Seed Certification and Standards Regulation of 2018 (L.I 2363), and the ECOWAS Regulation C/REG.04/05/2008. Other relevant policy instruments and documents include the National Seed Policy of 2013, the Plant Variety Protection Act (Act 1050), and the Bio-Safety Act of 2011 (Act 831).
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	9.00	Ghana is a member of the Economic Community of West African States (ECOWAS). Act 803 and L.I. 2363 were aligned with the ECOWAS Regional Seed Regulations (C/REG.4/05/2008) and ratified. PPRSD is in the process of harmonizing the new amended instruments from ECOWAS including the Manual of Harmonized Procedures for the Import and Export of Seeds and Seedlings in the ECOWAS, UEMOA, and CILSS Region. In addition, the Ministry is still in the process of establishing the Seed Sector Support Fund.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 score (out of 10)	2025 score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	4.00	8.50	The Biosafety Act (Act 831) was passed in 2011 to regulate genetically modified organisms. The National Biosafety Authority (NBA) oversees the implementation of the Act and works with the NSC, NVRRC, and PPRSD to develop modalities for transgenic breeding and GMO seed production. The NSC released a single transgenic cowpea variety, Songotra T after the NBA gave environmental clearance.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	2.00	4.00	FMSS are not explicitly recognized in the seed policy instruments in Ghana. However, the informal seed system is recognized in the National Seed Policy of 2013, and the National Seed Plan of 2015 has a section on how to facilitate the role of the informal seed sector in the country. FMSS has received increased attention in the country over the last few years.
15. Adequacy of seed inspection services	7.00	6.33	In 2024, PPRSD had 36 seed inspectors located in the 14 regions of the country. The number is a reduction from the 45 inspectors in 2022 and is considered to be inadequate. Several major seed-producing regions have only five inspectors, which is not enough for peak-season inspections and sampling. Transportation options are insufficient, and digital tools are not utilized for seed inspection.
16. Adequacy of government efforts to combat counterfeit seed	6.00	7.50	The Seed Certification and Standards Regulation of 2018 (L.I 2363) stipulates a fine of not less than two hundred penalty units or a term of imprisonment of not more than two years or both for anyone convicted of engaging in the production and sale of counterfeit seed. In addition, PPRSD has introduced a digital traceability system. Further, seed associations, including NASTAG and the Seed Producers Association of Ghana (SEEDPAG) conduct regular farmer education campaigns.
17. Adequacy of national seed trade association	8.00	8.17	The National Seed Trade Association of Ghana (NASTAG) is the umbrella body of the private-sector seed industry in the country. Overall rating of NASTAG was 8.17/10 and comprised of the following sub-scores, all measured on a scale of 1-10: democracy in elections and governance: 10, activity on important seed sector issues: 9, effectiveness in advocacy: 8, proving value to members: 8, managerial ability: 8, ability to mobilize resources: 6. NASTAG is a well-known entity in the seed sector and routinely collaborates with MoFA, and CSIR-SARI/CRI. However, NASTAG's membership is dominated by large seed companies. Many smallholder seed producers, especially in the far North and Upper West regions are not NASTAG members.
FINAL ASSPI SCORE	**5.93**	**6.58**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Ghana's formal seed sector is in the growth stage of development, characterized by established breeding programs and a complete seed policy environment. Seed companies and growers produce and sell certified seed of multiple crops. There is a growing network of private agro-dealers that supports the distribution of seeds to smallholder farmers. Nevertheless, a significant portion of seed sales of staple crops is conducted through the agri-input subsidy program Planting for Food and Jobs (PFJ). PFJ is a key factor in the growth of the seed sector. For Ghana's seed sector to sustain the current growth momentum, the government should prioritize:

- Strengthening PPRSD's human resources and logistical capacity in national seed quality control, seed certification, seed analysis, and seed testing.
- Increasing funding to registered Early Generation Seed producers to produce and supply quality seed.
- Increasing levels of awareness of newly released varieties for all four crops.

Data for the ASSPI Ghana report was collected by:

Kwasi Wih

Head of Ghana Seed Inspection and Certification Division in PPRSD under the Ministry of Food and Agriculture in Ghana.

African Seed Sector Performance Index (ASSPI) Country Brief – GUINEA (CONAKRY)

OVERVIEW OF THE SEED SECTOR

The seed industry in Guinea (Conakry) is in the early growth stage of development. The seed sector is dominated by the informal system. The formal sector is regulated by Direction Nationale de l'Agriculture (DNA), the government agency in charge of seed quality assurance. The other important government institution is Institut de Recherche Agronomique de Guinée (IRAG, Guinea (Conakry)'s National Agricultural Research Institute). The private sector players include seed producer groups, seed cooperatives, seed associations, and individual seed producers. The formal seed sector is guided by the Politique Semencière Nationale of 2015. The four priority crops, as identified by the local seed sector experts, are rice, maize, fonio, and groundnut. Combined, these four crops account for 95% of area harvested to field crops. Guinea (Conakry) is a member of the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	1.88

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Rice	2,352,000	49%
Maize	650,000	14%
Fonio	614,262	13%
Groundnut	900,000	19%
Total		95%

Total arable land:	6.0 million ha
Population:	14,405,468
Number of farming households:	MD
Contribution of agriculture to GDP:	31.0%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	5.00	4.25	Guinea (Conakry) has a simple variety registration system. The approval and registration of varieties are done by the IRAG and the DNA. The existence of a national catalog is uncertain, as are details regarding its update frequency and the associated cost structure of the variety registration process. The length of the variety release is 24 months.
2. Number of varieties released in last 3 years	1.71	2.29	During the 2022 – 2024 period, a total of 10 varieties of the four priority crops were released: eight groundnut varieties and two rice varieties. This was a slight increase from the six varieties released between 2020 and 2022.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.50	1.50	There are three breeders for the four crops: two rice breeders and one maize breeder. There are no breeders for fonio or groundnut. The adequacy for three sub-indicators, that is, number of breeders, funding to the breeding programs, and research infrastructure was rated at 1.5/10. This is because there is no breeding program for either fonio or groundnut. The rice breeding program is occasionally supported by projects funded by Africa Rice. The current infrastructure was provided through a World Bank project in 1990 and is now mostly obsolete. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	1.00	The IRAG agronomic research center at Foulaya in Kindia is responsible for the collection, characterization and conservation plant genetic resources in Guinea. However, these activities are no longer being carried out. There are no records of accessions kept by this center.
5. Adequacy of Early Generation Seed (EGS)	4.83	3.83	The adequacy of EGS in Guinea (Conakry) varies by crop. Rice and maize seed are mostly available and in good quality as they have breeding programs, and these programs collaborate with other institutions like Africa Rice and IITA respectively. The average score for each crop is 7.7/10. However, there are no breeding programs for fonio and groundnut. As such EGS for these crops is not available, and the scores are 0/10.
6. Availability of crop varietal choice to farmers	4.04	1.28	In 2024, there were five varieties on the market for the four crops: three for rice and two for maize.
7. Utilization of quality commercial seed by farmers	0.13	0.13	In 2024, seed production for the four crops was: 216 MT of rice seed, 48 MT of maize seed, and 60 MT of groundnut seed. There was no production of fonio seed. The volumes of rice and maize are a reduction from what was produced in 2022: 300 MT of rice seed and 125 MT of maize seed. The volumes produced in 2024 meet less than 1% of the national rice seed requirements, 3% of the national maize seed requirements, and 2% of the groundnut seed requirements.
8. Clarity and enforcement of seed import/export regulations	5.00	6.00	The provisions for the export and import of seeds in the national seed law are not followed. In addition, provisions in the ECOWAS regulation related to seed importation have been signed but not implemented. In 2024, the country imported 100 MT of maize seed.
9. Adequacy of agro-dealer networks	0.00	0.00	The number of agro-dealers in Guinea (Conakry) was not reported in 2025.
10. Availability of seed in small package sizes	0.00	0.00	None of the four priority crops is sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	6.00	5.75	Guinea (Conakry)'s seed sector is guided by the *Politique Semencière Nationale of 2015*. It is operationalized through the ECOWAS regional regulations C/REG 4/2008 which was approved in 2013.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	4.00	Guinea (Conakry) is a member of ECOWAS. The seed policy instruments are aligned to the harmonized ECOWAS-UEMOA-CILSS Seed Regulations (C/REG 4/2008). The decree for the catalog has been signed and the legal text on imports and exports has also been signed. However, the national catalog has not been updated since 2017 and the seed fund has not been established, among other aspects.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	Guinea (Conakry) does not have a national biosafety framework
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	9.00	0.00	FMSS are not recognized in any seed policy instruments. There was a misunderstanding of the question in 2023, where FMSS was equated to use of community (informal) seed.
15. Adequacy of seed inspection services	4.00	2.00	In 2024, Guinea (Conakry) had nine public seed inspectors, the same number in 2022. The number of inspectors and the resources to support seed inspection are inadequate.
16. Adequacy of government efforts to combat counterfeit seed	4.00	0.00	Currently, there are no measures in place by government to respond to the challenge of counterfeit seed.
17. Adequacy of national seed trade association	0.00	0.00	There is no national seed trade association in Guinea (Conakry).

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
FINAL ASSPI SCORE	**3.48**	**1.88**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

The seed sector in Guinea (Conakry) is an integral component of its agricultural development, crucial for enhancing the productivity and sustainability of the sector. However, it faces several challenges, including inadequate access to high-quality seeds, limited investment in seed production, and underdeveloped distribution networks. While the seed sector holds significant potential for growth, particularly considering the country's agricultural history and existing cash crop base, its development is hampered by infrastructural deficiencies and a lack of coordinated efforts to improve seed quality and availability. Significant investments and policy reforms are needed across the entire seed value chain, including the following priorities by government:

- Expediting the implementation of the ECOWAS-UEMOA-CILSS Seed Regulations and the règlementation semencière nationale.
- Strengthening the capacity of IRAG to produce crop varieties adapted to the country.
- Raising awareness of the importance of certified seed among farmers.
- Developing a robust distribution system for certified seed that can reach farmers in remote, rural locations.

Data for the ASSPI Guinea (Conakry) report was collected by:

Mr. Aboubacar Demba SAMOURA

National Director of Agriculture/Head of the National Seed Service

African Seed Sector Performance Index (ASSPI) Country Brief – GUINEA-BISSAU

OVERVIEW OF THE SEED SECTOR

Guinea-Bissau's seed industry is in the early growth stage of development. The country has no national seed law or policy to guide the development of a formal seed system. However, the seed sector operates under the ECOWAS Seed Regulations (C/REG.4/05/2008). The two main government institutions in the seed sector are the Laboratoire National des Semences (LNS) and Instituto Nacional de Pesquisa Agrária (INPA). LNS is under the General Directorate of Agriculture in the Ministry of Agriculture and Rural Development and is responsible for seed inspection and certification. INPA is responsible for research and variety development. The four priority crops, identified by local seed sector experts, are rice, maize, millet, and cowpea, which, combined, account for 89% of area harvested to field crops. Guinea-Bissau is a member of the Economic Community of West African States (ECOWAS) and the Community of Sahel–Saharan States (CEN-SAD).[19]

Overall country score (out of 10):	3.09

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oils
Rice	168,574	69%
Maize	15,000	6%
Millet	30,000	12%
Cowpea	4,309	2%
Total		89%

Total arable land:	0.396 million ha
Population:	2,153,339
Number of farming households:	600
Contribution of agriculture to GDP:	37.0%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	6.00	2.00	On paper, the variety release process includes the testing of candidate varieties by farmers in collaboration with extension agents. However, due to a lack of resources, this process is not always followed. There is no variety release committee, and the costs of the process have not been determined.
2. Number of varieties released in last 3 years	2.57	1.43	During the 2022–2024 period, four varieties of the four priority crops were released: one for each of the four crops - rice, maize, millet, and cowpea. This is a reduction from the 12 varieties released in the 2020-2022 period.

19 FAOSTAT, 2022

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	2.67	2.67	As of 2025, the *Instituto Nacional de Pesquisa Agrária* (INPA) had five active breeders for the four crops: two for rice and one each for maize, millet, and cowpea. The adequacy of the number of breeders was rated 2.0/10, signaling that the current number of breeders is insufficient to meet the country's variety development needs. Funding for breeding programs was given a rating of 2/10, highlighting that breeding programs lack the financial support needed to improve current breeding efforts. The adequacy of basic research infrastructure was rated 4/10 because most of the equipment needs repair or replacement. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	4.00	The INPA is responsible for plant genetic resource management in Guinea-Bissau. However, due to insufficient funding and staff, the institute cannot perform its tasks effectively.
5. Adequacy of Early Generation Seed (EGS)	5.00	3.67	The main local source of EGS for rice is INPA. EGS for rice is also sourced from AfricaRice in Côte d'Ivoire. The *Institut Sénégalais de Recherches Agricoles* (ISRA) provides EGS for rice, maize and millet. The West and Central African Council for Agricultural Research and Development (CORAF) provides EGS for millet. The international Institute of Tropical Agriculture (IITA) provides EGS for cowpea. The adequacy of the quality of EGS was rated 4/10. The adequacy of the quantities of EGS supplied was rated 4/10. The adequacy of the timeliness of the delivery of EGS was rated 3/10. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	1.85	1.92	In 2024, the number of varieties available on the market for the four priority crops was 14: six rice, three maize, two millet, and three cowpea varieties.
7. Utilization of quality commercial seed by farmers	9.72	5.49	In 2024, volumes of seed production reported for the four priority crops were 244 MT of rice seed, 26 MT of maize seed, 34 MT of millet seed, and 1.3 MT of cowpea seed. Adjusted for imports and exports, below (Indicator 8), the total available seed meets 35% of the national seed requirement for rice, 100% for maize and cowpea, and 97% for millet.
8. Clarity and enforcement of seed import/export regulations	4.00	6.00	Seed importation follows the ECOWAS, UEMOA, and CILSS Regulations, although these are not yet published in the national gazette. Imported seeds are typically subjected to sampling and testing by the national seed laboratory prior to their release for commercial distribution. In 2024, the volume of imports for the four crops was 750 MT of rice seed, 400 MT of maize seed, 200 MT of millet seed, and 150 MT of cowpea seed. No exports were reported.
9. Adequacy of agro-dealer networks	0.00	0.00	Guinea-Bissau has no agro-dealers.
10. Availability of seed in small package sizes	0.00	0.00	None of the seed of the four priority crops is sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	3.00	7.00	Guinea-Bissau has no national policy instruments; instead, the seed sector is guided by the ECOWAS Regional Seed Regulations C/REG.4/05/2008 and Regulation N° 03/2009/CM/UEMOA[20], which provide guidelines for the quality control, certification, and marketing of plant seeds and seedlings in its respective region. While helpful, the regional guidelines are not a perfect substitute for local policy instruments.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	5.00	Guinea-Bissau is a member of ECOWAS and follows the region's Harmonized Seed Regulations. However, as the country does not have a national seed law nor regulation, local instruments are not aligned to the ECOWAS Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	4.00	3.00	*Biosécurité National* is the entity designated to develop and oversee national biosafety frameworks; it is not yet operational.

20 The West African Economic and Monetary Union

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	Guinea-Bissau has no national seed policy instruments and thus FMSS are not officially recognized.
15. Adequacy of seed inspection services	6.00	2.33	In 2024, Guinea-Bissau had six public seed inspectors. The number is not sufficient to inspect fields across the whole country; further, the inspectors lack adequate training in field inspection. In addition, the inspectors are constrained by transport limitations, and they do not use digital inspection tools.
16. Adequacy of government efforts to combat counterfeit seed	4.00	3.00	Measures to address counterfeit seed are outlined in the ECOWAS Regional Seed Regulations, including those governing seed multiplication, as well as marketing and phytosanitary measures. However, they are not consistently enforced due to a lack of inspectors.
17. Adequacy of national seed trade association	2.83	5.00	*Anapa Socoven Proagri* is the national seed traders' association in Guinea-Bissau. Although the association is set up, it functions minimally. *Anapa Socoven Proagri* received an overall score of 5/10, comprised of sub-scores of 5/10 for the following sub-indicators: activity on important seed sector issues, providing value to members, managerial capacity, governance and democracy, ability to mobilize resources, and effectiveness in advocacy.
FINAL ASSPI SCORE	**4.10**	**3.09**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

The agricultural sector in Guinea-Bissau is the backbone of the economy, engaging 75-85% of the working population. In 2024, agriculture contributed 37% of Guinea-Bissau's gross domestic product.[21] For Guinea-Bissau's seed sector to grow, the following issues need to be prioritized:

- Drafting and aligning national seed policy instruments with Regulation C/REG.4/05/2008, which is the ECOWAS seed regulations.
- Strengthening the capacity of NARI to produce locally adapted varieties.
- Enhancing the capacity of Laboratoire National des Semences in seed inspection.

Data for the ASSPI Guinea-Bissau report was collected by:

N'Queba Cia

Director, National Seed Committee, Ministry of Agricultural Development and Rural Service of Guinea-Bissau

21 https://www.theglobaleconomy.com/Guinea-Bissau/Share_of_agriculture/ Accessed 25 March 2026

African Seed Sector Performance Index (ASSPI) Country Brief – KENYA

OVERVIEW OF THE SEED SECTOR

Kenya's seed industry is in the growth stage of development. It is composed of formal and informal systems. The formal system is structured and is supported by appropriate legislation, anchored on the Seeds and Plant Varieties Act of 2012 and subsidiary legislation. The informal sector is largely unstructured and includes the use of farm-saved seed, community seed banks, and relief seed. The Kenya Plant Health Inspectorate Service (KEPHIS) regulates the formal system. The four priority crops, as identified by local seed sector experts, are maize, bean, cowpea, and sorghum, which, combined, account for 91% of area harvested to field crops. Kenya is a member of the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), Community of Sahel-Saharan States (CEN-SAD), and the Intergovernmental Authority on Development (IGAD).

Overall country score (out of 10):	7.64

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Maize	2,414,536	53%
Bean	1,229,882	27%
Cowpea	234,351	5%
Sorghum	250,432	5%
Total		91%

Total arable land:	6.632 million ha
Population:	55,339,002
Number of farming households:	4,469,494
Contribution of agriculture to GDP:	22.5%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	9.00	9.75	The variety release process in Kenya requires Distinctness, Uniformity, and Stability (DUS) tests, and National Performance Trials (NPT). Each test requires two seasons and both may be conducted consecutively. Upon completion of the NPTs, KEPHIS submits the findings to the National Performance Trials Committee (NPTC). The NPTC reviews the data and recommends varieties that satisfy the established criteria for release to the National Variety Release Committee (NVRC). Testing and release processes are clearly elaborated in the evaluation and release regulations, testing protocols and release criteria. Sensitization and training of breeders on the requirements are undertaken regularly. Variety release meetings are held at least once a year, but often, more than once. The national variety list is updated immediately after the release process. The catalog was last updated in February 2025. The costs of the process are clear and are adhered to. The process takes 24 months.
2. Number of varieties released in last 3 years	6.00	7.00	During the 2022 – 2024 period, 43 varieties of the four priority crops were released: 33 maize varieties, two bean varieties and eight sorghum varieties. While the number of maize varieties released is commendable, the score is affected by the small number of releases, for bean and no releases at all for cowpea.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	5.42	6.92	As of 2025, the Kenya Agricultural and Livestock Research Organization (KALRO) had 44 breeders: 20 maize, 10 bean, four cowpea, and 10 sorghum breeders. In addition, several private companies and universities also employ breeders, although ASSPI only rates public breeding programs. The adequacy of the number of public breeders was rated 7/10, mainly driven by the significant maize breeding program, which attracts both donor and private-sector funding. The adequacy of funding for public breeding programs was given a score of 5.75/10 due to insufficient funding for the bean and cowpea breeding programs. The adequacy of research infrastructure was rated 8/10, showing that basic infrastructure is in place. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	7.67	The Genetic Resources Research Institute (GeRRI) at KALRO is responsible for PGRFA activities in Kenya. GERRI leads the collection, conservation, and exchange of plant genetic materials and supplies breeders with germplasm. The human resources are adequate. Collaboration with community seed banks is also adequate. 7,935 accessions of the four crops are being conserved: 1,825 for maize, six of bean, 565 of cowpea, and 5,539 of sorghum.
5. Adequacy of Early Generation Seed (EGS)	5.75	7.00	The main sources of EGS for the four priority crops are KALRO, public seed companies, public universities, and private seed companies. The adequacy of the quality of EGS was rated 8/10, because EGS undergoes quality checks by KEPHIS. The adequacy of the quantity of EGS was rated 6.5/10, reflecting that quantities demanded are not always available. The adequacy of timeliness of delivery of EGS was rated 6.5/10. Timeliness of delivery is often delayed for seed companies depending on other seed companies. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	8.98	9.12	In 2024, the number of varieties available on the market for the four priority crops was 156: 103 maize, 29 bean, 11 cowpea, and 13 sorghum varieties. The score reflects the wide range of choices available for Kenyan smallholder farmers.
7. Utilization of quality commercial seed by farmers	3.45	5.26	In 2024, production volumes reported for the four priority crops were 27,502 MT of maize seed, 1,774 MT of bean seed, 196 MT of cowpea seed and 501 MT of sorghum seed. Adjusted for imports and exports below (Indicator 8), total available seed meets 76% of national seed requirement for maize, 11% for bean, 12% for cowpea, and 72% for sorghum.
8. Clarity and enforcement of seed import/export regulations	8.00	9.50	Seed import and export processes are clearly defined and KEPHIS works with seed importers and exporters to ensure that they adhere to the relevant procedures and rules. In 2024, 20,912 MT of maize seed and 0.1 MT of sorghum seed were imported, and 2,208 MT of maize seed was exported.
9. Adequacy of agro-dealer networks	7.00	8.00	In 2024, Kenya had 5,000 active agro-dealers. The number is adequate, but more funding is needed in surveillance and training to ensure compliance with the seed law. The agro-dealers are well distributed in the farming areas.
10. Availability of seed in small package sizes	8.56	8.58	Of the four priority crops, 85% of maize seed, and 100% of bean, cowpea, and sorghum seed were sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	9.00	8.00	All important seed policy documents are in place and are up to date, including: National Seed Policy 2010 – guides the seed sector (currently being revised) Seeds and Plant Varieties Act, 2012 Seeds and Plant Varieties (Seeds) Regulations, 2016 Seeds and Plant Varieties (Variety Evaluation and Release) Regulations, 2016 Seeds and Plant Varieties (Plant Breeders Rights) Regulations, 1994 Plant Protection Act (revised 2012)
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	8.00	The Seeds and Plant Varieties (Variety Evaluation and Release) Regulations, 2016 are harmonized with the COMESA Seed Trade Harmonization Regulations and are being implemented.
13. Status of national biosafety frameworks for plant breeding and seed production	9.00	10.00	Kenya's Biosafety Act is implemented by the National Biosafety Authority. Evaluation and approval of applications for the production and commercialization of varieties with GMO content are ongoing.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	2.00	1.50	Kenya does not recognize FMSS at present, but the ongoing review of the National Seed Policy will incorporate FMSS. In the meantime, several NGOs promote activities that support FMSS.
15. Adequacy of seed inspection services	9.00	7.33	In 2024, Kenya had 77 public seed inspectors employed by KEPHIS and 42 authorized private inspectors. Private inspectors have relieved public inspectors' workload. Public inspectors face vehicle shortages and an ageing fleet. Existing digital tools require improvement.
16. Adequacy of government efforts to combat counterfeit seed	8.00	8.00	KEPHIS is leading efforts to combat counterfeit seeds with measures that include surveillance, the use of seed package labels linked to an SMS-based verification system, and awareness raising among farmers on how to detect counterfeit seeds. The cases of counterfeit seed have decreased since 2017 when the above measures were introduced[22]. However, the measures need to be upscaled.
17. Adequacy of national seed trade association	8.00	8.33	The Seed Trade Association of Kenya (STAK) is the national seed association representing registered seed merchants. STAK received an overall rating of 8.33/10, comprised of the following sub-scores: providing value to members – 8/10, activities on important seed sector issues – 10/10, effectiveness in advocacy – 9/10, ability to mobilize resources -8/10, managerial ability -7/10, and governance, and democracy -8/10.
FINAL ASSPI SCORE	**7.13**	**7.64**	Highest scores: in COMESA: Egypt, 8.13 in EAC and IGAD: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Kenya's agriculture sector contributes 20% of the country's gross domestic product (GDP).[23] The sector employs over 70% of the rural population. Kenya's high rainfall areas constitute about 10% of the arable land and produce 70% of national commercial agricultural production.[24] Kenya's seed sector ranks among the most developed on the continent. To sustain this momentum, the government should prioritize:

- Availing public land to private seed producers to enable them to work on large tracts of land that allow for high isolation distances.
- Evaluating measures that can reduce the cost of seed production.
- Enhancing measures to combat counterfeit seed.
- Enhancing the capacity of public entities to produce varieties for other crops and not just maize to improve availability of improved varieties for the important priority crops.
- Developing alternative financing mechanisms to unlock affordable credit for seed production.

Data for the ASSPI Kenya report was collected by:

Simon Maina

Head of Seed Certification, KEPHIS, Kenya.

22 As reported by 2022 Kenya TASAI study (Mabaya et al., 2022). Accessed 19 February 2024.
23 https://www.centralbank.go.ke/2023/02/03/agriculture-sector-survey-of-january-2023/ Accessed 7 March 2024.
24 https://knoema.com/atlas/Kenya/topics/Land-Use/Area/Arable-land-as-a-share-of-land-area#:~:text=In%202021%2C%20arable%20land%20as,average%20annual%20rate%20of%201.15%25. Accessed 7 March 2024.

African Seed Sector Performance Index (ASSPI) Country Brief – LESOTHO

OVERVIEW OF THE SEED SECTOR

Lesotho's seed sector is in the early growth stage of development and is dominated by the informal sector. The formal sector is dependent on the government's seed subsidy program, and most of the seed companies and agro-input dealers sell inputs through it. The Seed Development Unit of the Department of Agricultural Research in the Ministry of Agriculture and Food Security is responsible for seed inspection and certification services. The four priority crops identified by the local seed sector experts are maize, wheat, sorghum, and bean, which, combined, account for 99% of the area harvested to field crops. Lesotho is a member of the Southern African Development Community (SADC).

Overall country score (out of 10):	2.75

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Maize	89,206	73%
Sorghum	15,814	13%
Wheat	5,814	5%
Bean	8,953	7%
Total		99%

Total arable land:	0.357 million ha
Population:	2,311,472
Number of farming households:	199,059
Contribution of agriculture to GDP:	6.5%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	0.00	0.00	Lesotho does not have a variety release committee, and, as a result, variety release and registration is not carried out in the country.
2. Number of varieties released in last 3 years	0.00	0.00	No varieties have been released in Lesotho due to the absence of procedures for variety release and registration.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	0.67	2.00	In 2024, Lesotho had three breeders: two wheat breeders (qualified at PhD level) and one bean breeder (qualified at MSc level). However, they were not active because there are no crop breeding programs. The adequacy of breeders was rated 0/10 because the number is completely inadequate. The adequacy of funding was rated 1.5/10 because the government does not allocate funds to breeding activities. Occasionally, the Department of Agricultural Research receives breeding lines from the International Maize and Wheat Improvement Center (CIMMYT), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), the International Center for Tropical Agriculture (CIAT), and the Agricultural Research Council (ARC) of South Africa. The adequacy of existing research facilities was rated 4.5/10 because new laboratories have just been completed under the World Bank-funded Agricultural Productivity Programme for Southern Africa (APPSA). Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	5.67	The National Plant Genetic Resource Centre is located within the Department of Agriculture's Plant Genetics section. The center does not have enough staff, and government funding has generally been insufficient to support effective operations. The collaboration between the center and community-based organizations is mostly adequate. 2,667 accessions of the four crops are being conserved: 1,064 for maize, 405 of sorghum, 401 of wheat, and 797 of bean. Of these, 34% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	4.17	2.42	In Lesotho, the main source of EGS is the Seed Development Unit of the Department of Agricultural Research in the Ministry of Agriculture and Food Security. To meet the increasing demand for EGS, three private companies were also producing EGS in 2024. The adequacy of quality of EGS was rated 2.5/10, reflecting that, while seed policy instruments are absent, modest quality control is being conducted. The adequacy of the quantity of EGS was rated 2.25/10, as EGS production is in the infancy stage. The late onset of rains affected bean EGS seed supply. The adequacy of the timeliness of delivery of EGS was rated 2.5/10 reflecting late submission of requests. It is worth noting that the ratings are based on maize and bean seed only. The other two crops were not produced in 2024. Crop-specific ratings are available in Appendix 2.
6. Availability of crop varietal choice to farmers	1.42	2.48	In 2024, the number of varieties available on the market for the four crops was 22: 12 maize varieties, three sorghum varieties, four wheat varieties and three bean varieties.
7. Utilization of quality commercial seed by farmers	2.48	3.50	In 2024, production volumes reported for the four priority crops were 31 MT of maize seed and 14.82 MT of bean seed. No seeds were produced for wheat and sorghum. Adjusted for imports below (Indicator 8), total available seed meets 43% of national seed requirement for maize, 32% for sorghum, and 6% each for wheat and bean.
8. Clarity and enforcement of seed import/export regulations	6.00	5.00	Lesotho is a net importer of seed for the four crops. Importers largely follow the procedures and requirements for importation. In 2024, 1,433 MT of maize seed, 14 MT of wheat seed, 115 MT of sorghum seed, and 30.5 MT of bean seed were imported. There were no seed exports in 2024. Most seed is imported or exported through agro-dealers.
9. Adequacy of agro-dealer networks	5.00	5.00	In 2024, Lesotho had 95 agro-dealers. Since there are ten districts in the country, an average of nine agro dealers per district is mostly adequate. However, only a few are located in the remote parts of the country.
10. Availability of seed in small package sizes	0.13	0.00	Of the four priority crops, none of the seeds of the four focus crops was sold in small packages of 2 kg or less. The low score indicates unmet demand for seed in small packages for all four priority crops.
11. Status of national seed policy instruments	5.00	4.40	The National Seed Policy of 2016 outlines the framework for Lesotho's seed sector. However, the policy is not operational as Parliament is yet to pass the Seed Bill which will guide the implementation of the policy. Similarly, the Plant Protection Bill is also waiting to be passed. On the plus side, government has developed a seed certification scheme.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	5.00	4.00	The National Seed Policy is aligned with the SADC Harmonized Seed Regulatory System. However, since the policy is not operational, the implementation of the SADC Regulations are also hindered.
13. Status of national biosafety frameworks for plant breeding and seed production	5.00	2.50	The Biosafety Bill has been drafted but it is yet to be enacted by Parliament into law.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	8.00	2.50	FMSS, along with community-based seed programs, are recognized in the National Seed Policy and Intellectual Property rights policy. The National Seed Policy aims to support the development of both formal and informal seed systems. The Intellectual Property rights policy acknowledges that indigenous knowledge is an essential part of FMSS. However, since the policy has not been operationalized, as explained under indicator 11 above, FMSS is not recognized in Lesotho. Several NGOs also support community-based seed production.
15. Adequacy of seed inspection services	6.00	3.33	In 2024, Lesotho employed four seed inspectors, a number insufficient to meet current needs. Additional vehicles have been acquired through the APPSA project to support seed inspection activities. At present, the inspectors do not use any digital tools.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	4.00	4.00	To address the challenge of counterfeit seed, agro-dealers are required to carry the required import/export documentation, including import permits, certificates from seed testing laboratories, and, in the case of exports, phytosanitary certificates. The Plant Protection and Quarantine section works with inspectors at the border to ensure compliance. Local seed packages must have labels, but imported seeds are not always labeled. The rise in counterfeit seeds during peak cropping season is partly a result of the country's porous borders and the limited number of seed inspectors.
17. Adequacy of national seed trade association	0.00	0.00	Lesotho has no national seed trade association.
FINAL ASSPI SCORE	**3.52**	**2.75**	Highest scores: in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Lesotho's seed sector has a sound policy foundation — the National Seed Policy of 2016, a certification scheme, and SADC alignment — but implementation capacity remains critically constrained. Public breeding and inspection institutions are severely under-resourced, and as a result, the country depends on seed imports, primarily from South Africa. To address these constraints, the government should prioritize:

- Enacting the Seed Bill into Law to provide the legal framework for the seed sector.
- Strengthening the breeding programs through consistent funding for the Department of Agricultural Research.
- Hiring additional technical staff in the Seed Development Unit to strengthen the quality control, variety release, and registration activities.

Data for the ASSPI Lesotho report was collected by:

Marankoe Selikane

Seed Development Unit, Department of Agricultural Research, Ministry of Agriculture and Food Security, Lesotho.

African Seed Sector Performance Index (ASSPI) Country Brief – LIBERIA

OVERVIEW OF THE SEED SECTOR

Liberia's seed sector is in the nascent stage of development. The sector is composed of both the formal and informal systems. The formal seed system is supported by the Central Agricultural Research Institute (CARI), Liberia's national agricultural research institute, which is in charge of breeding and variety development, and the Ministry of Agriculture, which is responsible for regulating the sector. A few private seed companies and cooperatives produce and market certified seed. The informal system consists of small-scale businesses, seed banks, group-based seed production, and seed villages. The four priority crops, as identified by local seed sector experts, are rice, maize, groundnut, and cowpea, which, combined, account for 98% of area harvested to field crops. Further, these are the only food crops that undergo seed certification. Liberia is a member of the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	3.94

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Rice	290,000	78%
Maize	59,492	16%
Groundnut	8,242	2%
Cowpea	8,499	2%
Total		98%

Total arable land:	0.5 million ha
Population:	5,493,031
Number of farming households:	338,630
Contribution of agriculture to GDP:	33.8%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	3.00	4.25	The variety release process is explicitly outlined in the Seed Development and Certification Agency Act of 2019. The Seed Development and Certification Agency (SDCA) became operational in 2021 when the SDCA regulations came in force and is currently forming subcommittees to facilitate its mandate. While a variety catalog exists, it has not been updated since 2022. Additionally, cost structures have yet to be determined.
2. Number of varieties released in last 3 years	0.00	0.00	During the 2022–2024 period, no varieties of the four priority crops were released as there is no procedure for variety release and registration.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.00	4.00	As of 2025, CARI had eight active breeders for the four priority crops: six rice, two maize, and no groundnut and cowpea breeders. The adequacy of the number of breeders was rated 2.5/10, and they are mostly adequate for rice and inadequate for maize. The adequacy of funding for breeding programs was rated 5.5/10, clearly indicating that CARI's funding needs are not met. The adequacy of basic research infrastructure was rated 4/10, reflecting the lack of equipment. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	4.00	3.00	CARI is Liberia's national gene bank. As of 2022, limited resources restricted CARI to *in-situ* conservation for select priority accessions. Its PGRFA program faces staff shortages and outdated controlled storage facilities needing upgrades. Liberia's first community seed bank, established in 2024, partners with CARI. 15 accessions of the four crops are being conserved: five of rice, and 10 of maize. Of these, 10% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	5.58	5.67	CARI is the main source of EGS for all four crops in Liberia, while AfricaRice from Côte d'Ivoire supplies EGS for rice. The adequacy of the quality of EGS was rated 6/10, reflecting that CARI and IITA maintain EGS adequately. The adequacy of the quantity of EGS was rated 6/10, as CARI and IITA mostly supply the qualities of EGS required consistently, although adequate quantities are more likely to be available with adequate notice. The timeliness of delivery of EGS was rated 5/10, due to a lack of storage, which means that orders submitted on short notice may not be satisfied on time. Crop-specific ratings are available in Appendix 2.
6. Availability of crop varietal choice to farmers	1.42	2.98	In 2024, the number of varieties available on the market for the four crops was 29: 19 rice varieties, eight maize varieties, one groundnut variety and one cowpea variety.
7. Utilization of quality commercial seed by farmers	0.01	0.71	In 2024, production volumes reported for the four priority crops were 225 MT of rice seed. National seed production and imports less exports accounted for less than 1% of the national requirement for each of the four priority crops.
8. Clarity and enforcement of seed import/export regulations	8.00	7.00	According to importers, import and export regulations are clear and are adhered to. In 2024, the imports were: 10 MT of rice seed, 8.5 MT of groundnut seed and 12 MT of cowpea seed.
9. Adequacy of agro-dealer networks	4.00	5.00	In 2024, Liberia had 105 agro-dealers. The number is inadequate. A substantial portion of farmers in rural areas do not access improved seeds and other agricultural inputs due to poor distribution of agro-dealers.
10. Availability of seed in small package sizes	0.14	2.32	For the four priority crops, 25% of rice seed, 25% of maize seed and 5% of groundnut seed was sold in small packages of 2 kgs or less in 2024.
11. Status of national seed policy instruments	9.00	8.00	Liberia's seed sector is guided by the Liberia National Seed Policy and Regulatory Framework of 2012, the Liberia SDCA Act of 2019 and SDCA regulations of 2021. The Act established the SDCA . The government has also developed the Liberia National Rice Development Strategy (2018-2030) to support the seed sector for the country's most important staple crop.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	7.00	Liberia is a member of ECOWAS. The SDCA Act is aligned with the ECOWAS Regional Seed Regulations. However, not all aspects have been operationalized, e.g., creation of a seed fund is still pending.
13. Status of national biosafety frameworks for plant breeding and seed production	2.00	7.00	Liberia has signed its national biosafety framework, which addresses the generation, utilization, and commercialization of agricultural biotechnology. However, Article 48 of the SDCA Act requires that genetically modified varieties be subject to bio-security rules, although these rules are not yet in place.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	2.00	4.00	FMSS are recognized in the Liberian Seed Policy and Regulatory Framework.
15. Adequacy of seed inspection services	MD	0.00	Liberia has no seed inspectors. Seed inspection services are the responsibility of the SDCA, which is not yet functional.
16. Adequacy of government efforts to combat counterfeit seed	1.00	6.00	There are currently no legal measures to address counterfeit seed in Liberia, although the SDCA Act stipulates quality control arrangements. However, the Act is yet to be operationalized.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
17. Adequacy of national seed trade association	0.00	0.00	Liberia has no national seed trade association.
FINAL ASSPI SCORE	**3.20**	**3.94**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Liberia's agricultural sector provides livelihood for more than 60 percent of Liberia's population. In 2024, it accounted for 34 percent of Liberia's gross domestic product (GDP).[25] Most agricultural production is small scale, and overall agricultural productivity is low due in large part to low-technology practices and a lack of quality agricultural inputs. As a result, Liberia imports more than 80% of its staple crop rice, making the country vulnerable to global food price volatility. Since the seed sector is in the nascent stage, the government should focus on:

- Enhancing CARI's capacity to meet the demand for EGS from seed companies and producers.
- Funding the Liberia Seed Development and Certification Agency to facilitate inspection, certification, and variety release and registration in the country.
- Supporting awareness raising about the benefits of certified seed among farmers.
- Promoting and supporting agro-dealers in rural areas to increase adoption rates of improved seed and other agricultural inputs.

Data for the ASSPI Liberia report was collected by:

Alaric Mienwipia

Assistant Director, Department of Regional Development Research and Extension, Ministry of Agriculture in Monrovia, Liberia.

25 https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=LR. Accessed 23 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – LIBYA

OVERVIEW OF THE SEED SECTOR

Libya's seed sector is in the nascent stage. Most of Libya is a desert, with only 2% of the land suitable for agriculture. Over the last ten years, the country's modest agriculture sector, including its seed sector, has further declined due to political instability. The government entities regulating the seed sector are the Agriculture Research Centre (ARC), responsible for research and variety development, the Cereal Production Authority, responsible for variety release, and the Agriculture Quarantine Centre (AQC), responsible for seed inspection and certification. The four priority crops, as identified by local seed sector experts, are barley, wheat, green peas, and broad bean, which, combined, account for 97% of area harvested to field crops. Libya is a member of the Union du Maghreb Arabe (UMA), the Common Market for Eastern and Southern Africa (COMESA), and the Community of Sahel–Saharan States (CEN-SAD).

Overall country score (out of 10):	2.54

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Barley	126,698	50%
Wheat	117,228	46%
Green peas	3,757	1%
Broad bean	117	<1%
Total		97%

Total arable land:	1.72 million ha
Population:	7,305,659
Number of farming households:	170,000
Contribution of agriculture to GDP:	2.4%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 score (out of 10)	Description of performance
1. Quality of variety release and registration process	7.00	6.75	Candidate varieties are evaluated based on standards of quality, productivity, and resistance to pests and diseases, as well as standards of Distinctness, Uniformity, and Stability. The Agricultural Crop Varieties Registration Committee meets routinely to evaluate varieties. The National Registration List is updated after meetings of the registration committee. Fees for the process are set and are paid before the tests are conducted. The length of the variety release is 24 months.
2. Number of varieties released in last 3 years	2.43	4.00	During the 2022 – 2024 period, 22 varieties of the four priority crops were registered: six for barley, seven for wheat, four for green pea, and five for broad bean
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	3.67	4.25	In 2024, the ARC, the National Center for Improved Seeds, and universities had 15 active breeders, who all worked on barley. The adequacy of the number of breeders was rated 5.75/10, because it is not possible to ascertain the actual number of active breeders among the 426 researchers by the four-priority crop due to a lack of reliable statistics. The funding for breeding programs was rated 3/10, reflecting a lack of reliable financial support from government. The adequacy of basic research infrastructure was rated 4/10, highlighting that research facilities need to be rehabilitated. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	0.00	4.33	The National Gene Bank is mandated to carry out PGRFA activities. The human resources are inadequate. Libya is in the process of establishing advanced biological laboratories with a modern design to preserve genetic varieties. The gene bank has limited collaboration with community seed banks.
5. Adequacy of Early Generation Seed (EGS)	7.42	7.75	The main sources of EGS in Libya are the research centers under ARC and multinational seed companies that supply seed to the country. The adequacy of the quality of the EGS was rated 7.50/10, reflecting that the EGS supplied met international quality standards. The adequacy of the quantity of EGS was rated 8.25/10. The timeliness of the delivery of EGS was given a score of 7.5/10, because seeds are supplied and delivered at the beginning of each season according to the terms agreed upon between the supplying and receiving agencies. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	1.85	1.64	In 2024, the number of varieties available on the market for the four crops was 10: three each for barley and wheat, and two each for green pea, and broad bean.
7. Utilization of quality commercial seed by farmers	MD	0.00	In 2024, there was no seed production for the four priority crops. The government has not reported any seed production since 2019.
8. Clarity and enforcement of seed import/export regulations	7.00	8.00	The government is the sole importer of seed in the country. The seed import process is clearly defined and followed by the government. However, no imports were reported in 2024.
9. Adequacy of agro-dealer networks	7.00	0.00	The number of agro-dealers in Libya is unknown.
10. Availability of seed in small package sizes	MD	MD	It was not possible to determine the proportion of seed sold in small packages due to a lack of seed production data. However, seed for green pea and broad bean are available in 5 kg seed packages.
11. Status of national seed policy instruments	0.00	0.00	Due to the current state of the seed industry, seed policy instruments (decrees and ministerial orders) cannot be traced.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	0.00	0.00	Libya is a member of COMESA. The country has not made any substantive progress towards harmonizing the national seed regulations with the COMESA Seed Trade Harmonization Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	Under the current conditions, the frameworks in place for national biosafety are no longer operational. The biotechnology laboratory was suspended in 2016.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	1.00	As implied under indicator 11, the status of FMSS cannot be confirmed.
15. Adequacy of seed inspection services	0.00	0.00	Libya has no seed inspectors as the country has no local seed production.
16. Adequacy of government efforts to combat counterfeit seed	5.00	3.00	Because there is no local seed production, currently Libya does not need to combat counterfeit seeds in the country. However, the government regularly inspects imports to ensure that counterfeits seeds do not enter the country.
17. Adequacy of national seed trade association	0.00	0.00	Libya has no national seed association, although there is a Farmers Syndicate that participates in agriculture and livestock policy discussions with government.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 score (out of 10)	Description of performance
FINAL ASSPI SCORE	**2.76**	**2.54**	Highest scores: in COMESA: Egypt, 8.13 in UMA: Tunisia, 6.92 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

In 2024, agriculture contributed 1.74% of Libya's gross domestic product.[26] However, the seed sector has been deeply affected by over ten years of political instability, and the sector is underdeveloped. Efforts to revive the nascent seed sector should focus on:

- Developing a comprehensive national program for seed sector development, starting with seed production
- Introducing and commercializing new and improved varieties of seed for the four crops and promoting their uptake among farmers.
- Building the human capacity across the seed system, including for breeders, seed producers, seed analysts and technologists, and seed inspectors.

Data for the ASSPI Libya report was collected by:

Nadiyah Saeid Masoud Algharari

International Cooperation Office, Ministry of Agriculture and Livestock, Libya.

26 https://www.theglobaleconomy.com/Libya/Share_of_agriculture/ Accessed 23 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – MADAGASCAR

OVERVIEW OF THE SEED SECTOR

The seed sector in Madagascar is in the early growth stage of development. The informal sector is dominant and is characterized by the exchange of seeds between farmers. The semi-formal sector, producing Quality Declared Seed (QDS) is prevalent in the arid, southern parts of the country. In the formal sector, seed production is carried out by local and foreign seed companies, seed producers, and cooperatives. In total, more than 350 local seed establishments are currently approved for seed production. The Agence Nationale Officielle de Contrôle des Semences et des Plants (ANCOS) oversees variety release and registration, seed inspection and certification. The Foibem-Pirenena momba ny Fikarohana ampiharina amin'ny Fampandrosoana ny eny Ambanivohitra (FOFIFA) is responsible for research and variety development. The four priority crops, as identified by the local seed sector experts, are rice, maize, bean, and groundnut. Combined, they account for 98% of the area harvested to field crops. Madagascar is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC).

Overall country score (out of 10):	3.98

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oils
Rice	**2,040,884**	**86%**
Maize	**144,592**	**6%**
Bean	**69,767**	**3%**
Groundnut	**70,192**	**3%**
Total		**98%**

Total arable land:	**3.0 million ha**
Population:	**31,195,932**
Number of farming households:	**5,200,000**
Contribution of agriculture to GDP:	**22.5%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**5.00**	**4.75**	Variety release and registration rely on Distinctness, Uniformity, and Stability (DUS) tests, as well as Value for Cultivation and Use (VCU) evaluations. ANCOS clearly defines and supervises this process. However, the variety release committee required by *seed law has not yet been formed. Approval of varieties is* requested jointly by the Service Officiel de Contrôle des Semences et Matériel Végétal (SOC) and breeders. There is no set schedule for updating the catalog; it is revised whenever a new variety is approved and published online soon after. Costs for variety registration applications are still undetermined. On average, the length of variety release is 36 months.
2. Number of varieties released in last 3 years	**3.00**	**7.57**	During the 2022– 2024 period, only 47 varieties of the four priority crops were released: 41 rice varieties, three maize varieties, two bean varieties and one groundnut variety. This was an increase from the 15 varieties released between the 2020-2022 period.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**4.00**	**4.00**	As of 2025, the FOFIFA had 15 active breeders for the four priority crops: nine for rice, one for maize, three for bean, and two for groundnut. The adequacy of the number of breeders was rated 3.5/10 because the number of breeder is largely inadequate. The adequacy of funding for breeding programs was rated 3.5/10, because funding allocation to agricultural research is inadequate. The adequacy of basic research infrastructure was rated 5/10 because funds allocated for facilities and equipment are inadequate. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	3.33	FOFIFA and FIFAMANOR oversee ex-situ plant genetic conservation in Madagascar but are underfunded. The Ministry of Agriculture houses the PGRFA focal point, and no community seed banks exist in the country. 3,022 accessions of the four crops are being conserved: Out of the four priority crops, the gene bank has conserved 3,022 rice accessions.
5. Adequacy of Early Generation Seed (EGS)	5.67	5.67	FOFIFA is the main source of EGS for the four priority crops in Madagascar. Seed industry experts rated the quality of EGS as 5.5/10 because the production of EGS follows the defined standards and undergoes control by the regulator. Seed industry experts rated the adequacy of the quantity of EGS supplied as 4.5/10 because of the frequent mismatch between supply and demand. Seed industry experts rated the timeliness of delivery of EGS at 7/10 because compliance with on-time delivery is enforced. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	5.03	6.73	In 2024, the number of varieties available on the market for the four crops was 82: 66 for rice, seven for maize, six for bean, and three for groundnut.
7. Utilization of quality commercial seed by farmers	0.67	0.74	In 2024, seed production for the four crops was: 1,328 MT of rice seed, 328 MT of maize seed, 71 MT of bean seed, and 56 MT of groundnut seed. These volumes met 7% of the national rice seed requirements, 11% of the national maize seed requirements, 5% of the national bean seed requirements, and 2% of the national groundnut seed requirements.
8. Clarity and enforcement of seed import/export regulations	3.00	3.00	Seed importation into Madagascar is unregulated due to ambiguities in the legislation that oversees the process. In 2024, there were no imports of seed for the four crops.
9. Adequacy of agro-dealer networks	5.00	3.50	In 2024, Madagascar had no agro-dealers registered by ANCOS. Several development projects are establishing networks of input distributors by creating local input shops. Although large distribution companies exist, their points of sale do not cover all regions of the country.
10. Availability of seed in small package sizes	1.54	1.30	Of the four priority crops, 10% of rice, and 5% of maize seed, 75% of bean and 57% of groundnut seed, are sold in small seed packages of 2 kg or less.
11. Status of national seed policy instruments	7.00	6.00	Madagascar's seed sector is guided by: Loi N°94-038 du 03/01/95 (1994). This law has been under review since 2022 Loi n°94-038 du 03/01/95 du 03/01/1995, regulates the production, control, certification, and marketing of seeds Décret n°2010-1009 du 14/12/2010, on the bodies responsible for implementing seed policy. Décret portant création du Fonds d'Appui au Secteur semencier, 2010, establishing the Seed Sector Support Fund (FASS) Stratégie Nationale Semencière, was finalized and approved by the Government in January 2024
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	3.00	Madagascar is a member of COMESA and SADC. Seed policy instruments have been aligned with harmonized SADC regulations on the designation of seed classes, the standards for control and certification, and the standards for seed analysis. Alignment of seed policy instruments with the COMESA Harmonized Seed Trade Regulations is under review by specialized committees and sector stakeholders.
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	4.50	*Politique et Structure Nationale de Biosécurité* of Octobre 2004 and *Décret n°2012-833* of September 2012 guide the biosafety frameworks in Madagascar. The Decree No. 2012-833 of 18/09/2012 is not yet implemented.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS is not recognized in national seed policy instruments.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	6.00	5.00	In 2024, Madagascar had 140 public seed inspectors, which is sufficient. However, the *Service Officiel de Contrôle des Semences et matériel vegetal (*SOC) faces transport limitations for seed inspections, and digital tools are not utilized.
16. Adequacy of government efforts to combat counterfeit seed	5.00	3.50	Penalties for engaging in actions in violation of the seed law are specified in diverse decrees. In addition, ANCOS is in the process of digitizing transaction along the formal seed value chain. This exercise will lead to each approved seed establishment obtaining a QR code which interacts with the ANCOS database to verify the traceability of the seeds. Enforcement measures for seed counterfeiting are not applied even though they are clearly set out in the seed law.
17. Adequacy of national seed trade association	5.00	5.00	*Fikambanana Malagasy Misehatra Masomboly* (F3M) is the national association of seed professionals. F3M was established in 2022 to replace the *Association Malgache des Professionnels des Semences et Plants* (AMPROSEM), which is no longer functional. The F3M is currently being set up and is raising awareness among seed actors. Performance of F3M was rated at 5/10 overall and comprised of the following sub-scores, all measured on a scale of 1-10: providing value to members: 5, activities on important seed sector issues: 5, effectiveness in advocacy: 5, ability to mobilize resources: 5, managerial ability: 5, and governance and democracy: 5.
FINAL ASSPI SCORE	**4.52**	**3.98**	Highest scores: in COMESA: Egypt, 8.13 in SADC and in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Madagascar's seed sector is at a crucial stage of development, with a diverse landscape comprising informal, semi-formal, and formal components. While the informal sector remains dominant, there is growing potential for formal seed production, as evidenced by the presence of local and foreign seed companies, cooperatives, and over 350 approved seed establishments. However, challenges such as limited utilization of quality commercial seed by farmers and ambiguous seed import/export regulations are hampering the sector's progress. On a positive note, Madagascar has shown commitment to regional cooperation, aligning its seed policies with harmonized regional standards in COMESA and SADC. For the seed sector to thrive, the following urgent issues need to be addressed:

- Enhancing the capacity of ANCOS to implement its mandate of national seed quality control.
- Improving the financial and technical support to FOFIFA for the development, production, and maintenance of Early Generation Seed.
- Strengthening the capacity of local seed enterprises in internal seed quality assurance at the production, processing, and marketing levels.

Data for the ASSPI Madagascar report was collected by:

Tafitasoa Andrianoroharison Mandanirina

Seed industry expert

African Seed Sector Performance Index (ASSPI) Country Brief – MALAWI

OVERVIEW OF THE SEED SECTOR

The seed industry in Malawi is in the growth stage. The formal seed sector is regulated by the Seed Services Unit (SSU) in the Ministry of Agriculture, Irrigation and Water Development (MOAIWD) and governed by up-to-date seed policy instruments. The main players in the formal sector are private seed companies. The registered seed producers are public breeders, breeders from the Consultative Group on International Agricultural Research (CGIAR) centers, associations, seed companies, co-operatives, and individual seed producers. The Department for Agricultural Research Services (DARS) oversees variety research and development. The informal seed system is common among smallholder farmers growing legumes and planting material for vegetatively propagated crops. The four priority crops, as identified by the local seed sector experts, are maize, groundnut, soya bean, and bean. Combined, these four crops account for 78% of area harvested to field crops. Malawi is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC).

Overall country score (out of 10):	6.43

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	1,500,000	46%
Groundnut	400,000	12%
Bean	388,909	12%
Soya Bean	260,000	8%
Total		78%

Total arable land:	4.0 million ha
Population:	21,104,482
Number of farming households:	4,355,739
Contribution of agriculture to GDP:	31.8%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	7.00	8.00	In Malawi, crop varieties must undergo Value for Cultivation and Use (VCU) trials for at least three seasons before they can be released. The Agricultural Technologies Release Committee (ATCC), chaired by the Ministry of Agriculture, is responsible for releasing new varieties. Both breeders and the ATCC are familiar with this transparent process. The committee meets twice a year, and the variety catalog is regularly updated and remains current. Most applicants pay the necessary fees for variety release, though public varieties are sometimes not fully paid for. On average, the release process takes 36 months.
2. Number of varieties released in last 3 years	5.86	4.71	During the 2022-2024 period, 27 varieties for the four crops were released: 18 for maize, four each for groundnut and bean, and one for soya bean.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	5.58	4.08	As of 2025, the DARS had five active breeders for the four priority crops: two for maize, and one each for groundnut, bean and soya bean. The adequacy of the number of breeders was rated 3.25/10 because the number of breeders is inadequate. The adequacy of funding to the breeding programs was rated 3/10 because the government and development partners do not provide adequate funding for breeding activities. The adequacy of equipment and infrastructure at the breeding programs was rated 6/10. While basic breeding facilities are in place, there is a shortage of storage and cold room infrastructure, and the state of irrigation equipment and greenhouses is deteriorating. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	6.33	The Malawi Plant Genetic Resources Centre (MPGRC) conducts *in-situ* and *ex-situ* conservation of plant genetic resources. The human resources at the center are mostly adequate. However, MPGRC is constrained by an inadequate storage facility for *ex-situ* conservation and a lack of backup power supply. Collaboration with community seed banks is mostly adequate. 725 accessions of the four crops have been conserved: 520 of maize, 39 of groundnut, 166 of bean, and none for soya bean. Of these, 98% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	8.75	6.17	The main sources of EGS in Malawi are DARS, CGIAR centers, and private seed companies. The adequacy of the quality of the EGS supplied was rated 9/10, as it consistently meets the required quality standards. The seed is registered for cultivation by SSU after testing for germination and purity. The adequacy of the quantity of EGS supplied was rated 3.5/10 because it is often inadequate. EGS production by the DARS is not funded adequately by the government and relies on support from projects. The adequacy of timeliness of delivery of EGS was rated 6/10 signalling that deliveries are mostly on time. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	3.55	4.54	In 2024, the number of varieties available on the market for the four crops was 51: 33 for maize, five for groundnut, three for bean, and 10 for soya bean. This was an increase from the 37 varieties in 2022.
7. Utilization of quality commercial seed by farmers	4.75	6.57	In 2024, seed production for the four crops was: 15,095 MT for maize seed, 1,047 MT for groundnut seed, 364 MT for bean seed, and 1,703 MT for soya bean seed. Adjusted for imports and exports (see Indicator 8), total available seed meets 98% of national seed requirement for maize, 4% for groundnut, 4% for bean, and 9% for soya bean.
8. Clarity and enforcement of seed import/export regulations	7.00	10.00	The process for seed importation and exportation is very clear and consistent in its enforcement. In 2024, 31,450 MT of maize seed, 250 MT of groundnut seed, 150 MT of bean seed and 250 MT of soya bean seed were imported. The volume of exports was: 621 MT of maize seed, 56 MT of bean seed, and 126 MT of soya bean seed.
9. Adequacy of agro-dealer networks	7.00	5.00	In 2024, Malawi had 430 registered agro-dealers. The agro-dealers are registered by SSU and the Seed Trade Association of Malawi (STAM). Many agro-dealers operate informally and do not appreciate the benefits of formal registration. Many of them are in the urban areas far from the farming communities.
10. Availability of seed in small package sizes	1.71	3.81	Of the four priority crops, only 40% of maize seed, 5% of groundnut seed, 10% of bean seed, and 20% of soya bean seed are sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	10.00	10.00	Malawi's seed sector is guided by the National Seed Policy of 2018 which is operational. The Seed Act of 1996 is operational. The new Seed Act of 2022 has been enacted and assented to by parliament and was operationalized in April 2024. The Seed Act mandates the creation of a National Seed Authority. Two of the five seed regulations of 2022 were gazetted while three are pending gazettement by the Ministry of Justice.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	9.00	Malawi is a member of COMESA and SADC. The Seed Regulations of 2018 are aligned with the harmonized regulations of the SADC and COMESA seed regulations. Although Malawi's seed standards are based on the harmonized seed standards, the country has yet to start implementing the harmonized variety release requirements. These will be implemented after the Seed Regulations of 2018 are revised and the Seed Act 2022 is operationalized.
13. Status of national biosafety frameworks for plant breeding and seed production	9.00	8.00	The Biotechnology and Biosafety Policy of 2008 and the Biosafety Act of 2014 regulate agricultural biotechnology in Malawi. Both are operational. The National Biosafety framework is being implemented effectively. Lilongwe University of Agriculture and Natural Resources has the capacity to conduct GMO testing and issue non-GMO certificates, but actual testing and certification have not begun yet.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	4.00	2.50	Although the National Seed Policy recognizes the FMSS, it clearly states that it focuses on the formal seed system. However, several non-governmental organizations promote FMSS.
15. Adequacy of seed inspection services	7.00	4.33	In 2024, Malawi had 95 seed inspectors, of whom 33 were public inspectors and 62 were private inspectors. The number of inspectors is mostly adequate, but the SSU encounters challenges related to the adequacy of resources especially vehicles required for conducting effective seed inspections. Inspectors typically rely on cell phones and GPS devices.
16. Adequacy of government efforts to combat counterfeit seed	7.00	8.00	Seed Act of 1996, Seed Regulations of 2018, and Malawi Bureau of Standards Act outline penalties for violating government quality control standards. Measures taken include monitoring seed selling points, collaboration with law enforcement and judicial officers on enforcement of seed laws to assist in curbing malpractice, and the introduction and use of scratch card seed labels. Penalties include loss of license and a prison sentence. Government efforts are inadequate since a lack of resources affects monitoring of seed in the market. However, recently, suspects with counterfeit seed were apprehended and are being investigated.
17. Adequacy of national seed trade association	7.83	8.33	The Seed Trade Association of Malawi (STAM) is a dynamic industry association that boasts a membership encompassing both seed producers and seed distributors. The overall rating of STAM was 8.33/10 and comprised of the following sub-scores, all measured on a scale of 1-10: managerial ability: 8/10, governance and democracy: 10/10, activities on important seed sector issues: 9/10, providing value to members: 8/10, ability to mobilize resources: 7/10, and effectiveness in advocacy: 8/10.
FINAL ASSPI SCORE	**6.47**	**6.43**	Highest scores: in COMESA: Egypt, 8.13 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Malawi's formal seed sector is in the growth stage of development. In 2024, agriculture accounted for 31.8% of Malawi's GDP and generated over 80% of national export earnings.[27] Growing private-sector involvement in variety production and commercialization, combined with a stable seed policy environment, support continued sector development. To sustain this momentum, the following issues need to be addressed:

- Enhancing the capacity of local seed companies to manage parental lines for maize varieties.
- Strengthening DARS's capacity to produce adapted varieties.
- Supporting availability of seed in small packages to promote trial and adoption of newer improved varieties.
- Enhancing the capacity of the Seed Services Unit to conduct seed inspections to minimize the prevalence of counterfeit seed.

Data for the ASSPI Malawi report was collected by:

Dr. Nathan Aliel Kachiguma

Commodity Team Leader for Seed Services Unit
Seed Services Unit, Department of Agricultural Research Services, Ministry of Agriculture

27 https://efaidnbmnnnibpcajpcglclefindmkaj/https://www.jica.go.jp/Resource/malawi/english/activities/c8h0vm00004bpzlh-att/agriculture.pdf Accessed 15 April 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – MALI

OVERVIEW OF THE SEED SECTOR

Mali's seed industry is in the early growth stage. In the formal sector, seeds are produced and marketed by a combination of seed companies, seed cooperatives, and individual seed producers. Seed quality control, inspection, and certification are overseen by the Laboratoire des Semences (LABOSEM) ,the sworn phytosanitary inspectors and controllers of the Regional Directorates of Agriculture (DRA) and, in the case of seed imports and exports, the Division Législation Contrôle Phytosanitaire (DLCP). LABOSEM falls under the Direction Nationale de l'Agriculture (DNA). The four priority crops, as identified by local seed sector experts, are rice, maize, sorghum, and millet which, combined, account for 89% of area harvested to field crops. Formerly a member of the Economic Community of West African States (ECOWAS). Mali left the organization in January 2025.

Overall country score (out of 10):	5.85

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Rice	789,529	11%
Maize	1,598,149	23%
Sorghum	1,693,748	24%
Millet	2,123,057	31%
Total		89%

Total arable land:	8.341 million ha
Population:	23,769,127
Number of farming households:	1,493,061
Contribution of agriculture to GDP:	33.3%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	6.00	7.75	The Comité National des Semences (CNS) is responsible for variety release and registration in the official national seed catalog. The variety release process is managed by the Comité National d'Homologation under the supervision of LABOSEM, which acts as a technical adviser and permanent secretary to the CNS. The system has clear procedures and thorough documentation for application review, DUS and VATE testing, and annual validation by the approval committee. After field evaluations, the committee approves new varieties to be added to catalogs according to set update cycles. The validated varieties are registered annually in the official national and regional catalog of ECOWAS-UEMOA-CILSS. These procedures are followed mostly consistently. The cost of the variety registration process depend on the location of the trials. The average length of the process is 24 months, i.e., two independent seasons.
2. Number of varieties released in last 3 years	8.29	8.16	During the 2022-2024 period, 55 varieties were released for the four crops: 31 rice, 3 maize, and 21 sorghum varieties.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	5.25	5.83	As of 2025, the *Institut d'Economie Rurale* (IER) employed 20 breeders for the four priority crops: nine rice breeders, five maize breeders, four sorghum breeders, and two millet breeders. The adequacy of the number of breeders was rated 6/10, highlighting that the number of breeders is mostly adequate. The adequacy of funding was rated 5.25/10, as breeding programs often rely on project funds. The adequacy of basic research infrastructure was rated 6.25/10 on the basis that breeding programs have benefited from project support that built infrastructure such as irrigation facilities. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	4.00	5.33	The *Banque de Ressource Génétique* (BRG) under the IER oversees the management of plant genetic resources in Mali. BRG lacks sufficient funding, and its infrastructure is inadequate. IER breeders work with community seed banks on prospecting missions to identify and collect farm seed for use in variety selection. A total of 6,545 accessions of the four crops are being conserved: 1825 of rice, 349 of maize, 3199 of sorghum, and 1127 of millet. Of these, 25.7% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	7.50	5.17	The main sources of EGS for the four priority crops in Mali are the IER and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). The adequacy of the quality of EGS was rated 5.25/10, reflecting that LABOSEM and the regional directorates adhere to field and laboratory standards. The adequacy of the quantity of EGS was rated 4.25/10, because, due to inadequate planning, and the lack of a pre-order system, the quantity of EGS produced did not meet seed producers' requirements, especially for millet. The adequacy for timeliness of delivery of EGS was rated 6/10, reflecting that delivery EGS to seed producers was mostly on time. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	7.65	8.40	In 2024, the number of varieties available on the market for the four priority crops was 121: 54 for rice, 29 for maize, 25 for sorghum and 13 for millet. This was an increase from the 95 varieties in 2022.
7. Utilization of quality commercial seed by farmers	1.47	1.00	In 2024, the volumes of production reported for the four priority crops were 3,684 MT of rice seed, 2,691 MT of maize seed, 193 MT of sorghum seed and 155 MT of millet seed. These volumes met 24% of the national requirement for rice seed, 17% for maize seed, 4% of the same for sorghum seed and 4% of millet seed. The low score reflects the fact that the current production volumes for seed fall short of the national requirements for all four priority crops.
8. Clarity and enforcement of seed import/export regulations	8.00	7.50	The procedures for seed importation and exportation are harmonized with the ECOWAS/UEMOA/CILSS Regional Seed Regulations under two national laws: Law No. 02-013 of June 3, 2002, governing phytosanitary control in the country, and Law No. 10-032 of July 12, 2010, which pertains to seeds of plant origin. Some seed importers fail to comply with the process, often due to not fully understanding it. Seed imports were 1.2 MT of rice seed and 209 MT of Maize seed. There were 30 MT of maize seed exports.
9. Adequacy of agro-dealer networks	5.00	4.50	In 2024, Mali had 85 registered agro-dealers. The agro-dealers are too few for the large country and their distribution in the rural areas is thin. In addition, they are not registered or tracked by government.
10. Availability of seed in small package sizes	0.34	0.50	Of the four priority crops, only 5% of the seed for all four priority crops is sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	8.00	9.80	Most important seed policy instruments are in place and are up to date, including: National Seed Policy of 2009 and updated in 2018 is in the process of being adopted. Seed Law of July 2010 (Loi N°10-032 of July 12th, 2010) 3 decrees and 4 by-laws, published in 2018 and 2019.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	9.00	Although Mali left ECOWAS in 2025, it remains a member of the Comité permanent Inter-États de Lutte contre la Sécheresse dans le Sahel (CILSS) where the country continues to compply with ECOWAS seed regulations. Mali adopted the ECOWAS Seed Regulations (C/Reg.4/05/2008), which were published in the official gazette on June 6, 2014 (Official Journal N°23). Mali is implementing the regulations and uses the ECOWAS Catalog of Plant Varieties and Species, along with other harmonized manuals and protocols.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	7.50	The following relevant laws and decisions are in place: Law No. 08-042-AN-RM of December 1, 2008, regulates biotechnology in Mali. Decision No. 2021-0055-USTTB-R/SG-SAJE of March 12, 2021, created the *Comité de Biosûreté et de Biosécurité des établissements Publics* (CIPBB). Decision No 2021-0118-USTTB- R/SG/SAJE of June 08, 2021, appointed the members of the CIPBB in Mali.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	2.00	2.00	FMSS are not recognized in the seed policy or seed law. The national seed policy is currently being reviewed by the Ministry of Agriculture to ensure that farmers' seeds are taken into consideration. However, several NGOs promote and support FMSS.
15. Adequacy of seed inspection services	6.00	6.67	In 2024, Mali had 148 public seed inspectors. The seed inspectors are active across the country. They work in accordance with the regulatory texts governing phytosanitary control in the Republic of Mali and the Seed Law. This number is inadequate for country. Transportation for the inspection is limited by a lack of means of transport. Field inspectors/controllers use smartphones, and tablets, for field inspections.
16. Adequacy of government efforts to combat counterfeit seed	6.00	4.00	Seed policy instruments outline punishment and penalties for seed quality-related offenses. However, the laws are not enforced strictly.
17. Adequacy of national seed trade association	6.17	6.33	The ASSEMA is Mali's national seed trade association. ASSEMA received an overall rating of 6.33/10, comprised of the following sub-scores: democracy and governance:7/10, activity on important seed sector issues:7/10, providing value to members:6/10, managerial ability:6/10, ability to mobilize resources:4/10, and effectiveness in advocacy:8/10.
FINAL ASSPI SCORE	**5.74**	**5.85**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Despite the high potential for production and productivity, the agriculture sector operates below its capacity due to overreliance on rain-fed crop production and limited use of improved inputs. Mali's seed sector is in the early growth stage. For the seed sector to sustain the current growth momentum, the following issues need to be addressed:

- Increasing the capacity to produce and maintain Early Generation Seed.
- Enhancing the analytical capacity of the seed laboratory.
- Improving seed distribution networks in the rural areas.
- Enhancing awareness of the benefits of certified seed among farmers.

Data for the ASSPI report for Mali was collected by:

Dr. Dioncounda Camara

Head, Seed Laboratory (LABOSEM), Mali

African Seed Sector Performance Index (ASSPI) Country Brief – MAURITANIA

OVERVIEW OF THE SEED SECTOR

The seed industry in Mauritania is in the nascent stage of development. The formal system comprises seed companies, seed producers, cooperatives, and a network of seed multipliers who produce under multiplication contracts between institutions and multipliers. These entities source breeder seed from the Centre National de Recherche Agronomique et de Developpement Agricole (CNRADA), the national agricultural research institute. The sector is guided by Law No. 96-025 of 8 July 1996, which opened the industry to private players. In addition, there are multiple regulatory instruments including decrees, technical regulations, and ministerial orders, most of which are either drafts, or were passed, but not being implemented. The main government advisory body in the seed sector is Conseil National des Semences et Plants (CNSP) where key private and public actors are members and it is chaired by an advisor to the Minister in charge of agriculture. The four priority crops, as identified by the local seed sector experts, are sorghum, rice, maize, and cowpea. Combined, these four crops account for 87% of area harvested to field crops. Mauritania is a member of the Union du Maghreb Arabe (UMA).

Overall country score (out of 10):	3.24

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oils
Sorghum	240,000	55%
Rice	88,500	20%
Maize	28,000	6%
Cowpea	22,493	5%
Total		87%

Total arable land:	0.45 million ha
Population:	5,022,441
Number of farming households:	160,792
Contribution of agriculture to GDP:	19.3%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	4.00	2.75	Varieties that have passed Distinctness, Uniformity, and Stability (DUS) and Value for Cultivation and Use (VCU) tests are approved by the CNRADA, in collaboration with the CNSP. Although a variety release committee exists, it has not met for more than eight years. The catalog is barely updated. The cost structure for the process is established. On average the length of the variety release process is 30 months.
2. Number of varieties released in last 3 years	0.00	0.00	During the 2022 – 2024 period, no varieties of the four crops were released.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	1.36	2.08	As of 2025, the CNRADA had five active breeders for the four crops: one for sorghum, two for rice, one for maize and one for cowpea. The adequacy of the number of breeders was rated 1.25/10 because five breeders fall well short of requirements. The adequacy of funding to the breeding programs was rated 2/10 because budgets for research activities are extremely low. The adequacy for basic research infrastructure was rated 3/10 due to the obsolescence of research facilities and a shortage of laboratory equipment. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	1.00	4.33	The National Center for Agricultural Research and Development (CNRADA) coordinates PGRFA activities. The CNRADA has a bank for the conservation of phylogenetic resources and a cold room in which varieties are stored. However, the center lacks qualified human resources for the collection and characterization of accessions. A total of 220 accessions of the four crops are being conserved: 76 of sorghum, 118 of rice, and 26 of cowpea.
5. Adequacy of Early Generation Seed (EGS)	2.08	1.58	The main source of EGS in Mauritania is private seed companies. The adequacy of the quality of EGS supplied was rated 1.5/10 because only rice EGS is produced under sufficient quality standards. The adequacy of the EGS supplied was rated 1.5/10 because EGS production is almost exclusively dedicated to rice varieties. The adequacy of timeliness of delivery of EGS was rated 1.75/10. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	1.99	1.99	In 2024, the number of varieties available on the market for the four crops was 15 rice varieties. There were none for the other three crops.
7. Utilization of quality commercial seed by farmers	5.43	1.26	In 2024, seed production for the four crops was: 4,900 MT of rice seed. These volumes met 46% of the national rice seed requirements.
8. Clarity and enforcement of seed import/export regulations	3.00	5.50	Import procedures are laid down in Law 025.96 on seed production, certification, and marketing. Article 6, of the law stipulates that the importation of seeds and plants is subject to prior authorization by the Minister responsible for agriculture. However, the requirements are not enforced and farmers obtain seed illegally from neighboring countries without complying with the law. In 2024, there were no imports or exports of the four priority crops.
9. Adequacy of agro-dealer networks	3.00	6.00	In 2024, Mauritania had only 44 agro-dealers.
10. Availability of seed in small package sizes	0.00	0.00	Of the four priority crops, none of the seed is sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	9.00	7.00	Mauritania's seed sector is guided by Law No. 96-025 of 8 July 1996 on the production, control, and marketing of seeds and seedlings. It is operationalized through two decrees, one regulation, and 10 ministerial orders. This legal framework, needs to be revised to adapt it to the changing circumstances.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	3.00	4.00	Mauritania is an associate member of the ECOWAS, through the *Comité permanent inter-État de lutte contre la sécheresse au Sahel* (CILSS). CILSS is an organization of countries in the Sahel region that subscribe to the ECOWAS Regional Seed Regulations. However, the implementation of the ECOWAS seed regulations is constrained by the lack of an Arabic version.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	7.00	In 2010, Mauritania adopted a national biodiversity strategy and action plan for 2011-2020. A framework document, endorsed by the Minister of the Environment, has prompted the country to adopt a range of legal actions aimed at enhancing sustainable management of natural resources. This process includes the development of an environmental code and the ratification of several international conventions regarding biodiversity. Implementation of the framework was supported by a series of national workshops designed to inform stakeholders and decision-makers, as well as the creation of a dedicated entity responsible for ongoing awareness initiatives.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS are not recognized in Mauritania.
15. Adequacy of seed inspection services	5.00	1.00	In 2024, Mauritania had only five public seed inspectors. This is a very small number, and they lack adequate transportation. Additionally, the inspectors do not use any digital tools in their work.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	2.00	3.00	Combating the production and sale of counterfeit seed is guided by Law No. 96-025 of 8 July 1996, which designates a directorate to lead efforts to combat counterfeit seeds. On paper, two main measures exist to control counterfeit seeds: certificates issued by the government agency in charge of control and certification of seed, and penalties for infringement. Measures have been taken by the government but are difficult to enforce due to the nature of national borders and trade between farmers on both sides.
17. Adequacy of national seed trade association	7.00	7.50	The Interprofessional Seeds and Seedlings of Mauritania (ISPM) is the national seed trade association. ISPM comprises 35 to 40 private producer companies, 19 of which are active and produce rice seed. The overall rating of ISPM was 7.50/10 and composed of the following sub-scores, all measured on a scale of 1-10: effectiveness in advocacy -8/10; managerial ability – 8/10; providing value to members -7/10; governance and democracy -7/10; ability to mobilize resources -7/10; activities on important seed sector issues - 8/10.
FINAL ASSPI SCORE	**2.82**	**3.24**	Highest scores: in UMA: Tunisia, 6.92 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

The agricultural sector in Mauritania faces several challenges, primarily due to its arid and semi-arid climate, which limits agricultural production. Agriculture plays a relatively minor role in the country's economy, contributing a small percentage of the GDP. The sector is characterized by subsistence farming, with crops such as millet, sorghum, maize, and rice grown for domestic consumption. Challenges in the agricultural sector include water scarcity, inadequate infrastructure, and limited access to modern farming techniques and technologies. Mauritania's formal seed sector is in the nascent stage of development, constrained by water scarcity, inadequate infrastructure, and limited use of improved inputs. Commercially available improved seed is almost exclusively limited to rice varieties; no improved seed is available on the market for sorghum, maize, or cowpea. Significant investment and policy reform are needed across the entire seed value chain, particularly in the following areas:

- Updating the main seed law and passing multiple regulatory instruments to provide a framework for the development of the formal seed sector.
- Enhancing CNRADA's capacity to produce pre-basic and EGS for priority cereal crops in the country.
- Enhancing the capacity of personnel and facilities of the quality control center for seeds and seedlings.

Data for the ASSPI Mauritania report were collected by:

Dr. Mohamed Lemine Chriv Daoud

Head of Seeds and Plants Quality Control in the Ministry of Agriculture of Mauritania.

African Seed Sector Performance Index (ASSPI) Country Brief – MOZAMBIQUE

OVERVIEW OF THE SEED SECTOR

The seed sector in Mozambique is in the early growth stage and is dominated by the informal seed system. The Autoridade Nacional de Sementes (ANS) which oversees seed quality control and certification and is under the Ministry of Agriculture. The Instituto de Investigação Agrária de Moçambique (IIAM) is Mozambique's national agricultural research institute. The four priority crops, as identified by the local seed sector experts according to data collected from Inquerito Agrario Integrado (MADER, IAI, in 2023) are maize, cowpea, groundnut, and rice. Combined, these four crops account for 68% of area harvested to field crops. Mozambique is a member of the Southern African Development Community (SADC).

Overall country score (out of 10):	4.80

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	**2,862,895**	**48%**
Groundnut	**591,338**	**10%**
Rice	**273,082**	**5%**
Cowpea	**351,267**	**6%**
Total		**68%**

Total arable land:	**5.65 million ha**
Population:	**33,635,160**
Number of farming households:	**4,459,291**
Contribution of agriculture to GDP:	**25.2%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**4.00**	**5.50**	As part of the variety release process, the ANS conducts the Distinctness, Uniformity, and Stability (DUS), and Value for Cultivation and Use (VCU) tests, while the *Subcomitê de Registo e Libertação de Variedades* (SCRLV) evaluates and approves the release. Although the process for variety release is clearly defined, some breeding programs remain unaware of its specifics in practice. Variety release meetings are held infrequently and are often not attended by all members. Nevertheless, catalogs are promptly updated once new varieties are released. The cost of the tests is US$ 500. The process duration is 24 months.
2. Number of varieties released in last 3 years	**1.57**	**1.29**	Between 2022 and 2024, only three maize varieties were released out of the four crops.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**2.67**	**3.17**	As of 2025, IIAM had 10 active breeders for the four crops: two for maize, two for groundnut, four for rice, and two for cowpea. The adequacy of the number of breeders was rated 3.5/10 due to the inadequate number of breeders. The adequacy of funding for breeding programs was rated 2/10 because funding for breeding all programs is inadequate. The adequacy for basic research infrastructure was rated 4/10 because of inadequate investment in research infrastructure. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	3.00	6.00	The *Centro Nacional de Recursos Fitogeneticos* (CNRF) is the national center for the management of plant genetic resources in Mozambique. The center manages a gene bank and undertakes *ex-situ* conservation. However, the center is constrained by inadequate technical staff and low maintenance and multiplication of accessions. Some activities on conservation and use of plant genetic resources have been conducted in collaboration with the Community Seed Bank coordinated by other entities. A total of 2,534 accessions of the four crops are being conserved: 587 of maize, 136 of groundnut, 1,340 of rice, and 471 of cowpea. Of these, 1% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	3.08	6.67	IIAM, the International Maize and Wheat Improvement Centre (CIMMYT), and the International Institute for Tropical Agriculture (IITA), are the main sources of EGS for the four crops in Mozambique. The adequacy of the quality of EGS was rated 7.25/10 because seed quality is mostly adequate. The adequacy of the quantity of EGS supplied was rated 6.5/10 on average. The adequacy of the timeliness of delivery of EGS was rated 6.25/10 due to improved planning and coordination between IIAM and seed companies. However, EGS for groundnut faces challenges due to the lack of seed. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	3.83	3.05	In 2024, the number of varieties available on the market for the four priority crops was 30, an increase from the 15 varieties available in 2022. By crop, there were 18 for maize, three for groundnut, five for rice, and four for cowpea.
7. Utilization of quality commercial seed by farmers	1.63	1.08	In 2024, seed production for the four crops was: 3,914 MT of maize seed, 424 MT of groundnut seed, 2,044 MT of rice seed, and 657 MT of cowpea seed. Adjusted for imports and exports below (Indicator 8), total available seed meets 22% of national seed requirement for maize, 4% for groundnut, 11% for rice and 19% for cowpea.
8. Clarity and enforcement of seed import/export regulations	8.00	7.50	The regulations to guide seed importation and exportation are very clear. However, their implementation is weak due to inadequate coordination among the actors. In 2024, 3,601 MT of maize seed and 15 MT of rice seed were imported.
9. Adequacy of agro-dealer networks	4.00	5.00	In 2024, Mozambique had only 343 agro-dealers. In compliance with Article 41 of the Seed Regulation, agro-dealers first apply for a permit from the Ministry of Industry and Trade, after which they are licensed by the ANS and the local state bodies that oversee agriculture. Agro-dealers are inadequate and are unevenly distributed throughout the country.
10. Availability of seed in small package sizes	0.63	4.82	Of the four priority crops, only 50% of maize seed, 70% of groundnut seed, 30% of rice seed and 80% of cowpea seed were sold in small packages of 2kg or less.
11. Status of national seed policy instruments	9.00	6.67	The formal seed sector in Mozambique is regulated by Decree Nº 12/2013 of 10 April 2013. The Decree mandates the ANS to regulate the formal sector. The Seed Policy, Law, and updated Regulation are currently awaiting approval.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	7.00	Mozambique is a member of the SADC. The Mozambique Seed Regulation is aligned with the SADC Harmonized Seed Regulatory System. The clauses related to variety release are implemented and have allowed varieties in the SADC Variety Catalog to be commercialized in Mozambique. The clauses related to Seed Quality Assurance and Seed Certification are not yet implemented.
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	6.50	Decree 71/2014, *Regulamento de Biosseguranca Relativa a Gestao de Organismos Geneticamente Modificados*, is expected to regulate the national biosafety frameworks. It establishes procedures and norms related to the use, importation, exportation, and research related to GMOs. The regulation is not fully implemented because of limited technical and institutional capacity.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	2.00	4.50	FMSS are only recognized in the draft seed policy. In addition, FMSS are promoted by the government, some local and international development agencies and NGOs.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	5.00	6.00	In 2024, Mozambique had 24 seed inspectors. Of these, 16 were public inspectors and eight were private inspectors. Public inspection service is not effective due to lack of resources to effectively conduct their mandate. Most private seed inspectors are in academic institutes and are not active. The digital system is mostly adequate. It captures result of field inspections in the field, but the management of data is not working well.
16. Adequacy of government efforts to combat counterfeit seed	2.00	2.00	The government measures to address the challenge of counterfeit seed are inadequate. Activities for monitoring the players as well as surveillance are not conducted consistently. In addition, the details of the seed lots are not labeled on the seed packages. The monitoring of seed trade is not conducted regularly.
17. Adequacy of national seed trade association	3.33	4.83	The Mozambique Seed Trade Association (MOSTA) is the national umbrella for the private-sector seed industry. The overall rating of MOSTA was 4.83/10 and is comprised of the following sub-scores, all measured on a scale of 1-10: democracy in elections-9/10, effectiveness in advocacy -4/10, managerial ability -4/10, activity on important seed sector issues – 4/10, providing value to members -4/10, and ability to mobilize resources -4/10.
FINAL ASSPI SCORE	**3.93**	**4.80**	Highest scores: in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Mozambique's formal seed system is in the early growth stage of development. It is characterized by well-established breeding programs, evolving seed policy environments, many small and medium seed companies, and a growing agro-dealer network. Seed companies produce and sell a limited range of staple crops, while the government and NGOs are still significant players in the sector. The number of local and regional seed companies entering the seed market is increasing. The agro-dealer network that supports the distribution of seed to smallholder farmers is also growing. Recently, the government and development partner initiatives have contributed to a favorable environment for seed business competition. For the seed sector to sustain the current growth momentum, the government should focus on:

- Enhancing the capacity of IIAM to produce and maintain Early Generation Seed.
- Strengthening the capacity of the ANS in seed quality control and certification.
- Facilitating the strengthening of the capacity of seed companies in seed quality assurance and improving their capacities in seed production and marketing.

Data for the ASSPI Mozambique report was collected by:

Dr. Elsa Adélia Timana

Head of the National Seed Authority, Ministry of Agriculture of Mozambique.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

African Seed Sector Performance Index (ASSPI) Country Brief – NAMIBIA

OVERVIEW OF THE SEED SECTOR

Namibia's seed sector is in the early growth stage of development. While agriculture is an important contributor to Namibia's economy, due to the country's arid climate, much of the sector focuses on livestock as opposed to crop production. Its agroecological conditions set Namibia apart from many other African countries and impact its seed sector, which is in the early growth stage and is mostly semi-formal. The main relevant policy instrument is the Seed and Seed Variety Act, No.23 of 2018, though enacted, is yet to be enforced because the accompanying regulations are not yet passed. The seed sector is the mandate of the Ministry of Agriculture, Water, and Land Reform (MAWLR). As of 2022, Namibia had no private seed companies (local or multinational) actively producing seed. The four priority crops, as identified by the local seed sector expert, are pearl millet, maize, sorghum, and cowpea. Combined, these four crops account for 99% of area harvested to field crops. Namibia is a member of the Southern African Development Community (SADC).

Overall country score (out of 10):	4.24

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oils
Millet	268,803	81%
Maize	32,215	10%
Sorghum	28,421	9%
Cowpea	1,800	1%
Total		99%

Total arable land:	0.8 million ha
Population:	2,963,095
Number of farming households:	193,412
Contribution of agriculture to GDP:	7.3%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	4.00	1.50	Namibia lacks a functional variety release and registration system. Although the Seed and Seed Variety Act (No.23 of 2018) outlines the process, regulations are pending, the release committee is not established, there is no variety catalog, and cost structures await regulatory approval.
2. Number of varieties released in last 3 years	1.57	0.00	During the 2022-2024 period, no varieties of the four priority crops were released due to the lack of a variety release process.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	1.50	2.25	As of 2025, the MAWLR had four breeders: one for millet, one for sorghum and two for cowpea. The adequacy of the number of breeders was rated 0.75/10. The adequacy of funding for breeding programs was rated 3/10, because the Ministry of Agriculture received support from the International Atomic Energy Agency (IAEA) to develop cowpea varieties using mutation breeding. The adequacy of breeding infrastructure was rated 3/10. The MAWLR does not have adequate research facilities such as greenhouses, screen houses and testing laboratories. Crop-specific ratings are available in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	7.33	The national gene bank is under the National Botanical Research Institute, which collects, characterizes, and conserves the genetic resources of most of the cultivated crops and wild species. The institute has qualified technical staff but they are inadequate. The institute provides trainings to community seed banks in the entire country. In addition, the institute has established one community seed bank and plans to roll-out three more in future. A total of 1,740 accessions of the four crops are being conserved: 1,461 of millet, 46 of maize, 160 of sorghum, and 73 of cowpea. Of these, 85% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	6.42	6.33	The MAWLR is the sole producer of EGS for the four priority crops, which it sells to seed growers to produce certified seed. The adequacy of the quality of EGS was rated 7/10. EGS is produced by the government at its Research Stations under the strict management of the technical staff and supervision of seed inspectors. The adequacy of the quantity of EGS supplied was rated 7/10, reflecting that the government lacks sufficient capacity and land to produce enough EGS. However, the quantity EGS is mostly adequate for cowpea and some varieties of pearl millet. The adequacy of the timeliness of the delivery of EGS was rated 5/10 on account of occasional delays in the delivery of EGS to seed cooperatives and seed producers. This is because Namibia has only one seed processing plant which processes all the seeds from EGS to Certified seed. Furthermore, screening of cowpea EGS is done manually, causing delays in packaging and eventually in the distribution. Crop-specific ratings are available in Appendix 2.
6. Availability of crop varietal choice to farmers	1.99	1.99	In 2024, the number of varieties available on the market for the four crops was 15: three pearl millet, two maize, two sorghum, and eight cowpea varieties.
7. Utilization of quality commercial seed by farmers	2.39	2.36	In 2024, the volumes of production reported for the four priority crops were 107.3 MT of millet seed, 1 MT of maize seed, 5 MT of sorghum seed and 5 MT of cowpea seed. Adjusted for imports and exports (see Indicator 8), these volumes met 27% of the national requirement for millet seed, 4% for maize seed, 10% for sorghum seed, and 100% of cowpea seed.
8. Clarity and enforcement of seed import/export regulations	7.00	7.00	The Seed and Seed Variety Act guides the importation and exportation of seeds. The Department of Law Enforcement in the MAWLR is responsible for issuing import permits. In 2023, only 13 MT of millet seed were imported. There were no exports.
9. Adequacy of agro-dealer networks	3.00	4.50	In 2024, Namibia had 15 agro-dealers. The number is not adequate, and they are mostly located in urban areas.
10. Availability of seed in small package sizes	9.72	10.00	Of the four priority crops, 100% of seed for all four priority crops was sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	7.00	4.75	Most important seed policy instruments exist, but some are yet to be enacted. The policy instruments include: Namibia Seed Policy (2013) - operational Seed and Seed Variety Act No. 23 (2018) has been enacted but is not yet in force. Namibia Plant Breeders' and Farmers' Right Bill (2009) - was reviewed in 2016, but is yet to be enacted into law The regulations for implementing the Seed and Seed Variety Act No. 23 (2018) are still in draft status and have not been formally enacted into law.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	3.00	4.00	The Seeds and Seed Varieties Act and its draft regulations are aligned with the SADC Harmonized Seed System, but the Act is not enforced, and the regulations remain in draft form.
13. Status of national biosafety frameworks for plant breeding and seed production	9.00	9.00	Biosafety Act No. 7 (2006) became operational in 2016. The law is being implemented. The National Commission on Research, Science and Technology (NCRST) oversees the implementation of the Biosafety Legal Framework and the operations of the Biosafety Council.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	4.00	The FMSS is recognized under the component of Farmers Rights in Plant Breeders and Farmers Rights Bill but is still under review. The only government entity that promotes FMSS, is the National Botanical Research institute through training.
15. Adequacy of seed inspection services	4.00	3.00	In 2024, Namibia had 40 public seed inspectors employed by MAWLR, who also conduct research or extension work. This number is sufficient, but limited vehicle access hinders inspections. No digital tools have been adopted for seed inspection.
16. Adequacy of government efforts to combat counterfeit seed	4.00	4.00	The draft regulations for the Seeds and Seed Varieties Act outline the penalties and fines for offenses involving counterfeit seed in the Schedule of Fees section. The government also uses secure seed packages to help reduce the incidence of counterfeit seeds. The absence of the Seed law hampers proper control of counterfeit seeds by Government
17. Adequacy of national seed trade association	0.00	0.00	Namibia has no national seed trade association.
FINAL ASSPI SCORE	**4.21**	**4.24**	Highest scores: in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Namibia is mainly arid and thus the amount of arable agriculture is limited. For the seed sector to grow, the government should focus on:

- Finalizing and adopting the regulations to implement the Seed and Seed Variety Act, adopting the Seed and Seed Varieties Act of 2018 into law and finalizing the Namibia Plant Breeders and Farmers' Rights Bill.
- Strengthening the capacity of the plant breeders in the MAWLR to develop and maintain new varieties that are suitable for the agroecological conditions in the country.
- Establishing seed processing facilities and seed laboratories to improve the performance of the quality control system.

Data for the ASSPI Namibia report was collected by:

Irene Mundjele

Senior Agricultural Scientific Officer in the Ministry of Agriculture, Water, and Land Reform, Namibia.

African Seed Sector Performance Index (ASSPI) Country Brief – NIGER

OVERVIEW OF THE SEED SECTOR

Niger's seed industry is in the emerging stage of development. Although the seed system is dominated by the informal system, it is moving towards a more organized and regulated formal system. The main entity in charge of seed certification and quality control is the Direction du Contrôle et de la Certification des Semences (DCCS) under the Ministry of Agriculture. Plant breeding activities are concentrated in the Instituts Nationaux de Recherche Agronomique du Niger (INRA, Niger's national agricultural research institute). The four priority crops, as identified by the local seed sector experts are rice, millet, sorghum, and cowpea. Combined, these four crops account for 99% of the area harvested to field crops. Niger is a member of the Comité Inter Etat de Lutte Contre la Sécheresse au Sahel (CILSS, the Inter States Community against Drought), the Union Monétaire des Etats de l'Afrique de l'Ouest (UEMOA), the West African Economic and Monetary Union) and the Community of Sahel–Saharan States (CEN-SAD). Formerly a member of the Economic Community of West African States (ECOWAS), Niger left the organization in January 2025.

Overall country score (out of 10):	4.86

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Millet	**6,804,476**	**42.68%**
Cowpea	**5,575,434**	**34.97%**
Sorghum	**3,429,220**	**21.51%**
Rice	**48,714**	**0.31%**
Total		**99%**

Total arable land:	**17.7 million ha**
Population:	**26,159,867**
Number of farming households:	**2,809,372**
Contribution of agriculture to GDP:	**34.5%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**5.00**	**4.75**	Applications for variety release are evaluated by the *Comité National des Semences* (CNS). The evaluation is based on Distinctness, Uniformity, and Stability (DUS) and Value for Cultivation and Use (VCU) tests through the Comité Technique d'Homologation Variétale Technical (CTHV National Variety Release Committee). The DCCS reviews applications before forwarding them to the CTHV technical committee for assessment, which in turn submits recommendations to the CNS. The CNS proposes approval or rejection to the Ministry of Agriculture, which issues the final decision. If approved, the Ministry of Agriculture issues an official registration. Approved varieties are listed in national and regional catalogs and can be produced in Niger regardless of catalog status. There are no official fees for registration or testing, and the process takes 36 months.
2. Number of varieties released in last 3 years	**3.14**	**1.86**	During the 2022-2024 period, a total of seven varieties were released, all cowpea varieties. The low score reflects the absence of new varieties for the other three priority crops.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**5.58**	**4.00**	As of 2025, the INRA had 10 active breeders for the four crops: four for sorghum, two each for millet, rice, and cowpea. The adequacy of the number of breeders was rated 4/10, signalling that the number of breeders employed by INRA is not sufficient to meet the needs of the industry. The adequacy of funding for breeding programs was rated

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
			4/10, reflecting that the current funding levels meet only a part of the overall need. The adequacy of research infrastructure was rated 4/10, signalling that the current infrastructure needs improvement and updating. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	3.33	Plant genetic conservation and utilization is INRA's mandate in the country. The gene bank has two senior qualified managers and a trainee technician. A total of 9,193 accessions of the four crops are conserved: 5,414 of millet, 832 of cowpea, 2,755 of sorghum, and 192 of rice. Of these, 47% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	7.83	6.08	The main sources of EGS in Niger are the International Institute for Tropical Agriculture (IITA) for cowpea and the international Crops Research Institute for the Semi-Arid Tropics (ICRISAT) for millet. The adequacy of the quality of EGS was rated 8/10, on the basis that EGS undergoes field and laboratory checks before it is delivered to producers. The adequacy of the quantity of EGS was rated 5.25/10, reflecting the fact that recently the availability of EGS has improved considerably. The adequacy of the timeliness of delivery of EGS was rated 5/10, indicating that EGS is mostly delivered on time. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	3.40	3.47	In 2024, the number of varieties available on the market for the four crops was 36: 16 millet, eight sorghum, eight cowpea, and four rice varieties.
7. Utilization of quality commercial seed by farmers	3.76	1.38	In 2024, the volumes of production reported for the four priority crops were 6,048 MT of millet seed, 1,265 MT of cowpea seed, 552 MT of sorghum seed, and 342 MT of rice seed. These volumes meet 27% of the national requirement for millet seed, 3% for cowpea seed, 5% for sorghum seed, and 39% for rice seed. The available volumes of seed for all four crops fall short of meeting the demand.
8. Clarity and enforcement of seed import/export regulations	8.00	7.00	Guidelines for seed imports and exports are outlined in the Manual of Harmonized Procedures for the Import and Export of Plant Seeds and Seedlings in the ECOWAS-WAEMU-CILSS region, which Niger follows. The procedures are mostly clear and their enforcement is mostly consistent. There were no reported seed imports and exports in 2024. The manual for import and export procedures has not yet been adapted for eventual adoption at national level.
9. Adequacy of agro-dealer networks	7.00	7.50	In Niger, agro-dealers are authorized to market seed and other inputs by the Ministry of Agriculture. In 2024, the number of registered agro-dealers was 107. The number is adequate for the current demand, as most seed is not distributed through agro-dealers, but instead sold directly to farmers, NGOs, or other projects. Seed distributors are concentrated in certain areas more than others.
10. Availability of seed in small package sizes	2.39	4.01	Of the four priority crops, 45% of millet seed, 22% of cowpea seed, 36% of sorghum seed, and 26% of rice seed are sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	10.00	9.00	All important policy instruments are in place and are up to date, including: Seed policy - *La Politique Semencière Nationale* (2012) *Loi N°1214-67 du 05 Novembre* - provides overall guidance to the seed sector. Nine regulations that operationalize various aspects of the seed law, including registration of seed producers, quality control, seed packaging, among others.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	7.00	6.00	While Niger left ECOWAS in 2025, it remains a member of CILSS. The country has adopted the ECOWAS-UEMOA-CILSS seed regulations of 2008, but implementation is incomplete, namely: While *Arrêté N°121 MAG/DGA* of 16 September 2014 established the *Comité National de Semences* (CNS), the variety release subcommittee does not meet regularly. The decree for seed import and export has not been implemented. The Ministry of Agriculture has adopted a National Catalog of Crop Varieties and Plant Species in *Arrêté 122 MAG/DGA du 16/09/2014*. However, the catalog is not updated regularly. The seed sector support fund has not been set up.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	5.50	Niger's Law No. 2019-48 of October 30, 2019, and national strategy adopted on June 26, 2020, are the National Biosafety Frameworks that deals with all aspects related to the generation, use, and commercialization of agricultural biotechnology.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS are recognized in section 6.7 of the National Seed Policy alongside the formal system. However, it is only the formal system that benefits from minimal incentives and state support.
15. Adequacy of seed inspection services	7.00	5.33	In 2024, Niger had 54 public seed inspectors. The number of inspectors is not sufficient given the size of the country, which means fields are located large distances from each other. However, the available means of transport and the use of digital tools are inadequate. The process of digitalization has been initiated (base and domain created with the support of a project and the state). The seed inspection system lacks traceability and monitoring at points of sale.
16. Adequacy of government efforts to combat counterfeit seed	4.00	7.00	The DCCS, which oversees seed quality, does not have a mechanism to track and report counterfeit seed at present. *Loi N°1214-67 complétant REG.4.5 -2008* (November 2014) spells out guidelines on combating counterfeit seeds. Measures used by the government include monitoring seed storage facilities and the use of secure labels on packaging. Further, seed supplied through tenders must be certified by the *Direction du Contrôle et de la Certification des Semences* (DCCS). These measures and their implementation are reasonably adequate.
17. Adequacy of national seed trade association	7.50	6.38	The *Association des Producteurs Privés de Semences du Niger* (APPSN) brings together private seed sector players in Niger. APPSN received an overall rating of 6.38/10, comprised of the following sub-scores: effectiveness in advocacy:5/10, managerial ability:6/10, activities on important seed sector issues:6/10, providing value to members:6.5/10, governance and democracy:8.3/10, and ability to mobilize resources:6.5/10.
FINAL ASSPI SCORE	**5.56**	**4.86**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

In 2024, agriculture contributed 34.5% of Niger's gross domestic product.[28] Crop production is based on smallholder subsistence farming. Niger's seed sector is in the emerging stage of development: while a regulated formal system is being established, formal seed meets less than 40% of national requirements for any of the four priority crops. To address these gaps, the following priority issues need to be targeted:

- Increasing funding for variety development, especially for the crops that have had no new varieties for years.
- Increasing support to produce seed for the priority crops to ensure that local production covers a greater percentage of the national requirement.
- Increasing the percentage of seeds available in small packages to better cater to smallholder farmers.
- Strengthening DCCS in seed quality control and certification.

Data for the ASSPI Niger report was collected by:

Hassane Yacouba Salamatou

Direction du Contrôle et de la Certification des Semences (DCCS), Ministry of Agriculture

28 https://www.theglobaleconomy.com/Niger/share_of_agriculture/ Accessed 23 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – NIGERIA

OVERVIEW OF THE SEED SECTOR

The seed industry in Nigeria is in the early growth stage of development. The National Seed Policy of 2021, the National Agricultural Seed Council (NASC) Act of 2019, and the National Seed Roadmap for Nigeria of 2020 provide the policy direction and regulatory framework for the formal seed sector. The NASC Act describes the roles of the NASC, which is the seed regulatory agency. The National Centre for Genetic Resources and Biotechnology (NACGRAB) coordinates variety release and registration, and several research institutions such as the Institute for Agricultural Research and Training (IART), the National Cereals Research Institute (NCRI), and the Institute for Agricultural Research (IAR), as well as universities that play a role in research, variety development and maintenance. The four priority crops, as identified by the local seed sector experts are maize, sorghum, rice, and cowpea. Combined, these four crops account for 91% of area harvested to field crops. Nigeria is a member of the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	6.15

Focus crop	Area harvested (ha)	% of total area harvested to cereals and pulses
Maize	5,500,000	23%
Sorghum	6,100,000	26%
Rice	4,572,900	20%
Cowpea	5,142,986	22%
Total		91%

Total arable land:	36.872 million ha
Population:	227,882,945
Number of farming households:	40,221,000
Contribution of agriculture to GDP:	25.9%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	8.00	9.00	The NACGRAB oversees the activities of the National Committee on Naming, Registration, and Release of Crop Varieties, Livestock Breeds, and Fisheries. All measures are in place to align the DUS (Distinctness, Uniformity, and Stability) and VCU (Value for Cultivation and Use) guidelines with both regional and national regulations for variety release and registration in Nigeria. Recent support provided under the Collaborative Seed Program (CSP), part of the Nigerian-Netherlands partnership, has led to increased awareness of the variety release process. The committee meets regularly and the latest update of the variety catalog was in April 2025. With the intervention and support of the CSP, the cost of the variety release process for different crops has been standardized. The length of variety release process ranges between 24 and 36 months depending on the crop.
2. Number of varieties released in last 3 years	5.14	8.49	During the 2022-2024 period, 63 varieties were released for the four crops: 45 for maize, four for sorghum, eight for rice, and six for cowpea. This was an increase from the 23 varieties for maize, two varieties for sorghum, two varieties for rice, and three varieties for soya bean that were released in 2022.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.75	5.00	As of 2025, the IAR, Amadu Bello University (ABU), the IART, Obafemi Awolowo University (OAU), and the NCRI had 30 active breeders for the four crops: 13 for maize, five for sorghum, six for rice, and six for cowpea. The adequacy of the number of breeders was rated 6/10 because most breeders are not adequately funded to conduct any serious breeding work. The adequacy of funding to the breeding programs was rated 5/10 because funding is generally limited. The adequacy of equipment and infrastructure at the breeding programs was rated 4/10 because existing infrastructure facilities in most of the research stations require a major overhaul. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	5.67	The NACGRAB is tasked with overseeing activities related to plant genetic conservation and utilization in Nigeria. The national gene bank employs a team of highly qualified professionals and generally maintains adequate staffing levels to support its PGRFA initiatives. Nevertheless, the institute faces significant challenges due to insufficient funding, which affects its ability to conserve, document, and manage the country's genetic resources. Additionally, limited infrastructure presents further obstacles. Currently, there is no collaboration between the national gene bank and community seed banks, largely due to the scarcity of such facilities within the country. Despite this, some cooperation exists with community-based organizations through user engagement activities under the Seeds for Resilience project, supported by the Global Crop Trust. A total of 3,773 accessions of the four crops are conserved: 362 of maize, 2,340 of sorghum, 341 of rice, and 730 of cowpea. Of these, 37% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	4.75	4.33	The main sources of EGS in Nigeria are private seed companies as well as national and regional agricultural research institutions, such as NCRI, the International Institute for Tropical Agriculture (IITA)-GoSeed, and IAR. The adequacy of the quality of EGS supplied was rated at 5.5/10. This is due to indications of admixtures, mislabelling, and low quality of EGS for all the four priority crops. Breeders are mostly engaged in direct multiplication of breeder seeds to produce foundation seeds, and in most cases, do very little variety maintenance work to retain quality. The adequacy of the quantity of EGS supplied was rated 3.5/10 on average across the four priority crops. The quantity of EGS in most cases is far below the national requirement due to the lack of a proper central coordination and planning system. The adequacy of the timeliness of delivery of EGS supplied was rated 4/10. This is because most EGS requests are driven by the government purchase of seeds or by other institutional buyers. EGS deliveries are, in most cases, not met because requests are not adequately planned. There is room for improvement through the introduction of licensing and contract seed production. Crop-specific ratings are available in Appendix 1.
6. Availability of crop varietal choice to farmers	7.86	7.08	In 2024, the number of varieties available on the market for the four crops was 87: 28 for maize, 13 for sorghum, 28 for rice, and 18 for cowpea.
7. Utilization of quality commercial seed by farmers	2.11	2.70	In 2024, seed production for the four crops was: 61,759 MT for maize seed, 5,935 MT for sorghum seed, 52,449 MT for rice seed, and 6,395 MT for soya bean seed. Adjusted for imports and exports below (Indicator 8), total available seed meets 49% of national seed requirement for maize, 9% for sorghum, 46% for rice, and 5% for cowpea.
8. Clarity and enforcement of seed import/export regulations	5.00	3.00	The import and export of seed are hindered by a significant lack of knowledge about necessary procedures. Additionally, the process is complicated by the involvement of several government agencies that currently do not coordinate with each other. Moreover, enforcement by these agencies is weak. In 2024, 640 MT of maize seed and 13 MT of rice seed were imported, while there were no official records of seeds exports.
9. Adequacy of agro-dealer networks	5.60	3.50	In 2024 Nigeria had 2,845 agro-dealers who were registered by NASC. However, the number of active but unregistered agro-dealers is much higher.
10. Availability of seed in small package sizes	3.78	3.91	Of the four priority crops, only 60% of maize seed, 15% of sorghum seed, 20% of rice seed, and 15% of cowpea seed are sold in small packages of 2kg or less.
11. Status of national seed policy instruments	9.00	8.40	The seed sector in Nigeria is guided by the National Agricultural Seed Policy (2022) and operationalized by the National Agricultural Seed Council Act (2019). The National Harmonized Seed Rules and Regulation (2015) is operational. NASC has set up a Plant Variety Protection Office, as a key part of implementing the Plant Variety Protection Act of 2021.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	9.00	Nigeria is a member of ECOWAS. The current seed policy instruments are aligned with the regional seed regulations and are being implemented. In 2022, the National Agricultural Fund was established.
13. Status of national biosafety frameworks for plant breeding and seed production	9.00	9.00	National Biosafety Management Act (2015) and the National Biosafety Regulations (2017) are the key instruments that regulate biotechnology in Nigeria. The Act is fully operational and is managed by the National Biosafety Management Agency (NBMA). Through the Act, the NBMA has released four maize, two cowpea varieties and two cotton varieties.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	8.00	7.50	FMSS in Nigeria are recognized in the National Agricultural Seed Policy (2022) and the National Agricultural Seeds Council Act (2019). Although FMSS are promoted in Nigeria, stakeholder engagement and sensitization are still needed to promote pluralistic seed systems.
15. Adequacy of seed inspection services	7.00	6.00	In 2024, Nigeria had 152 seed inspectors. 77 were public while 75 were private. Efforts are ongoing to implement the Organization for Economic Cooperation and Development (OECD) seed scheme and decentralize the coordination of seed certification and quality assurance mechanisms to make it service-oriented and improve efficiency. The facilitation of public seed inspectors to conduct their work is inadequate. Further, there is a need to encourage all seed producers on the digital portals to ensure direct contact between them and seed inspectors is reduced.
16. Adequacy of government efforts to combat counterfeit seed	7.00	7.00	Combating the production and sale of counterfeit seed is guided by the NASC Act and the Seed Policy. Measures taken include regular market raids, surveillance missions, enlightenment missions, public burning of confiscated seeds, deployment of National Seed Tracker, and special labels called SeedCodex. Punitive measures include stoppage of sale of suspected seed, confiscation of seeds, sealing of premises, withdrawal of license, prison term of one year for a first offender or two years for a second offender, and withdrawal from participation in government seed subsidy programs. Stakeholders have reported a reduction in adulteration of seed as a result of the SeedCodex and National Seed Tracker. More effort is needed to enhance enforcement and ensure full compliance by all.
17. Adequacy of national seed trade association	5.00	5.00	The Seed Entrepreneurs Association of Nigeria (SEEDAN) is the umbrella body of seed producers in Nigeria. SEEDAN's performance was rated at 5.00 /10 average and comprised of the following sub-scores: activities on important seed sector issues:5/10, effectiveness in advocacy:5/10; managerial ability:5/10; providing value to members:5/10; ability to mobilize resources:5/10; governance and democracy:5/10.
FINAL ASSPI SCORE	**6.29**	**6.15**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Nigeria's formal seed sector is in the early growth stage of development characterized by established breeding programs and evolving seed policy environments. Seed companies produce and sell a limited range of staple crops. While governments and NGOs are still significant players in the sector, there is a growing private agro-dealer network that supports the distribution of seed to smallholder farmers. Since a large percentage of farmers' seed requirements are met through the informal seed sector, there is ample opportunity for the formal sector to grow, especially given the country's large population of over 227 million and its diverse agro-ecology and dietary preferences. Collectively, these factors call for much larger investments in the research, development, and the multiplication of new crop varieties that are both climate and nutrition smart. For the seed sector to sustain the current growth momentum, the following issues need to be addressed:

- Strengthening the capacity of NARIs to produce varieties, produce and maintain EGS.
- Providing incentives and support for private sector engagement, especially in quality seed production and distribution.

- Strengthening the coordination between research centers and seed companies to ensure a timely supply of adequate quantities of quality seed.
- Streamlining coordination among NARIs, NASC, and NACGRAB to reduce delays and inefficiencies in the registration and release of varieties.
- Enhancing the management of varietal pipelines and use of market-informed product profiles in breeding efforts
- Enhanced enforcement of seed quality standards to reduce adulteration of certified seeds by farmers.

Data for the ASSPI Nigeria report was collected by:

Dr. Folarin Sunday Okelola

Registrar Plant Variety Protection Office, National Agricultural Seeds Council

African Seed Sector Performance Index (ASSPI) Country Brief – RWANDA

OVERVIEW OF THE SEED SECTOR

The seed industry in Rwanda has developed rapidly from nascent to a growth stage over the last 10 years. The industry is characterized by an up-to-date policy environment, a growing local private sector, and active public breeding programs. The Rwanda Inspectorate, Competition, and Consumer Protection Authority (RICA) oversees seed inspection and certification. The Rwanda Agriculture and Animal Resources Development Board (RAB) is the national agricultural research institute, in charge of variety development and maintenance of public varieties and is the main source of EGS for seed companies. The four priority crops, as identified by the local seed sector experts are bean, cassava, maize, and potato. Combined, these four crops account for 66% of area harvested to field crops. Rwanda is a member of the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC). It announced that it would withdraw from the Economic Community of Central African States (ECCAS) on June 7, 2025.

Overall country score (out of 10):	6.72

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, roots and tubers
Bean	**660,495**	**36%**
Cassava	**93,511**	**5%**
Maize	**342,024**	**19%**
Potato	**104,518**	**6%**
Total		**66%**

Total arable land:	**1.159 million ha**
Population:	**13,954,471**
Number of farming households:	**2,300,011**
Contribution of agriculture to GDP:	**24.6%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**6.00**	**7.75**	The RICA is the custodian of the data on variety release and registration. The National Variety Release Committee (NVRC) does not conduct tests for Distinctness, Uniformity, and Stability (DUS) and the National Performance Trials (NPT) for locally developed varieties but relies on data from breeders. For the varieties that are already registered in COMESA, the DUS and VCU data is obtained from the countries where the varieties were previously released. The NVRC meets regularly. The national variety catalog is regularly updated, and the recent version was published in 2024.
2. Number of varieties released in last 3 years	**6.29**	**7.71**	During the 2022-2024 period, the number of varieties released for the four crops was 48: 19 for bean, 25 for maize and four for potato. This was an increase from the 38 varieties released in 2022.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**5.08**	**6.00**	In 2025, the RAB had five breeders for the four crops: one for bean, two for cassava, one for maize, and one for potato. The adequacy of the number of breeders was rated 3/10 on average across the four crops, as the current number is insufficient to meet existing needs. The adequacy of funding for breeding programs was rated 7/10, as government only partly covers of the RAB's breeding program budget for the four crops through a

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
			project called “Development of Market Responsive Plant Varieties”. The adequacy of basic research infrastructure was rated 8/10, because it is not sufficient for the production and maintenance of Early Generation Seed. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	4.00	5.67	The RAB operates the national gene bank and coordinates PGRFA activities. Although the RAB recently acquired equipment for the gene bank, it is currently operating below capacity due to the lack of personnel and funding. A total of 640 accessions of the four crops are conserved: 423 of bean, 133 of maize, and 84 of potato.
5. Adequacy of Early Generation Seed (EGS)	7.33	7.75	The RAB is the main source of EGS for seed companies and producers in Rwanda. The adequacy of the quality of EGS was rated 7/10 due to RICA’s strict adherence to quality control. Maize and potato were rated lower than the other two crops. For maize, this was due to non-compliance with isolation distances that led to genetic contamination. For potatoes, this resulted from high disease pressure in seed production fields, as they are cultivated in regions where farmers cannot rotate crops due to insufficient land. Adequacy of the quantity of EGS supplied was rated 8/10 on average across the four crops due to RAB’s good production capacity. Timeliness of supply of EGS was also rated highly at 8.25/10 because ordering EGS has an established process that most seed producers follow. Some commercial seed producers made pre-orders one season before to the EGS producers. See Appendix 1 for crop-specific ratings.
6. Availability of crop varietal choice to farmers	4.04	2.77	In 2024, there were 26 varieties of the four crops on the market: six for bean, four for cassava, 12 for maize, and four for potato.
7. Utilization of quality commercial seed by farmers	2.11	3.10	In 2024, reported seed production was: 440 MT of bean seed, 5,620 MT of maize seed, and 11,802 MT of potato seed. Adjusted for seed imports described below (Indicator 8), the total amount of available seed meets 3% of national bean seed requirements, 100% of maize seed requirements and 9% of potato seed requirements.
8. Clarity and enforcement of seed import/export regulations	8.00	8.50	According to the Seed Law No 005/2016 of April 2016 seed importer must receive authorization from RICA and obtain a plant import permit, a phytosanitary certificate, and an International Orange Certificate from the source country. The import process is efficient, assisted by online application and processing facilities. In 2024, 2,704 MT of bean seed was imported.
9. Adequacy of agro-dealer networks	9.00	9.50	In 2024, Rwanda had 2,871 agro-dealers. The agro-dealers are registered by RICA and are distributed across the agricultural regions of the country. About half of these agro-dealers work exclusively under the Tubura program of the One Acre Fund (OAF).
10. Availability of seed in small package sizes	8.32	9.52	Of the four priority crops, only 5% of the bean seed and 100% of the maize seed was sold in small packages of 2 kg or less.
11. Status of national seed policy instruments	10.00	9.00	Rwanda’s seed sector is guided by the National Agriculture Policy (2018), Law N° 005/2016 of 05/04/2016 governing seeds and plant varieties and seven Ministerial Orders.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	8.00	Rwanda is a member of COMESA and EAC. The Seed Law and the Seed Standards are aligned with the COMESA Seed Trade Harmonization Regulations of 2014. However, the varieties listed in the COMESA catalog are added to the national catalog if an application is made by a seed company. The national pest list is not yet fully aligned with the COMESA Pest List.
13. Status of national biosafety frameworks for plant breeding and seed production	1.00	7.50	Law n° 025/2024 of 16/02/2024 governs biosafety in Rwanda. The ministerial orders supporting the implementation of this law have been approved. REMA, Rwanda’s biosafety regulatory authority, evaluated biosafety dossiers submitted by RAB and collaborating institutions and granted environmental release approvals for three crops (cassava, potato, and maize), paving the way for the ongoing variety evaluation trials that will culminate in variety release for cultivation.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS are not legally recognized in the country.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	8.00	8.67	As of 2025, Rwanda had eight public seed inspectors and 24 private inspectors. The inspectors are generally adequate. Rwanda's digitalized seed certification service has eased the service delivery and communication between regulator and seed actors.
16. Adequacy of government efforts to combat counterfeit seed	8.00	7.50	The government has adopted several measures to improve seed quality assurance. There is strict implementation of the regulations on seed inspection (in the field and warehouses), seed sampling, and seed testing. In addition, seed that does not meet the standards is rejected and not sold and seed producers or agro-dealers who are caught dealing in counterfeit seed are blacklisted. Article 51 of the Seed Law stipulates a fine of up to US$ 5,000 for any person who is caught contravening the provisions of the law. However, Rwanda is yet to set up digital electronic tag or labelling system.
17. Adequacy of national seed trade association	6.67	5.33	Rwanda has two national seed trade associations: the National Seed Association of Rwanda (NSAR) and the National Seed Consortium (NSC). Founded in 2015, NSAR is the older of the two and serves as the umbrella for the private seed sector in Rwanda. The 2025 ASSPI study evaluated NSAR, which received an overall rating of 5.33/10, comprised of the following sub-scores: democracy in elections and governance - 5/10; effectiveness in advocacy - 5/10; managerial ability - 6/10; activity on important seed sector issues - 5/10; providing value to members - 5/10; and ability to mobilize resources - 6/10. The NSC was founded in 2021 through the support of MINAGRI and AGRA projects. It has a well-organized, national structure, and it is dominated by local seed companies and multipliers.
FINAL ASSPI SCORE	**6.05**	**6.72**	Highest scores: in COMESA: Egypt, 8.13 in EAC: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Rwanda's formal seed sector is in the early growth stage of development characterized by budding breeding programs and recently reformed seed policies. Seed producers and companies produce and sell a limited range of staple crops. While governments and NGOs are still significant players in the sector, the number of local and regional seed companies in the seed market is increasing. A strong private agro-dealer network supports the distribution of seed to smallholder farmers. The government's recent transition away from seed production and marketing has improved levels of competition in Rwanda's seed sector. For the seed sector to sustain the current growth momentum, the following issues need to be addressed:

- Enhancing the capacity of local seed companies in terms of breeding, variety maintenance, quality control, and seed marketing.
- Enhancing capacity of the NVRC to conduct independent VCU and DUS tests and exposure of breeding programs to international standards of OECD and UPOV.
- Optimizing the conditions for variety maintenance, production of early generation seed and genetic purity to ensure continuous supply of quality EGS.
- Supporting seed companies to develop climate-resilient driven varieties that respond to market demands and farmer preferences.

Data for the ASSPI report for Rwanda was collected by:

Dr. Clement Urinzwenimana

Seed industry expert

African Seed Sector Performance Index (ASSPI) Country Brief – SENEGAL

OVERVIEW OF THE SEED SECTOR

Senegal's seed sector is in the early growth stage and is moving towards a more organized and regulated formal system. Seed producing entities include seed companies, seed cooperatives, economic interest groups, and individual seed producers. The Division des Semences (DISEM) is responsible for seed inspection and certification, and the Comité National Consultatif des Semences et Plants (CNCSP) oversees variety release and registration. The Institut Sénégalais de Recherches Agricoles (ISRA) oversees research and variety development. The ISRA and AfricaRice supply breeder seed to seed producers to produce certified seed. Senegal follows OECD regulations for certification of maize, sorghum, and rice, and it has an ISTA accredited laboratory. The four priority crops, as identified by local seed sector experts, are groundnut, millet, rice, and maize. Combined, these four crops account for 83% of area harvested to field crops. Senegal is a member of the Economic Community for West African States (ECOWAS) and the Community of Sahel–Saharan States (CEN-SAD).

Overall country score (out of 10):	5.10

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Groundnut	1,267,592	36%
Millet	1,000,000	28%
Rice	410,271	11%
Maize	275,000	8%
Total		83%

Total arable land:	3.83 million ha
Population:	18,077,573
Number of farming households:	909,638
Contribution of agriculture to GDP:	16.6%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	7.00	3.50	The *Comité National Consultatif des Semences et Plants* (CNCSP) is responsible for overseeing the release and registration of varieties in alignment with ECOWAS Regulations and UPOV guidelines. At present, CNCSP lacks sufficient financial resources to convene approval meetings promptly. Currently, no costs are incurred; however, a draft decree is being developed to establish procedures for payment and fee application related to new variety approvals. The process typically takes an average of 34 months.
2. Number of varieties released in last 3 years	2.43	1.43	Four rice varieties were released between 2022 and 2024.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	2.50	3.00	In 2024, ISRA had five breeders for the four priority crops—two for groundnut and one each for millet, rice, and maize. With a score of 2/10, breeder staffing is well below the needs of the seed sector. Funding for breeding was rated 3/10 due to inadequate government support and reliance on donors. Research infrastructure received 4/10, reflecting outdated facilities needing major upgrades. See Appendix 1 for details by priority crop.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	2.67	The ISRA manages plant genetic resources in Senegal, collecting, characterizing, and conserving them in the national gene bank. The gene bank's facilities require refurbishment, and it collaborates with the Senegalese Association of Peasant Seed Producers (ASSSP).
5. Adequacy of Early Generation Seed (EGS)	6.58	5.42	EGS is produced by seed companies, cooperatives, and individual producers. The quality of EGS received a rating of 5/10, indicating that while field inspections, packaging, and laboratory testing are conducted prior to certification and marketing, there remains scope for improvement. The quantity of EGS was rated 5.5/10, as it is produced by approved entities; however, the supply for groundnuts and rice does not meet current demand. The timeliness of EGS delivery was rated 5.75/10, reflecting delays encountered by ISRA in sorting, packaging, and obtaining certification labels. Crop-specific ratings can be found in Appendix 2.
6. Availability of crop varietal choice to farmers	7.86	8.28	In 2024, 115 varieties of four priority crops were available: groundnut (29), millet (11), rice (64), and maize (11). Rice varieties increased from 36 in 2022, but the other crops saw declines.
7. Utilization of quality commercial seed by farmers	8.16	7.69	In 2024, seed production reached 54,278 MT for groundnut, 1,318 MT for millet, 10,622 MT for rice, and 35,673 MT for maize. After accounting for imports and exports (see Indicator 8), available seed supplies satisfied 99% of the country's groundnut requirements, 52% for millet, 55% for rice, and 9% for maize.
8. Clarity and enforcement of seed import/export regulations	5.00	4.00	The *Direction de la Protection des Végétaux* (DPV) regulates seed imports and exports under Decree No. 60-121 SG, but guidelines are not always followed and not all transactions are officially processed. In 2024, official records list imports of 3 MT of millet seed and 84 MT of maize seed, and exports of 50.5 MT of rice seed and 6 MT of maize seed.
9. Adequacy of agro-dealer networks	7.00	7.00	In 2024, there were 1,800 agro-dealers operating throughout Senegal, all engaged in selling or distributing seeds. This number is sufficient, with dealers found in various regions across the country.
10. Availability of seed in small package sizes	0.00	10.00	According to *Règlement C/REG.04/05/2008*, standard seed package sizes are defined as 50 kg for groundnut, 40 kg for rice, 16 kg for maize, and 4 kg for millet. These seed packages are suitable for farmers in Senegal.
11. Status of national seed policy instruments	8.00	8.00	Senegal's seed sector operates under the ECOWAS Seed Regulations (C/Reg.4/05/2008), which standardize quality control, certification, and marketing of seeds and seedlings across the ECOWAS region. Law No. 94-81, enacted on December 23, 1994, covers variety registration as well as the production, certification, and trading of seeds or plants, in addition to various related Decrees and a Ministerial Order. Stakeholders in the seed industry have emphasized the importance of establishing a national seed policy to guide the overall development of the country's seed sector.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	6.00	6.00	Senegal, an ECOWAS member, is implementing harmonized seed regulations. The national seed committee is established, and import/export decrees are in place. Pending tasks include creating a seed fund, applying the certification fee consistently, and standardizing the inspector professional card.
13. Status of national biosafety frameworks for plant breeding and seed production	8.00	7.00	The *l'Autorité Nationale de Biosécurité* (ANB), created under Law No. 2009-27 on July 13, 2009, oversees the regulation of genetically modified organisms (GMOs) and their related products, which includes managing their development, usage, import, export, transport, and sale. However, the ANB does not have sufficient resources to operate effectively and fulfill its responsibilities.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	0.00	0.00	FMSS are not included in existing seed policies. The government plans to strengthen the formal system first, then address farmer-managed seeds.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	6.00	2.00	In 2024, DISEM had 134 public and 16 approved private seed inspectors, up from 107 and 13, respectively, in 2022. Inspectors ensure producers meet quality standards, but the number of public inspectors remains insufficient and hampered by limited vehicle access to fields nationwide. The seed control and certification system still does not use digital technology.
16. Adequacy of government efforts to combat counterfeit seed	3.00	3.00	Law No. 94-81 of December 23, 1994, specifies the fines and penalties for producing or selling counterfeit seeds. Currently, counterfeit seeds are addressed only through certification tags and inspections conducted by the DPV and customs officers for imported seeds.
17. Adequacy of national seed trade association	6.67	7.67	The Union National Interprofessionnelle des Semences (UNIS) is Senegal's national seed trade association, comprising individual producers and cooperatives. UNIS received an overall rating of 7.67/10, with the following sub-scores: activity on seed sector issues was rated at 7.0, effectiveness in advocacy at 7.0, managerial ability at 8.0, value to members at 8.0, democracy at 8.0, and resource mobilization at 8.0.
FINAL ASSPI SCORE	**5.31**	**5.10**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Senegal's agriculture occurs in the drought-prone Sahel, where inconsistent rainfall and poor soils mean the country relies heavily on food imports.[29] Despite a relatively extensive agro-dealer network and broad varietal availability, formal seed meets only 52% of millet and 55% of rice requirements, and quality control capacity remains constrained. To advance the sector, the following priorities should be addressed:

- Expanding ISRA's plant breeding programs to develop locally adapted varieties.
- Enhancing seed quality control through certification, analysis, and testing.
- Upgrading regional seed labs and creating new sorting and conditioning centers.
- Boosting efforts to prevent counterfeit seeds.

Data for the ASSPI report for Senegal was collected by:

Mamadou Ndoye

Chef de la Division des Semences.

29 https://www.trade.gov/country-commercial-guides/senegal-agricultural-sector Accessed 23 February 2024.

African Seed Sector Performance Index (ASSPI) Country Brief – SEYCHELLES

OVERVIEW OF THE SEED SECTOR

Seychelles' seed sector is in the nascent stage of development. The country has limited agricultural land, restricting local food production; fishing, meat, and fruit and vegetable cultivation are the main activities. The country imports most of its food and relies on imported seeds, with no domestic seed producers or plant breeders. The Department of Agriculture oversees the sector, which prioritizes citrus, banana, pawpaw, and pineapple crops that make up 99% of the harvested crop area. Seychelles is part of the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC).

Overall country score (out of 10):	3.61

Focus crop	Area harvested (ha)	% of total area harvested to fruits
Citrus	7.0	6%
Banana	99.0	85%
Pawpaw	7.3	6%
Pineapple	2.0	2%
Total		99%

Total arable land:	0.00015 million ha
Population:	127,951
Number of farming households:	700
Contribution of agriculture to GDP:	2.5%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	0.00	0.00	Seychelles lacks a variety release and registration system, but the Department of Agriculture's research station conducts adaptive trials for imported crops.
2. Number of varieties released in last 3 years	0.00	0.00	Since there is no release process, no varieties were released for the four crops from 2022 to 2024. Imported varieties passed adaptive trials and can be commercialized but are not counted as released varieties.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	0.00	0.00	Seychelles does not have breeding programs. The research station conducts adaptive field trials to evaluate imported varieties, with crop ratings listed in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	6.00	The Department of Agriculture manages National Plant Genetic Resources for Food and Agriculture (PGRFA) activities, including conserving starchy crops, breadfruit, fruits, and vegetables. It is affiliated with the SADC Plant Genetic Resources Centre in Zambia and collaborates with farmer associations and individual farmers.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
5. Adequacy of Early Generation Seed (EGS)	6.17	0.00	EGS are not produced for the four priority crops; instead, they are imported, tested, and then distributed to farmers. Appendix 2 provides crop-specific ratings.
6. Availability of crop varietal choice to farmers	3.69	1.57	In 2024, nine varieties of the four crops were marketed: five citrus and four pawpaw varieties.
7. Utilization of quality commercial seed by farmers	MD	0.00	In 2024, all seeds for the four crops were imported, with no local production.
8. Clarity and enforcement of seed import/export regulations	7.00	8.00	The Animal and Plant Biosecurity Act of 2014 regulates import and export procedures. Importers of seeds must obtain a permit and follow biosecurity standards, enforced by officers at ports and airports. In 2024, 1.2 kg of pawpaw seeds were imported.
9. Adequacy of agro-dealer networks	4.00	7.50	In 2024, there were six agro-dealers in Seychelles, who imported seeds and supplied them directly to their customers. Although this number is not sufficient to fully meet farmers' needs, the small size of the island makes all dealers easily accessible.
10. Availability of seed in small package sizes	4.47	0.74	Citrus, banana and pineapple are vegetatively propagated and do not have seeds while pawpaw is seed propagated, less than a tenth of a kg was imported in small package sizes.
11. Status of national seed policy instruments	3.00	3.40	Seychelles lacks dedicated seed sector legislation, relying instead on the National Food and Nutrition Security Policy (2013), the Animal and Plant Biosecurity Policy (2014), and the Plant Variety Protection Bill 2025. The latter establishes plant breeder's rights in accordance with the guidelines of the *Union Internationale pour la Protection des Obtentions Végétales* (UPOV).
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	6.00	5.00	Seychelles is a member of both the COMESA and SADC regional blocs. The nation is presently harmonizing its national policy frameworks with those of these two regions.
13. Status of national biosafety frameworks for plant breeding and seed production	1.00	5.00	Biosafety in Seychelles will be regulated by the National Biosafety Framework, which has not yet been approved. The Ministry of Health has established a Biosafety Committee and appointed a biosafety officer; however, their responsibilities are limited to health-related matters.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	6.00	8.50	FMSS are addressed in the Plant Variety Protection Bill, 2025 which has been endorsed by the cabinet and is awaiting enactment.
15. Adequacy of seed inspection services	7.00	7.67	In 2024, Seychelles employed 15 biosecurity inspectors stationed at various border points, such as the airport. Although these officials are not seed inspectors, transport is provided for them to reach border locations and carry out their tasks. Both the airport and seaport are outfitted with advanced scanners for examining consignments.
16. Adequacy of government efforts to combat counterfeit seed	7.00	8.00	Certified seed is imported, so border authorities inspect shipments to prevent counterfeit seeds.
17. Adequacy of national seed trade association	0.00	0.00	Seychelles does not have a national seed trade association, which reflects the minimal activity within the country's local seed sector.
FINAL ASSPI SCORE	**3.90**	**3.61**	Highest scores: in COMESA: Egypt, 8.13 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

PRIORITY INTERVENTIONS

Agricultural production in Seychelles is constrained by a lack of arable land and extreme weather patterns. For the seed sector to grow, the following issues need to be addressed:

- Reducing the long procurement process for the purchase of seeds by the Department of Agriculture through the Procurement Oversight Unit.
- Sourcing more varieties that are adapted to the Seychelles agroecological conditions.
- Exploring alternatives to the high cost of importing quality seeds.
- Strengthening the policy environment by passing the draft Plant Variety Protection Bill.

Data for the ASSPI Seychelles report was collected by:

Dr. Nelson Charles

Department of Agriculture

African Seed Sector Performance Index (ASSPI) Country Brief – SIERRA LEONE

OVERVIEW OF THE SEED SECTOR

Sierra Leone's seed sector is in the early growth stage of development. The sector is dominated by the informal seed system. In the formal sector, variety release and registration are coordinated by the Sierra Leone Seed Certification Agency (SLeSCA), Variety Release and Registration Committee (VRRC) and the National Seed Board (NSB). The Sierra Leone Agricultural Research Institute (SLARI) conducts breeding and variety development. The four priority crops, as identified by local seed sector experts, are rice, maize, sorghum, and groundnut. Combined, these four crops account for 94% of area harvested to field crops. Further, these are the only food crops that undergo seed certification. Sierra Leone is a member of the Economic Community of West African States (ECOWAS) and the Community of Sahel–Saharan States (CEN-SAD).

Overall country score (out of 10):	3.76

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Rice	**987,345**	**78%**
Maize	**16,108**	**1%**
Sorghum	**60,000**	**5%**
Groundnut	**125,530**	**10%**
Total		**94%**

Total arable land:	**1.584 million ha**
Population:	**8,460,512**
Number of farming households:	**1,311,698**
Contribution of agriculture to GDP:	**35.0%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**8.00**	**6.00**	The Variety Release and Registration Committee (VRRC) oversees the release of crop varieties, operating with annual meetings and releases in 2014, 2015, 2019, and 2022. Key aspects of the process are well-defined, and guidelines are generally followed by breeders and stakeholders. Due to financial constraints, the VRRC meets its schedule about half the time. Costs align with Seed Regulations 2020, and processes are applied consistently. The variety release process should take 24 months as per regulations.
2. Number of varieties released in last 3 years	**4.43**	**3.86**	During the 2022 – 2024 period, 21 varieties were released for the four crops: 17 rice varieties, three sorghum varieties, and one groundnut variety.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**4.33**	**3.50**	In 2024, SLARI had eight breeders for the four priority crops: five for rice, and one each for maize, sorghum, and groundnut. Breeder adequacy scored 4/10, indicating a shortage except for rice. Funding received a 3.5/10 due to limited government support, which mainly covers salaries and basic expenses; some external funding comes from Africa Rice, IITA, and ICRISAT. Basic research infrastructure also scored 3.5/10 due to inadequate irrigation, labs, and land. See Appendix 1 for crop-specific ratings.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	5.00	3.00	There is no central body managing national PGRFA activities. RARC oversees PGRFA for rice, maize, and sorghum, while NARC manages groundnut. Coordination remains lacking, and human resources are insufficient. SLARI works with CSBs to provide germplasm, document varieties, train in conservation and seed production, and involve farmers in breeding and selection.
5. Adequacy of Early Generation Seed (EGS)	5.92	5.75	In Sierra Leone, RARC supplies rice, maize, and sorghum EGS, while NARC provides groundnut EGS; both operate under SLARI. EGS quality was rated 7/10 due to SLeSCA's improved controls. Quantity scored 5/10, with recent projects boosting production for all crops, especially rice and maize. Timely delivery received 5.25/10, hindered by poor distribution to seed producers. Appendix 1 lists crop-specific ratings.
6. Availability of crop varietal choice to farmers	1.64	2.34	In 2024, twenty varieties of the four priority crops were available on the market: ten rice varieties, four maize varieties, four sorghum varieties, and two groundnut varieties.
7. Utilization of quality commercial seed by farmers	1.30	2.50	In 2024, production volumes for the four priority crops were as follows: 4,564 MT of rice seed and 427.6 MT of maize seed. No sorghum and groundnut seed was produced. Including imports referenced in indicator 8, the total available seed satisfies 36% of the national requirement for rice, while supply for maize, sorghum, and groundnut meets 100% of their respective national seed requirements.
8. Clarity and enforcement of seed import/export regulations	8.00	7.00	The seed importation procedures are clear and consistently enforced. The procedures for seed imports and exports are generally followed closely. The seed importer applies to the Sierra Leone Seed Certification Agency for a notice of importation of seed. In 2024, six MT of maize seed was imported.
9. Adequacy of agro-dealer networks	5.00	3.00	Agro-dealers engaged in seed sales are required to register with the SLeSCA and the National Fertilizer Regularity Agency (NaFRA) for fertilizer. As of 2024, there were 94 active agro-dealers operating in Sierra Leone. However, they are unevenly distributed, with limited presence in remote regions of the country.
10. Availability of seed in small package sizes	0.75	0.00	In 2024, no seed of the four priority crops was sold in small packages of 2 kilograms or less.
11. Status of national seed policy instruments	9.00	7.67	Key seed policy instruments are now established and are relatively recent. These include: The National Seed Policy (2009), which offers general direction for the seed sector; it was updated in 2024 but is still pending approval. Sierra Leone Seed Certification Agency Act of 2018 Sierra Leone Seed Certification Agency Regulations of 2020, which were introduced to implement the SLeSCA Act of 2018.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	9.00	Sierra Leone is a member of the Economic Community of West African States (ECOWAS). The country has adopted and implemented the harmonized ECOWAS Seed Regulations of 2008, which were published in the National Gazette in December 2014. These regulations established a seed sector support fund, provided comprehensive guidelines for seed quality control and certification, facilitated seed production, and introduced a national catalog of plant varieties and species.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	Sierra Leone lacks a biosafety framework for agricultural biotechnology.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	5.00	5.00	The National Seed Policy (2009) acknowledges FMSS, and numerous local and international NGOs provide different types of support for these systems.
15. Adequacy of seed inspection services	4.00	2.33	In 2024, SLeSCA had only 15 seed inspectors, insufficient for the industry's needs. Seed inspection is also hampered by limited resources and minimal adoption of digital technology.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	4.00	3.00	SLeSCA's current initiatives addressing counterfeit seed are insufficient. The main source of counterfeit seeds are retailers or agents who purchase low-quality seed for distribution in relief markets. Relief seed programs also contribute to the proliferation of counterfeit seeds due to weak procurement processes and inadequate quality assurance measures. Existing government strategies to prevent fake seed remain largely ineffective.
17. Adequacy of national seed trade association	0.00	0.00	Sierra Leone has no seed trade association at present.
FINAL ASSPI SCORE	**4.43**	**3.76**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

In 2024, agriculture accounted for 35% of Sierra Leone's GDP and employed about two-thirds of its people.[30] Sierra Leone's seed sector is in the early growth stage, dominated by the informal system; formal seed supply for maize, sorghum, and groundnut is entirely import-dependent. To strengthen the sector, the following priorities must be addressed:

- Increase funding for SLARI breeding initiatives.
- Expand seed production for key crops to better meet national needs.
- Support SLeSCA's efforts against counterfeit seeds by adding security labels to packaging.
- Bolster SLeSCA's seed inspection through hiring and training additional inspectors.

Data for the ASSPI Sierra Leone report was collected by:

Dr. Momoh Turay

Sierra Leone Seed Certification Agency (SLeSCA).

30 https://www.trade.gov/country-commercial-guides/sierra-leone-agriculture-sector Accessed 24 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – SOMALIA

OVERVIEW OF THE SEED SECTOR

The seed sector in Somalia is in the nascent stage of development. It is characterized by arid/semi-arid lands and the dominant presence of the informal seed system. Nevertheless, recent initiatives have aimed to transition towards a regulated formal system. In 2020, the Somali Federal Parliament enacted legislation and established governance frameworks that led to the creation of the Somali Agricultural Regulatory and Inspection Services (SARIS), now serving as the regulatory authority within the Federal Ministry of Agriculture and Irrigation. The Agricultural Research Section of the Plant Protection and Agricultural Research Department functions as the national agricultural research institute. Additionally, the Ministry has overseen the drafting of the Seeds and Plant Varieties Law, 2020. Maize, sorghum, cowpea, and sesame have been identified as priority crops by local industry experts, collectively representing 81% of the field crop harvest area. Somalia is a member of the Intergovernmental Authority on Development (IGAD), the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA).

Overall country score (out of 10):	3.01

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	100,000	19%
Sorghum	250,000	46%
Cowpea	50,000	9%
Sesame	37,510	7%
Total		81%

Total arable land:	1.1 million ha
Population:	18,358,615
Number of farming households:	600,000
Contribution of agriculture to GDP:	MD

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	1.00	5.25	The Seed and Plant Variety Law lays out a clear and organized process for registering new seed varieties, offering legal and procedural guidance for their evaluation and approval. SARIS has set criteria for testing, such as DUS (Distinctness, Uniformity, and Stability) and VCU (Value for Cultivation and Use) assessments. This structured approach helps ensure transparency, predictability, and accountability among all parties involved, from public researchers to private seed companies. Despite these measures, a plant variety release and registration committee has yet to be formed. The National Variety Catalog is updated periodically, though these updates can sometimes be delayed. While most adhere to the outlined procedures, enforcement and consistent application can be hindered by institutional limitations and low awareness among certain stakeholders. The full process for releasing a new variety takes 24 months.
2. Number of varieties released in last 3 years	0.00	1.29	From 2022 to 2024, three of four priority crops—maize, sorghum, and cowpea—each saw one new variety released. In Somalia, public crop improvement programs are limited and uncoordinated, and private sector involvement is minimal, with only a few seed companies introducing new varieties sporadically.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	1.75	1.50	In 2024, the Agricultural Research Section did not employ any breeders. The average satisfaction score regarding the number of breeders across four crops was 0/10. Funding for breeding programs received a rating of 2/10, reflecting the absence of active initiatives. Breeding infrastructure was rated at 3/10, as research station facilities are currently in poor condition and require rehabilitation. Detailed crop-specific ratings can be found in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	0.00	0.00	Coordination of PGRFA activities in Somalia is currently lacking.
5. Adequacy of Early Generation Seed (EGS)	3.58	3.00	EGS for maize is supplied by CIMMYT, Quali Basic Seed Kenya and Zambia, and private seed companies in Kenya and Zimbabwe. EGS for sorghum comes from ICRISAT, INRAN (Niger), and a Zimbabwean private seed company. For cowpea, a Zimbabwean private firm is the main source. EGS quality was rated 4/10 and quantity 2/10, reflecting weak crop improvement programs and few active breeders in both sectors. Delivery timeliness scored 3/10 since local producers depend on regional imports. See Appendix 2 for crop-specific details.
6. Availability of crop varietal choice to farmers	1.92	1.64	In 2024, ten varieties of the four priority crops were available on the market: three maize varieties, three sorghum varieties, two cowpea varieties, and two sesame varieties.
7. Utilization of quality commercial seed by farmers	0.42	6.70	In 2024, seed production for four major crops reached the following amounts: 549 metric tons (MT) of maize, 337 MT of sorghum, 103 MT of cowpea, and 314 MT of sesame. This represented a substantial increase compared to 2022, when 230 MT of maize, 260 MT of sorghum, 220 MT of cowpea, and no sesame were produced. The 2024 yields met 66% of the national requirement for maize seed, 11% for sorghum, 34% for cowpea, and 100% for sesame.
8. Clarity and enforcement of seed import/export regulations	2.00	6.00	SARIS grants import permits to companies and individuals seeking to import seeds into the country, following established rules and regulations. The enforcement of seed import policies remains consistent. In 2024, seed imports were limited to 5.5 MT of sorghum seed and less than one MT each of maize and cowpea seed.
9. Adequacy of agro-dealer networks	3.00	1.50	In 2024, Somalia had no registered agro-dealers, though many unregistered ones operated nationwide. SARIS is developing a registration system to regulate these businesses. Agro-dealer distribution remains insufficient, especially in rural and remote areas.
10. Availability of seed in small package sizes	0.84	2.09	Among the four priority crops, small packages (2 kg or less) accounted for 24% of maize seed, 13% of sorghum seed, 12% of cowpea seed, and 27% of sesame seed sales.
11. Status of national seed policy instruments	4.00	7.25	Somalia's seed sector operates under the Seed and Plant Varieties Act passed in 2024. According to legislation enacted that same year, the Somali Agricultural Regulatory and Inspection Services (SARIS) serves as the national seed authority. The Somali Seed Sector Guidelines, established in 2021, are designed to oversee, regulate, and promote the production of high-quality seeds. Currently, the National Seed Policy is still in draft form.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	0.00	1.00	Somalia became a member of the Common Market for Eastern and Southern Africa (COMESA) on July 9, 2018. However, the country's seed laws still need to be aligned with COMESA's Harmonized Seed Trade Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	At present, Somalia has no national biosafety framework to regulate the generation, utilization, and commercialization of agricultural biotechnology.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	1.00	4.00	FMSS are not mentioned in the Seeds and Plant Varieties Act, but establishing FMSS is a priority for the Ministry of Agriculture and Irrigation. The government supports FMSS through policy discussions, indirect aid from agricultural projects, and by recognizing informal seed actors.
15. Adequacy of seed inspection services	3.00	4.03	As of 2024, SARIS employed eight public seed inspectors, a number insufficient to meet the current needs of the country. Transportation available for seed inspections remains inadequate. Access to modern technologies, including mobile data collection systems, digital reporting platforms, and electronic tracking tools is also limited.
16. Adequacy of government efforts to combat counterfeit seed	4.00	3.50	SARIS is taking the lead in tackling the issue of counterfeit seeds. Several policy tools outline different actions for this purpose. However, the Somali government's efforts to fight counterfeit seeds are still seen as insufficient, largely because of limited resources. Both financial and human resource constraints contribute to the shortcomings in implementing these measures effectively.
17. Adequacy of national seed trade association	0.00	2.50	The Somalia Seed Trade Association (SOSTA) was founded in 2025. Its founding members have established a leadership framework and defined the association's regulations. However, recognition by the Federal Ministry of Agriculture and Irrigation (FMoAI) is still pending.
FINAL ASSPI SCORE	**1.56**	**3.01**	Highest scores: in COMESA: Egypt, 8.13 in EAC: Kenya, 7.64 in IGAD: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Agriculture accounts for an estimated 20% of Somalia's GDP as a standalone crop sector and approximately 65% when combined with livestock.[31] However, ongoing political instability, frequent droughts, outdated infrastructure, and inadequate access to modern farming practices have hindered agricultural development. Displacement and insecurity stemming from political conflict have disrupted farming activities. Efforts by the government, international organizations, and NGOs have focused on improving food production, introducing drought-resistant crops, and providing support to farmers. For the seed sector to grow, the following issues need to be addressed:

- Strengthening the capacity of the SARIS in all matters of seed quality control,
- Strengthening the national breeding programs by hiring breeders and rehabilitating the facilities for research and variety development,
- Strengthening the relationships with regional seed companies and research institutions to source varieties that are well-adapted to hostile climatic conditions in the country.

Data for the ASSPI Somalia report was collected by:

Zakaria Hagi

seed industry expert assigned to the task by the Head of the Somali Agricultural Regulatory and Inspection Services (SARIS).

31 https://sdrb.gov.so/understanding-somalias-agricultural-sector/ Accesses 7 April 2026

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

African Seed Sector Performance Index (ASSPI) Country Brief – SOUTH AFRICA

OVERVIEW OF THE SEED SECTOR

The seed sector in South Africa is in the mature growth stage. The highly formal seed sector is dominated by private multinational companies. Much of the agricultural production in South Africa is driven by large-scale commercial farmers. The Agricultural Research Council (ARC) is a government parastatal with a mandate for agricultural research. The South Africa National Seed Organization (SANSOR) is the national seed association that brings together the private sector seed industry. SANSOR is the nationally designated authority in charge of seed inspection and certification. The four priority crops, as identified by the local seed industry experts are maize, soya bean, sunflower, and wheat. Combined, these four crops account for 95% of area harvested to field crops. South Africa is a member of the Southern African Development Community (SADC).

Overall country score (out of 10):	8.64

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	2,636,250	52%
Soya bean	1,150,500	23%
Sunflower	529,000	10%
Wheat	505,300	10%
Total		95%

Total arable land:	12.0 million ha
Population:	63,212,384
Number of farming households:	3,215,000
Contribution of agriculture to GDP:	2.9%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	10.00	9.75	The variety release process is well defined, understood, and is followed diligently. The variety release committee has structured meetings which are scheduled in advance. The South African National Variety List is updated and published biannually. Adherence to the costs related to the variety release and registration process, as stipulated in the Seed Regulations and Ministerial Orders, is generally reasonable compared to other countries and strictly enforced. The length of variety release is in line with UPOV guidelines and usually takes around 24 months or two growing seasons.
2. Number of varieties released in last 3 years	10.00	10.00	During the 2022-2024 period, 411 varieties of the four priority crops were released: 284 maize varieties, 79 soya bean varieties, 21 sunflower varieties, and 27 wheat varieties. This is a significant increase from the 286 varieties reported in the previous ASSPI report in 2023.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	9.00	9.00	Most of the breeding programs for the four priority crops are in the private sector, under seed companies. As of 2024, the number of public breeders at ARC was not available. The adequacy of the number of breeders was rated 9/10. South Africa loses a significant number of experienced breeders to the international market due to more competitive remuneration and career opportunities. For soya bean, minimal breeding activity occurs locally and the majority of new varieties are developed in South America. In the case of sunflower, private companies dominate the breeding of new varieties, while the ARC researchers focus on end-use traits. The adequacy of funding to breeding programs was rated 9/10 because, while relatively well resourced, ARC's funding is based on projects. The adequacy of breeding infrastructure was rated 9/10 because breeding programs are managed privately and are effective. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	8.00	8.33	The National Plant Genetic Resource Centre (NPGRC) is within the National Department of Agriculture (NDA), and is world-class. While the gene bank is committed to its PGRFA mandate and has achieved significant successes in conservation and providing germplasm, the adequacy of its human resources is a persistent challenge. Collaboration between the NPGRC and community seed banks has progressed but remains insufficiently formalized, and requires further institutionalization to meet the PGRFA mandate.
5. Adequacy of Early Generation Seed (EGS)	9.00	9.00	Private seed companies maintain their own EGS. As such, there are no challenges with the quantity of basic seed available, the quality of EGS, and the timeliness of supply of EGS. The adequacy of the quality of EGS was rated 9/10. The adequacy of quantity supplied was rated 9/10 because it is driven by the private sector's efficiency and dominance. The adequacy of timeliness of delivery was rated 9/10. Private sector has robust seed supply chain channels. Crop-specific ratings are available in Appendix 2.
6. Availability of crop varietal choice to farmers	10.00	10.00	In 2024, there were 1,707 varieties of the four crops on the market: 1,206 maize varieties, 246 soya bean varieties, 125 sunflower varieties, and 130 wheat varieties.
7. Utilization of quality commercial seed by farmers	10.00	5.48	In 2024, reported production volumes were: 32,745 MT of maize seed, 10,071 MT of soya bean seed, 2,967 MT of sunflower seed, and 12,857 MT of wheat seed. Adjusted for seed imports and exports below (Indicator 8), the total amount of available seed met 50% of the national seed requirement for maize, 34% for soya bean, 100% for sunflower, and 76% for wheat.
8. Clarity and enforcement of seed import/export regulations	10.00	10.00	The regulations and procedures for importation and exportation are clear and well-understood by the seed actors. They are also enforced fully. In 2024 the volume of seed imports was 957 MT for maize seed, 367 MT for soya bean seed, 1,034 MT for sunflower seed and 2 MT for wheat seed. Seed exports were: 4,581 MT of maize seed, 1,526 MT of sunflower seed, and 101 MT of wheat seed.
9. Adequacy of agro-dealer networks	9.00	8.50	South Africa has a well-distributed agro-dealer network comprising thousands of retail outlets, and market concentration does not pose a constraint. The country uses a combination of sales representatives, agents and cooperatives. Seed and other inputs are available from dedicated agro-dealers and supermarkets, general agro-input dealers, and hardware stores.
10. Availability of seed in small package sizes	0.00	10.00	South Africa's maize industry is dominated by large-scale commercial farmers. These farmers typically purchase bulk seed quantities, e.g., 25 kg, or even larger to cover extensive planting areas. A 2 kg pack is insufficient for the scale of commercial operations typical in South Africa. While smallholder farmers exist, especially in rural provinces like Limpopo and the Eastern Cape, they often rely on informal seed systems or open-pollinated varieties (OPVs) that allow seed saving. Limited volumes of seed in small packages are available at retail outlets, reflecting correspondingly low demand from the predominantly commercial farmer base.
11. Status of national seed policy instruments	8.00	8.75	Breeders' Rights Act of 2018, together with the Regulations thereto, promulgated on 1 June 2025 and 1 December 2025, respectively. The other seed laws governing the sector are the Genetically Modified Organisms Act (GMO Act; Act No. 15 of 1997) and the Agricultural Pests Act, 1983 (Act No. 36 of 1983). The Plant Health Act, 2024 which was signed into law on 10 December 2024 will repeal the Agricultural Pests Act, 1983 once the Regulations to the new Act are finalized and approved by the Minister of Agriculture and the Act is proclaimed.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	7.00	South Africa is a member of the SADC. The Plant Improvement Act of 2018 is in line with the SADC Harmonized Seed Regulatory System (HSRS). The government became a signatory to the SADC HSRS in 2023. South Africa has signed the SADC Plant Breeders' Rights Protocol and Seed Charter. However, the country has not yet ratified the afore-mentioned instruments. Further, the country needs to domesticate the HSRS protocols into national legislation and operational frameworks.
13. Status of national biosafety frameworks for plant breeding and seed production	10.00	9.50	The laws governing agricultural biotechnology include the Genetically Modified Organisms Act (Act No. 15 of 1997) as amended by the Genetically Modified Organisms Amendment Act (Act No. 23 of 2006). Policy, operating procedures, permit systems and advisory and regulatory committees are all functioning.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	5.00	6.00	The Regulations for the Plant Breeders Act of 2018 recognize farmers' rights to save and exchange seed. The Regulations allow for vulnerable household and subsistence producers to save, reuse, or exchange seed within their category, and if producing seed below the prescribed maximum quantities. These exceptions only apply to mainly edible and conventional crops. Although there is no national legislation promoting FMSS, the government promotes FMSS activities in collaboration with provincial departments of agriculture, community groups, and anti-biotechnology groups lobbying on behalf of subsistence farmers.
15. Adequacy of seed inspection services	10.00	9.00	In 2024, South Africa had 400 private seed inspectors and samplers. They are authorized by SANSOR, which is the national designated authority for seed inspection and certification. The private seed inspection system is effective and efficient because it is well resourced. The adoption of digital tools for seed inspection is at an intermediate stage, with SANSOR operating an online database for record-keeping and specialized companies employing digital analysis tools at the administrative and laboratory levels.
16. Adequacy of government efforts to combat counterfeit seed	10.00	7.50	Counterfeit seed is not a widespread problem in South Africa, and the legal and institutional framework to address it is in place. The measures to address counterfeit seed are outlined in the Plant Improvement Act of 2018 and the Plant Breeders Act of 2018, and their Regulations. SANSOR inspectors have the same legal status as government inspectors to investigate transgressions under the Plant Improvement Act. However, the adequacy of implementation is uneven and faces significant hurdles in terms of enforcement capacity, reaching remote areas, and the evolving sophistication of counterfeiters.
17. Adequacy of national seed trade association	9.50	9.00	The SANSOR is the national association in South Africa. The association is also the national designated authority for seed inspection for certification. The overall rating of SANSOR was 9/10 and comprised of the following sub-scores: activity on important seed sector issues -9/10, managerial capacity -9/10, and governance and democracy -10/10, providing value to members -8/10, effectiveness in advocacy -9/10, and ability to mobilize resources -9/10.
FINAL ASSPI SCORE	**8.62**	**8.64**	Highest scores: in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

South Africa has the most advanced formal seed sector in Africa. All policies and regulations are in place to support private sector investment and growth. The research and breeding programs are private sector-driven and comparable in quality to those of developed countries. However, the seed sector primarily serves large-scale commercial farmers, who constitute the dominant market segment, while smallholder farmers — concentrated in rural areas of the Eastern Cape, Limpopo, and KwaZulu-Natal provinces — remain largely underserved.

For the seed sector to sustain the current growth momentum, the following issues need to be addressed:

- Strengthening the resilience of the seed system to climate-related stresses, including drought, heat waves, and shifting rainfall patterns.
- Ensuring seed consignments are free from pests and diseases to maintain access to export markets.
- New Breeding Technologies (NBTs) are subject to an ongoing regulatory appeal in South Africa; the outcome will determine whether they are regulated like GM products or on a case-by-case basis, and could be an opportunity or a limiting factor for the sector.
- Enforcing plant breeders' rights protections against the illegal cleaning, treating, and selling of seed without authorization, practices that undermine breeder incentives and the integrity of the formal seed market.

Data for the ASSPI South Africa report was collected by:

Dr. Rodney Lavhelesani Managa

Research Group Leader, Council for Scientific and Industrial Research (CSIR), Advanced Agriculture and Food Cluster

African Seed Sector Performance Index (ASSPI) Country Brief – SOUTH SUDAN

OVERVIEW OF THE SEED SECTOR

South Sudan's seed sector is in the nascent stage of development, with informal systems supplying more than 90% of the seeds used nationwide. The Ministry of Agriculture and Food Security (MAFS) is responsible for breeding, developing new varieties, and certifying seeds, while the University of Juba manages several breeding initiatives. Experts in the local seed industry have identified sorghum, groundnut, maize, and sesame as top priority crops, which together represent 94% of the harvested field crop area. Additionally, South Sudan belongs to the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA) and the Intergovernmental Authority on Development (IGAD).

Overall country score (out of 10):	3.00

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Groundnut	**268,466**	**12%**
Sorghum	**1,018,687**	**47%**
Sesame	**604,865**	**28%**
Maize	**162,707**	**7%**
Total		**94%**

Total arable land:	**2.489 million ha**
Population:	**11,483,374**
Number of farming households:	**MD**
Contribution of agriculture to GDP:	**10.4%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**4.00**	**4.25**	The National Variety Release Committee includes representatives from MAFS, universities, seed companies, and farmers' associations. The committee follows the South Sudan Variety Release Guidelines, updated in 2019, which specify minimum testing requirements, the application process, the committee's structure, and its operational procedures. In the absence of a seed law, Distinctness, Uniformity, and Stability (DUS) tests, as well as Value for Cultivation and Use (VCU) tests, are not performed.
2. Number of varieties released in last 3 years	**2.14**	**1.86**	Between 2022 and 2024, seven varieties were released for the four main crops: four sorghum varieties and three maize varieties. Research activities remain limited because of funding constraints.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	1.67	2.50	Research efforts in South Sudan primarily focus on conducting adaptive trials with crop varieties previously released in Kenya, Sudan, and Uganda. As of 2024, six breeders were engaged across four major crops: one for groundnuts, three for sorghum, and two for maize. The current number of breeders received a score of 2.5 out of 10, indicating their number is insufficient. Funding for breeding programs was rated at 3 out of 10, indicating that government support remains insufficient to address existing research requirements. Basic research infrastructure was evaluated at 2 out of 10, with adequate facility support provided solely to the wheat breeding program. Detailed crop-specific evaluation ratings are presented in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	1.00	1.33	The Ministry of Agriculture and Food Security (MAFS) is responsible for managing plant genetic resources. South Sudan is a contracting party to the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which entered into force on 27 April 2020. To contribute towards the treaty's objectives, individual collection of plant genetic resources (PGR) has been undertaken with the support of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), International Institute for Tropical Agriculture (IITA) and the Association for Strengthening Agricultural Research In Eastern and Southern Africa (ASARECA). There is also a shortage of qualified personnel to run such programs, and no well-established community seed banks exist.
5. Adequacy of Early Generation Seed (EGS)	4.56	4.33	The MAFS and seed companies supply EGS for the four priority crops in South Sudan. EGS quality was rated 4/10 due to good physical purity and viability but uncertain genetic purity from lack of certification. Quantity received 2/10 because production capacity is low. Delivery timeliness was 7/10, with effective systems for some crops but major delays for sesame. See Appendix 2 for crop-specific ratings.
6. Availability of crop varietal choice to farmers	1.49	1.85	In 2024, 13 varieties of four priority crops were available: four sorghum, five groundnut, two sesame, and two maize varieties.
7. Utilization of quality commercial seed by farmers	3.40	2.76	In 2024, production was: groundnut seed 2,540 MT, sorghum seed 550 MT, sesame seed 327 MT, and maize seed 1,450 MT. With imports and exports (Indicator 8), available seed met 57% of groundnut, 15% of sorghum, 20% of sesame, and 82% of maize national requirements.
8. Clarity and enforcement of seed import/export regulations	2.00	2.50	Seed import and export in South Sudan follow MAFS regulations; MAFS issues both import permits and phytosanitary certificates for exports. A written procedure exists but is only occasionally followed.
9. Adequacy of agro-dealer networks	3.00	2.00	In 2024, a total of 35 agro-dealers operated in the country. These entities were not registered, as relevant regulatory frameworks had yet to be established. The majority of the agro-dealers were located in Juba and various state capitals.
10. Availability of seed in small package sizes	2.50	3.11	Of the four priority crops, 10% of groundnut, 50% of sorghum seed, 80% of sesame seed, and 50% of maize seed were sold in small packages (2 kg or less).
11. Status of national seed policy instruments	3.00	5.00	South Sudan does not have a seed law. Current regulations include the Draft Seeds and Plant Varieties Provisional Order of 2021 and the 2019 Varieties Release Guidelines, which outline procedures for variety release and registration.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	4.00	5.00	South Sudan is a member of COMESA, EAC, and IGAD. Its 2021 draft Seeds and Plant Varieties Provisional Order aligns with the COMESA Seed Trade Harmonized Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	0.00	0.00	South Sudan does not have a national agricultural biosafety framework.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	2.00	6.50	The draft seed policy acknowledges the FMSS. The government actively supports FMSS, as it recognizes that farmers trust the system due to its longstanding traditional use.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	2.00	1.67	In 2022, South Sudan had only 12 public seed inspectors under MAFS, an insufficient number. The lack of a national seed law and regulations further hampers seed quality assurance. Inspectors also lack transportation and digital tools.
16. Adequacy of government efforts to combat counterfeit seed	2.00	1.00	There are no punitive measures against the sale of counterfeit seed due to a lack of relevant laws and regulations.
17. Adequacy of national seed trade association	5.67	5.33	The Seed Trade Association of South Sudan (STASS) serves as the national umbrella organization for the country's private seed industry. STASS received an overall rating of 5.33 out of 10, with the following sub-scores: engagement in advocacy 6/10, activity on key seed sector issues 8/10, value provided to members 6/10, resource mobilization 4/10, managerial ability 6/10, and democracy in elections and governance 2/10.
FINAL ASSPI SCORE	**2.61**	**3.00**	Highest scores: in COMESA: Egypt, 8.13 in EAC: Kenya, 7.64 in IGAD: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

More than 95% of South Sudan's total land area (64,688,300 hectares) is deemed suitable for agriculture, with 50% classified as prime agricultural land. Nevertheless, only 4% of arable land has been under continuous cultivation to date, indicating substantial untapped agricultural potential in the country. The seed sector remains at the nascent stage of development, characterized by the predominance of NGOs and international relief organizations distributing free seed to farmers, an emerging private sector, the absence of a comprehensive legal and regulatory framework, lack of a formal variety release process, underdeveloped national breeding programs, and constraints within the seed distribution system. Despite these constraints, the Seed Trade Association of South Sudan (STASS) is a notably active entity within the sector. To advance the sector beyond the nascent phase, the following actions are recommended:

- Finalize and enact the draft Seeds and Plant Varieties Provisional Order into law, followed by the formulation and implementation of supporting regulations.
- Execute the principal provisions of the Seeds and Plant Varieties Provisional Order upon its passage, particularly the establishment of a designated national authority to oversee implementation.
- Increase funding for breeding programs managed by MAFS and the University of Juba to enhance their capacities in variety development.
- Strengthen internal seed quality control systems within local seed companies.

Data for the ASSPI South Sudan report was collected by:

Isaac Woja

Executive Secretary, Seed Trade Association of South Sudan (STASS)

African Seed Sector Performance Index (ASSPI) Country Brief – SUDAN

OVERVIEW OF THE SEED SECTOR

The ongoing conflict in Sudan has adversely impacted the country's seed sector. Prior to the current instability, the seed industry was in the early growth stage of development. The General Seed Administration (GSA) serves as the national authority overseeing variety registration, as well as seed inspection and certification processes. Breeding and variety development activities are carried out by the Agricultural Research Corporation (ARC) in collaboration with various private seed companies. According to local seed industry experts, sorghum, millet, wheat, and groundnut are identified as the four priority crops; collectively, these account for 84% of the total area harvested for field crops. Additionally, these primary food crops are subject to seed certification protocols. Sudan maintains membership in both the Common Market for Eastern and Southern Africa (COMESA) and the Intergovernmental Authority on Development (IGAD).

Overall country score (out of 10):	4.08

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Sorghum	8,525,030	51%
Millet	2,881,970	17%
Wheat	155,830	1%
Groundnut	2,450,200	15%
Total		84%

Total arable land:	20.995 million ha
Population:	50,042,791
Number of farming households:	MD
Contribution of agriculture to GDP:	22.2%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	5.00	4.75	The National Seed Council oversees variety release and registration, including setting fees. The process is unclear and often requires personal connections for breeders to access requirements. VRC meetings are rare. Released varieties appear on a national list, but no comprehensive, widely published catalog exists.
2. Number of varieties released in last 3 years	2.29	1.57	In 2022, five varieties were approved for release for the four priority crops: one sorghum variety, two millet varieties, and two groundnut varieties. Thereafter, a war crisis and wide destruction of research facilities with massive displacement of scientists further breeding and testing processes were halted.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.58	5.00	In 2022, ARC had 22 breeders; six for sorghum, three for millet, eight for wheat, and five for groundnut. Breeder adequacy scored 5.25/10; funding for breeding programs scored 5/10 due to insufficient government support, except for wheat, which receives substantial backing from both national and international sources. Research infrastructure was rated 4.75/10, with only the wheat program having sufficient resources. Appendix 1 provides crop-specific details.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	8.00	5.00	The ARC is Sudan's national authority for plant genetic resources, overseeing three well-maintained gene banks. Once a strong institution, it suffered facility and accession losses due to war but retains trained personnel. The ARC follows the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) guidelines for collecting, characterizing, and storing plant genetic materials. Sudan has no community-based seed banks.
5. Adequacy of Early Generation Seed (EGS)	5.08	4.83	The main sources of Early Generation Seed (EGS) are the ARC Seed Unit's crop breeding programs and private seed companies. EGS quality received a rating of 5.75 out of 10, largely because staff shortages mean the seed regulatory agency cannot consistently enforce quality assurance standards for all crops. Meanwhile, EGS quantity was rated 4.25 out of 10, highlighting unstable seed production nationwide. Wheat supplies are adequate as they come from regions less impacted by conflict; however, millet and groundnuts are heavily affected, and sorghum is moderately impacted. The absence of formal agreements between seed companies and the ARC complicates efforts to forecast required quantities. Delivery timeliness scored 4.50 out of 10, reflecting frequent supply delays. These scores differ depending on each crop's traditional growing region and its closeness to war zones. Crop-specific ratings can be found in Appendix 1.
6. Availability of crop varietal choice to farmers	2.34	2.27	In 2024, the market offered 19 varieties across the four priority crops: six sorghum, two millet, eight wheat, and three groundnut varieties.
7. Utilization of quality commercial seed by farmers	1.89	3.93	In 2024, reported production volumes were 15,353 MT of sorghum seed, 288 MT of millet seed, 22,628 MT of wheat seed, and 397 MT of groundnut seed. These volumes met 73.3% of the national requirement for sorghum seed, 4.85% of the national seed requirements for millet seed, 100% of the national requirements for wheat seed, and 0.29% of the groundnut seed requirements.
8. Clarity and enforcement of seed import/export regulations	5.00	7.00	Seed import and export procedures involve several agencies—Seed Authority, Standards and Metrology Department, Quarantine, Customs, and Biosafety—and are clearly laid out. In 2024, there were no recorded imports or exports of seeds for the four priority crops.
9. Adequacy of agro-dealer networks	3.00	0.00	The number of agro-dealers in Sudan is unknown.
10. Availability of seed in small package sizes	0.00	0.00	In 2024, no seed of the four priority crops was sold in packages of 2 kg or less.
11. Status of national seed policy instruments	9.00	7.00	Sudan's seed policy framework includes the National Seed Policy (2022), the Seed Act (2010), and the Seed Regulations (2012). Implementation began with ministerial approval and a dedicated committee. Although new draft laws on seeds and variety protection exist, the war has stalled progress.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	6.00	5.00	Sudan is a member of COMESA. In 2014, the country initiated the harmonization of its national seed instruments with the COMESA Seed Trade Harmonization Regulations; however, this process remains incomplete. To expedite progress, the draft instruments have been proactively aligned with the COMESA Seed Trade Harmonization Regulations, ensuring that no further alignment will be necessary upon their approval.
13. Status of national biosafety frameworks for plant breeding and seed production	8.00	8.00	The National Biosafety Law No. 15 of 2010 provides the regulatory framework for activities involving the production of genetically modified organisms (GMOs). The legislation led to the establishment of the National Biosafety Council, which faces limitations due to inadequate staffing and infrastructure. In 2012, Sudan initiated the commercialization of GMO cotton varieties.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	6.00	2.50	The Seed Policy of 2022 acknowledges farmers' varieties but exempts them from strict quality standards. These varieties are set to be included in upcoming seed laws and regulations. While some NGOs support FMSS, the General Seed Administration (GSA) currently does not recognize it as a valid seed source.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	4.00	2.33	In 2024, Sudan employed 31 public seed inspectors, a number insufficient to meet certification demands. Their activities were limited by inadequate resources. The GSA experienced a loss of several designated field vehicles due to the conflict and now primarily relies on transport provided by service recipients. Although the GSA recognizes the need for digitalization, progress remains slow owing to insufficient funding.
16. Adequacy of government efforts to combat counterfeit seed	3.00	3.00	Article 31 of the Seed Law of 2010 stipulates penalties for the production and sale of counterfeit seed, including fines and imprisonment. Additionally, the Sudan Standards and Meteorology Organization oversees product quality and may impose sanctions for the sale of counterfeit seed. The Seed Act requires the establishment of a National Seed Inspector to enforce regulations and monitor seed markets; however, this entity has not yet been formed. As a result, current seed inspectors lack the necessary resources and support to effectively fulfill their responsibilities.
17. Adequacy of national seed trade association	6.00	7.17	The Sudan Seed Trade Association (SSTA), the country's national seed trade body, received an overall rating of 7.17/10. Its sub-scores were: advocacy engagement 7/10, activity on key issues 8/10, member value 7/10, resource mobilization 6/10, managerial ability 6/10, and election democracy and governance 9/10.
FINAL ASSPI SCORE	**4.66**	**4.08**	Highest scores: in COMESA: Egypt, 8.13 in IGAD: Kenya, 7.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Sudan's ongoing conflict has severely disrupted the formal seed sector, halting breeding activities, destroying research infrastructure, and displacing technical personnel. The following priorities should be addressed once conditions permit:

- Promoting political stability will enable farmers displaced by the war to resume agriculture.
- Improving the overall capacity of the General Seed Administration, especially in national seed quality control and the fight against counterfeit seeds.
- Restoring seed infrastructure that was damaged in the production regions during the conflict.

Data for the ASSPI report for Sudan was collected by:

Mubarak El Sheikh

seed industry expert

African Seed Sector Performance Index (ASSPI) Country Brief – TANZANIA

OVERVIEW OF THE SEED SECTOR

Tanzania's seed industry is in the growth stage of development. The formal sector is managed by the Tanzania Official Seed Certification Institute (TOSCI), which acts as both the National Designated Authority under the Ministry of Agriculture and the secretariat for the National Variety Release Committee (NVRC). The NVRC is responsible for reviewing variety release applications. Public breeding is overseen by the Tanzania Agricultural Research Institute (TARI). Local experts have identified maize, rice, bean, and sunflower as the four priority crops; together, these account for 74% of the country's harvested field crop area and are the only food crops certified for seeds. Tanzania is affiliated with both the East African Community (EAC) and the Southern African Development Community (SADC).

Overall country score (out of 10):	7.35

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	4,200,000	41%
Rice	1,200,000	12%
Bean	1,080,752	11%
Sunflower	1,085,000	11%
Total		74%

Total arable land:	13.503 million ha
Population:	66,617,606
Number of farming households:	7,837,405
Contribution of agriculture to GDP:	23.3%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	8.00	8.50	Variety release and registration in Tanzania are overseen by the Tanzania Official Seed Certification Institute (TOSCI). The National Variety Release Committee (NVRC), part of the National Seed Committee, is responsible for evaluating new varieties. These procedures follow guidelines set out in the Tanzania Seed Act of 2003 and its 2007 regulations. Committee meetings depend on available funding, and the catalog is updated promptly after the minister of agriculture approves new varieties. Fees associated with variety release are detailed in the 2007 Seed Regulation. Although the standard process typically takes nine months, some breeders experience slightly longer times. Overall, the system is considered clear and well-organized, as reflected by its high score.
2. Number of varieties released in last 3 years	4.00	4.29	Between 2022 and 2024, only 24 new crop varieties were released: 17 maize, one rice, and six bean, with none for sunflower. These totals are similar to those recorded in the 2023 ASSPI report and are low relative to the advanced state of Tanzania's seed sector.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.83	4.08	In 2024, the Tanzania Agricultural Research Institute (TARI) employed 22 active breeders for the four crops: nine maize, seven rice, four bean and two sunflower breeders. This is a decline from the 20 maize breeders, 10 rice breeders and three sunflower breeders in 2022. Most maize, bean, and sunflower breeders now have additional administrative roles. There was an increase of one bean breeder since 2022. The adequacy of the number of breeders was given a score of 4/10 because several breeders have left TARI over the last few years. The adequacy of funding for breeding programs was given a rating of 4.25/10. The low funding has affected the availability of research infrastructure, which was rated 4/10. Crop-specific ratings are available in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	8.00	7.33	The National Plant Genetic Resource Centre (NPGRC), under the Tanzania Plant Health and Pesticides Authority (TPHPA) within the Ministry of Agriculture, manages the collection and maintenance of plant genetic resources in Tanzania. The Government funds NPGRC's operations and supports seven permanent staff, two interns, and three laborers working on PGR conservation and utilization — staffing considered adequate for the Centre's current mandate. NPGRC partners with national research and crop improvement programs, Community Seed Banks (CSBs), and Community-Based Organizations (CBOs) to conserve and sustainably use plant genetic resources, supporting germplasm and information exchange, farmer training, and the integration of local knowledge into national programs. A total of 2,257 accessions of the four crops are conserved: 506 for maize, 1,071 of rice, 612 of bean, and 68 of sunflower. Stronger coordination and dedicated PGRFA legislation are still needed to reduce duplication and pool resources.
5. Adequacy of Early Generation Seed (EGS)	7.33	7.67	TARI and the Agricultural Seed Agency (ASA) are the main public providers of Early Generation Seed (EGS) for the four priority crops, each handling their own EGS production and maintenance. Some private seed companies also manage EGS for their unique varieties. EGS quality received a high score of 8 out of 10, due to TOSCI's oversight on seed standards. The quantity of available EGS was similarly rated at 8/10, indicating supply is nearly sufficient to meet demand. Timeliness of EGS delivery scored 7/10, with prompt shipments occurring when seed companies place orders one season ahead of planting. Details on crop-specific ratings can be found in Appendix 1.
6. Availability of crop varietal choice to farmers	7.01	8.00	In 2024, the market offered 101 varieties across four major crops: 67 maize varieties, 3 rice varieties, 13 bean varieties, and 18 sunflower varieties. This figure reflects an increase from 61 maize varieties and a decrease from 14 bean varieties observed in 2022.
7. Utilization of quality commercial seed by farmers	3.03	2.64	In 2024, production volumes reported were as follows: maize seed at 20,201 MT, rice seed at 585 MT, bean seed at 93 MT, and sunflower seed at 846 MT. Compared to 2022 figures, maize, rice, and sunflower seed experienced declines, while bean seed showed a slight increase. Taking into account seed imports and exports (see Indicator 8), the total available seed meets 31% of the national requirement for maize and 2% for rice.
8. Clarity and enforcement of seed import/export regulations	8.00	8.00	The procedures governing seed importation and exportation are clearly outlined in the Tanzania Seed Act of 2003 and the Seed Regulation of 2007. The government has established a consolidated "one-stop-shop" for obtaining all necessary documentation, including import and export permits. In 2022, reported imports included 13,483 MT of maize seed and 1,696 MT of sunflower seed, while exports consisted of 2,162 MT of maize seed and 898 MT of bean seed.
9. Adequacy of agro-dealer networks	8.00	7.00	In 2024, Tanzania had 7,894 TOSCI-registered agro-dealers nationwide.
10. Availability of seed in small package sizes	9.89	9.96	100% maize and sunflower seeds, 99% of beans, and 75% of rice were sold in packages of 2 kg or less.
11. Status of national seed policy instruments	9.00	9.00	The seed policy instruments in Tanzania include: National Agriculture Policy of 2013, which covers the seed sector. Seed Act 2003, with amendments made in 2014. Seed Regulations of 2007, with amendments made in 2020. Plant Health Act of 2020 Seeds (Control of Quality Declared Seed) Regulations of 2020.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	9.00	Tanzania is a member of the Southern African Development Community (SADC) and formally joined the SADC Harmonized Seed Regulatory Systems (HSRS) in 2021. The process of domestication is currently underway, with partial implementation through the SADC variety release system. Additionally, Tanzania participates in the East African Community (EAC) and adheres to harmonized EAC seed protocols, which enable the duty-free importation of seed across the regional bloc.
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	9.00	Tanzania's National Biosafety Framework is established under the Environmental Management Act of 2004, complemented by the Biosafety Regulations of 2009 and their 2015 Amendments. All components are currently in effect. The Commission for Science and Technology (COSTECH) serves as the regulatory authority overseeing biotechnology activities, including those involving genetically modified organisms (GMOs).
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	9.00	8.00	FMSS are covered by the Seed Act of 2003, the 2007 Regulations, and also by the Quality Declared Seed system regulated in 2020. TOSCI manages this system.
15. Adequacy of seed inspection services	7.00	7.33	In 2024, Tanzania had 74 public seed inspectors, sufficient for current seed production. Transport is mostly adequate for reaching production areas, and most inspectors are trained in digital inspection tools.
16. Adequacy of government efforts to combat counterfeit seed	8.00	7.50	The Seed Act of 2003 and the Regulation of 2007 provide the legal framework for addressing the production and distribution of counterfeit seed. TOSCI implements several measures, including the application of electronic tags on seed packages, routine inspections of seed offered by agro-dealers, enforcement of penalties up to USD 21,000 for violations, and public awareness initiatives. These actions effectively support efforts to reduce the prevalence of counterfeit seeds in the marketplace.
17. Adequacy of national seed trade association	7.17	7.67	The Tanzania Seed Trade Association (TASTA) represents the country's seed producers and distributors. Receiving an overall score of 7.67 out of 10, TASTA was rated 8/10 for managerial ability, engagement on significant seed sector issues, member value, and advocacy effectiveness. Its scores for governance and democracy, as well as resource mobilization, were 7/10.
FINAL ASSPI SCORE	**7.25**	**7.35**	Highest scores: in EAC: Kenya, 7.64 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Agriculture accounts for 23% of Tanzania's GDP and employs over two-thirds of its population.[32] Despite favourable agroecological diversity, limited investment in public breeding programs, declining breeder numbers at TARI, and insufficient seed supply relative to demand constrain sector growth. To advance the sector, Tanzania should:

- Boost funding for public breeding programs to develop varieties suited to different agro-ecologies.
- Increase farmer awareness about improved crop varieties.
- Enhance funding to TOSCI to strengthen national seed quality assurance.

Data collection for the ASSPI Tanzania report was by:

Ms Jenniffer Didas Kabaka

Agriculture Officer, Ministry of Agriculture

32 https://www.usaid.gov/sites/default/files/2023-09/Tanzania%20Agriculture%20Factsheet_1.pdf Accessed 23 February 2025.

African Seed Sector Performance Index (ASSPI) Country Brief – TOGO

OVERVIEW OF THE SEED SECTOR

Togo's seed industry is in the emerging growth stage, transitioning from informal smallholder-led production to a more regulated system overseen by the Direction de la Production Agricole (DPA). Seed producers are mostly community-based farmers growing open-pollinated maize, other cereals, and legumes, with the Direction des Semences Agricoles et Plants (DSP) certifying quality. Quality declared seed (QDS) is not yet official and farmers in the informal system rely on saved seeds. The formal sector includes four multinational companies, no local firms, and seven producer groups mostly focused on legumes. Maize, rice, sorghum, and soya bean are the main crops, making up 74% of harvested field crop area. Togo belongs to the Economic Community of West African States (ECOWAS).

Overall country score (out of 10):	4.90

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	**804,000**	**39%**
Rice	**103,600**	**5%**
Sorghum	**320,000**	**16%**
Soya Bean	**281,684**	**14%**
Total		**74%**

Total arable land:	**2.65 million ha**
Population:	**9,304,337**
Number of farming households:	**677,692**
Contribution of agriculture to GDP:	**21.3%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**5.00**	**5.25**	Togo maintains a straightforward and dependable system for variety registration. The Conseil National de Semences et Plants (CNSP) oversees variety certification, with applications submitted directly to this body. Variety evaluation for release is conducted by the *Comité technique d'homologation des espèces et variétés* (CTHEV), while final approval rests with the *Conseil National des Semences* (CNS). The approval committee adheres to scheduled meetings as outlined in Decree No. 096/15/MAEP/Cab/SG dated May 22, 2015, which were observed during 2023 and 2024. Once a variety receives approval, the catalog is updated at the subsequent CNS meeting. Associated costs are applied with general consistency, and testing procedures span a period of 24 months.
2. Number of varieties released in last 3 years	**3.57**	**3.57**	During the 2022–2024 period, a total of 19 varieties of the four crops were released: seven maize varieties, five rice varieties, three sorghum varieties, and four soya bean varieties.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.33	5.00	The *Institut Togolais de Recherche Agronomique* (ITRA) has four breeders, one each for maize, rice, sorghum, and soya bean. Breeder adequacy was rated 5.5/10, suggesting reasonable staffing. Funding adequacy scored 5.25/10, indicating insufficient government support, though some external funding exists. Infrastructure was rated 4.25/10 due to underdeveloped research plots, limited storage, and a non-functional cold room. Crop-specific ratings are in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	4.00	4.67	ITRA oversees plant genetic conservation in Togo. ITRA has a cold storage room for genetic materials. The team comprises early-career professionals with adequate, though not advanced, technical qualifications.
5. Adequacy of Early Generation Seed (EGS)	6.58	6.58	EGS in Togo is mainly supplied by ITRA. The quality and quantity of EGS are both rated 5.75/10, with seed production regulated by DSP via inspections and lab analysis following ISTA standards. ITRA fulfills EGS needs for most crops each season, but as the sole sorghum supplier, it periodically faces supply shortfalls. Delivery timeliness was rated 8.25/10. While ITRA's centers cover most regions, southern applicants may face delays receiving sorghum EGS from the north. Crop-specific ratings are in Appendix 2.
6. Availability of crop varietal choice to farmers	1.99	1.78	In 2024, twelve varieties of four priority crops were on the market: six maize, two rice, two sorghum, and two soya bean.
7. Utilization of quality commercial seed by farmers	8.32	1.27	In 2024, production included 1,089 MT maize seed, 658 MT rice seed, 1 MT sorghum seed, and 1,593 MT soya bean seed. There were no imports and 300 MT of soya bean seed were exported. Domestic supply after exports covered 11% of maize, 14% of rice, 0% of sorghum, and 34% of soya bean national seed needs.
8. Clarity and enforcement of seed import/export regulations	8.00	8.00	Export and import procedures for seeds are clearly defined and generally followed. Procedures are well-documented and consistently applied. In 2024, 300 MT of soya bean seed were exported.
9. Adequacy of agro-dealer networks	5.00	4.50	In 2024, Togo had 42 agro-dealers: 10 large distribution companies and 32 small distributors operating in small towns and villages.
10. Availability of seed in small package sizes	0.65	1.45	Among the four priority crops, small packages (2 kg or less) account for only 25% of maize seed, 12% of rice seed, 25% of sorghum seed, and 7% of soya bean seed sales.
11. Status of national seed policy instruments	10.00	6.69	Togo's seed sector follows the 2010 *Politique Nationale Semencière*, implemented through ministerial ordinances and regulations. This policy is currently under review.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	9.00	Togo is a participant in the Economic Community of West African States (ECOWAS). Its seed policy instruments are harmonized with the joint ECOWAS-UEMOA-CILSS Seed Regulations.
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	4.00	Law No. 2009-001 (January 6, 2009) created a national biosafety framework, but the framework remains insufficiently disseminated and inconsistently enforced.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	4.00	3.50	FMSS in Togo are acknowledged under national seed regulations. However, this recognition applies exclusively to farm-saved seeds intended for private use and not for commercial distribution. Togo has chosen to implement a formal seed system governed by regulations that are consistent with both regional and international standards.
15. Adequacy of seed inspection services	6.00	5.33	In 2024, Togo had 12 fully sworn in public seed inspectors, with two assigned to each of its six agricultural regions. The current staffing level is inadequate for full national coverage. These inspectors have been officially sworn in, but they lack full authority. To support their work, all inspectors are provided with vehicles for visiting inspection sites. Additionally, tablets featuring traceability and geographic identity applications are being tested and will be widely implemented once proven effective.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	7.00	6.50	Efforts to fight the production and sale of counterfeit seed are governed by *Arrêté N° 090/19/MAPAH/Cab/SG du 17 avril 2019*, which outlines penalties for violating seed and seedling regulations, and *Décret N° 2014-124/PR*, which defines technical requirements for seed and seedling production, quality control, and certification. Actions include monitoring seed marketing, tracking certified seed inventory changes, and decommissioning plots that do not meet the technical standards.
17. Adequacy of national seed trade association	5.33	6.17	The *Réseau National des Producteurs de semences certifiées* is the largest seed marketing association in Togo. The association received an overall performance score of 6.17 out of 10, with the following sub-scores: advocacy effectiveness – 8/10, managerial ability – 5/10, value provided to members – 7/10, governance and democracy – 7/10, resource mobilization capacity – 5/10, and engagement on key seed sector issues – 5/10.
FINAL ASSPI SCORE	**5.57**	**4.90**	Highest scores: in ECOWAS: Ghana, 6.58 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Togo's seed sector has made measurable progress in certified seed production, regulatory frameworks, and quality control. However, variety availability remains critically constrained: in 2024, only 12 improved varieties were available across four priority crops, and seed production covered fewer than 35% of national needs for maize and rice. To sustain growth, Togo should:

- Develop and commercialize high-yield, locally adapted seeds,
- Increase funding for the promotion of seed companies,
- Increase funding for DSP to strengthen seed quality oversight including the number of seed inspectors.

Data for the ASSPI Togo report was collected by:

Bouab Kpanté

Direction des Semences Agricoles et Plants (DSP), Togo.

African Seed Sector Performance Index (ASSPI) Country Brief – TUNISIA

OVERVIEW OF THE SEED SECTOR

The seed industry in Tunisia is in the growth stage of development. The Department of Crop Production in the Ministry of Agriculture is responsible for regulating the seed sector. The four priority crops, as identified by local seed industry experts, are durum wheat, barley, soft wheat, and triticale. Combined, these four crops account for 91% of area harvested to field crops. Further, these are the only food crops that undergo seed certification. Tunisia is a member of the Union du Maghreb Arabe (UMA) and the Common Market for Eastern and Southern Africa (COMESA).

Overall country score (out of 10):	6.92

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Durum wheat	600,000	67%
Barley	108,000	12%
Soft wheat	100,000	11%
Triticale	10,214	1%
Total		91%

Total arable land:	2.831 million ha
Population:	12,200,431
Number of farming households:	237,000
Contribution of agriculture to GDP:	9.7%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	8.00	9.75	Tunisia's process for evaluating and registering new varieties is clear to stakeholders and follows Law No. 99-42 of 10 May 1999. The *Commission Technique des Semences, Plants et Obtentions Végetales* (CTSPOV) provides guidance, meets at least twice yearly, and publishes approved varieties in the Official Journal. The catalog updates biannually. Costs are set by Decree No. 2012-439 of 26 May 2012, and the release process takes 30 months.
2. Number of varieties released in last 3 years	1.71	3.57	From 2022 to 2024, 19 new varieties were released: nine durum wheat, three barley, six soft wheat, and one triticale. This marks an increase from the six varieties (three durum wheat, one barley, two soft wheat) released between 2020 and 2022.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	4.17	5.17	In 2024, the *Institut National de la Recherche Agricole de Tunis* (INRAT) had 14 active breeders working on four crops: five focused on durum wheat, four on barley, four on soft wheat, and one on triticale. The number of breeders received a score of 4.50/10, indicating that although there are enough wheat breeders, the numbers for barley and triticale are insufficient for Tunisia's current requirements. Funding for breeding programs was rated at 4/10, due to inadequate support for varietal improvement across all crops. Research infrastructure scored 7/10, suggesting that facilities are generally available and functional. Appendix 1 provides specific ratings by crop.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	6.00	9.00	INRAT and the Banque Nationale des Gènes (BNG) manage plant genetic conservation in Tunisia. Both have skilled staff and proper facilities to support PGRFA characterization and preservation. INRAT and BNG closely collaborate with regional and community collections. A total of 10,600 accessions of the four crops are conserved: 4,400 of durum wheat, 6,000 of barley, and 200 of soft wheat. Of these, 40% of the accessions have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	7.67	10.00	INRAT serves as the primary provider of EGS in Tunisia. The quality of EGS received a perfect score of 10/10, reflecting that it is subject to mandatory and systematic quality controls consistent with both national and international standards. Quantity adequacy was also rated 10/10, suggesting that required amounts are typically available because seed production is planned two seasons ahead. The timeliness of EGS delivery earned another 10/10, indicating enhanced delivery speed due to improvements such as upgraded equipment and better-trained technicians. Specific crop ratings can be found in Appendix 2.
6. Availability of crop varietal choice to farmers	2.77	3.05	In 2024, a total of 30 varieties of the four main crops were available on the market: 15 varieties of durum wheat, seven of barley, seven of soft wheat, and one variety of triticale.
7. Utilization of quality commercial seed by farmers	2.48	7.29	In 2024, production volumes were 34,100 MT of durum wheat seed, 12,200 MT of barley seed, and 1,900 MT of soft wheat seed. No triticale seed was produced, and there were no imports or exports for the four crops. Compared to 2022, soft wheat and triticale increased from 1,550 MT and 780 MT respectively, while durum wheat decreased from 32,000 MT. Production met 66% of national durum wheat seed needs, 56% for barley, and 32% for soft wheat.
8. Clarity and enforcement of seed import/export regulations	9.00	10.00	While there were no seed imports or exports during 2022, both seed companies and regulatory authorities have clearly defined procedures and regulations. The rules governing seed importation are applied consistently. In 2024 there were no imports or exports of seed of the four priority crops.
9. Adequacy of agro-dealer networks	7.00	9.00	In 2024, there were 190 agro-dealers operating in the country. This number is sufficient to ensure the timely distribution of seeds. Agro-dealers are strategically situated within or near rural production zones.
10. Availability of seed in small package sizes	0.00	10.00	In 2024, none of the four focus crops were sold in packages of 2 kg or less in Tunisia, where seeds are distributed in 50 kg packages that better meet the needs of the country's farmers for the four priority crops.
11. Status of national seed policy instruments	10.00	8.85	*Loi N° 99-42 du 10 mai 1999* provides comprehensive guidance for the seed sector and is implemented through ten decrees and two Ministerial Orders. This legislation has facilitated effective organization of the seed sector by delineating the roles and responsibilities of stakeholders in the system. It also establishes clear methods and standards for seed-related activities.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	3.00	Tunisia belongs to the Common Market for Eastern and Southern Africa (COMESA). From 2021 to 2024, Tunisia began updating its regulations to match COMESA's Seed Trade Harmonization Regulations. Two committees were formed to review the legal issues involved, and their work is still ongoing.
13. Status of national biosafety frameworks for plant breeding and seed production	5.00	4.00	A national biosafety framework is being developed. The law, reviewed by technical and legal committees, has been submitted to parliament for approval.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	3.00	1.50	FMSS in Tunisia are regarded as informal and do not hold legal recognition. Nevertheless, there are outreach initiatives designed to assist farmers in selecting grain for potential use as seed.
15. Adequacy of seed inspection services	8.00	6.33	Tunisia currently employs eight public seed inspectors, a number that has decreased because of retirements and limited hiring. While transport is usually accessible during inspection campaigns, digital tools now handle registration, follow-up, certification, and issuing certificates.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
16. Adequacy of government efforts to combat counterfeit seed	8.00	8.00	Regulations targeting the production and sale of counterfeit seeds are set by *Loi N° 42-99 du 10 Mai 1999*, *Loi N° 36-2001 du 17 Avril 2001*, *Loi N° 50-2007 du 23 juillet 2007*, and Décret N° 2009-418 du 16 Fevrier 2009, which established the National Council to Fight Counterfeiting. The Ministries of Agriculture and Commerce regularly inspect imports and respond to reports involving fake seeds. Penalties include fines between 1,000 and 50,000 dinars and prison sentences from one to twelve months. These measures are considered sufficient to address counterfeiting.
17. Adequacy of national seed trade association	7.33	9.17	The *Chambre Syndicale du Commerce des Semences et Plants* (UTICA), Tunisia's seed trade association, scored 9.17/10 overall, with high marks for activities (9), management (10), governance (10), resource mobilization (8), advocacy (9), and member value (9).
FINAL ASSPI SCORE	**5.77**	**6.92**	Highest scores: in COMESA: Egypt, 8.13 in UMA: Tunisia, 6.92 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Agriculture employs 16% of Tunisia's workforce and accounts for 9.7% of GDP, but output remains below national food demand even though two-thirds of land is arable. The seed sector's main challenges are:

- Improving access to affordable quality seeds,
- Growing use of certified seeds,
- Developing varieties suited to climate, social, and economic changes.

Data collection for the ASSPI Tunisia report was by:

Chammakhi Kacem

Deputy Director, Crop Production in the Ministry of Agriculture, Tunisia.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

African Seed Sector Performance Index (ASSPI) Country Brief – UGANDA

OVERVIEW OF THE SEED SECTOR

Uganda's seed industry is in the growth stage of development. It comprises the formal seed system, the semi-formal or Quality Declared Seed (QDS) system, and the informal seed system. The formal and semi-formal systems are regulated by the National Seed Certification Service (NSCS), the Department of Crop Inspection and Certification (DCIC), the Directorate of Crop Resources (DCR) in the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), under separate regulatory regimes, although the seed certification process is less rigorous for QDS than for certified seed. Uganda has about 30 mostly locally owned, seed companies active in the formal sector. A few regional and multi-national seed companies import seed. The four priority crops, identified by the local seed industry experts, are maize, bean, banana, and cassava. Combined, they account for 82% of area harvested to field crops. Uganda is a member of the Common Market for Eastern and Southern Africa (COMESA), the Intergovernmental Authority on Development (IGAD), and the East African Community (EAC).

Overall country score (out of 10):	6.12

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, roots and tubers
Maize	2,300,000	40%
Bean	863,246	15%
Banana	668,000	12%
Cassava	826,544	14%
Total		82%

Total arable land:	6.9 million ha
Population:	48,656,601
Number of farming households:	10,800,000
Contribution of agriculture to GDP:	24.6%

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	7.00	7.75	The National Variety Release Committee oversees the release of new varieties, following Seed Regulations. Candidate varieties undergo Distinctness, Uniformity, and Stability (DUS) tests as well as National Performance Trials (NPTs), with application fees outlined in the regulations. Article 4 of Part II in the Seeds and Plant Regulations (2017) details the process. The committee convenes twice a year, provided there are sufficient funds and enough candidates have been evaluated. The catalog is updated frequently; varieties released in March 2025 are already listed. Although the fee schedule is part of the regulations, the fees are minimal and do not sufficiently cover the expenses incurred during a trial. To release a variety, trials must be conducted over two growing seasons, which can span either 12 or 24 months.
2. Number of varieties released in last 3 years	1.29	2.43	From 2022 to 2024, only 11 varieties of four priority crops were released: eight maize, two bean, and one banana variety. This is up from three maize varieties released in 2020–2022. Several banana varieties remain in development.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	6.58	6.17	In 2024, NARO employed 25 breeders who focused on four crops: maize (eight breeders), beans (six breeders), bananas (five breeders), and cassava (six breeders). Overall satisfaction with the number of breeders received a score of 5.25 out of 10, suggesting that there are not enough specialists to meet the country's breeding requirements. Funding for these programs was rated equivalently at 5.25 out of 10, as insufficient and primarily reliant on short-term, donor-funded projects rather than sustainable sources for ongoing efforts. In contrast, research infrastructure supporting breeding activities was deemed more adequate, scoring 8 out of 10, with most programs possessing modern laboratories, irrigated fields, and essential machinery for crop development. Detailed ratings for individual crops can be found in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	6.33	The Plant Genetic Resource Centre (PGRC) under NARO operates the national gene bank, conducting *in-situ* and *ex-situ* conservation in national botanical gardens. Staff numbers are adequate, but the gene bank focuses mainly on major staple crops like beans, maize, cassava, and bananas. It supports community seed banks with improved management and upgraded storage facilities. A total of 4,633 accessions of the four crops are conserved: 1,507 of maize, 376 of bean, 550 of banana, and 2,200 of cassava. Of these accessions, 33% have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	7.75	7.25	The main suppliers of early generation seed (EGS) for maize and beans are NARO, NARO Holdings Limited (NHL), and both local and international private seed companies. Across four priority crops, EGS quality received an average score of 7.3 out of 10, while the quantity supplied was rated at 6.9 out of 10. EGS availability for maize and beans is generally high, thanks to NARO's pre-ordering program through NHL. Delivery timeliness was rated 7.55 out of 10, as EGS for cereals and legumes is typically available within six months. For more detailed ratings by crop, refer to Appendix 2.
6. Availability of crop varietal choice to farmers	5.31	5.31	In 2024, there were 62 varieties of the four crops on the market: 28 for maize, 14 for bean, four for banana, and 16 for cassava.
7. Utilization of quality commercial seed by farmers	2.06	3.02	In 2024, seed production reached 7,240 MT for maize, 658 MT for beans, 100,320 banana plantlets, and 22,650,000 cassava cuttings. Maize volumes rose from 6,640 MT in 2022, while bean seed dropped from 1,063 MT. Including seed imports and exports, available seed met 60% of national maize needs and 5% for beans.
8. Clarity and enforcement of seed import/export regulations	9.00	6.00	The seed import and export processes are well defined and generally followed, though enforcement has decreased over the past two years. In 2024, maize seed imports totaled 14,612 MT and exports 1,200 MT; no imports or exports were recorded for the other three priority crops.
9. Adequacy of agro-dealer networks	6.00	5.00	In 2024, there were 525 agro-dealers registered by MAAIF throughout Uganda. While these dealers were present in most districts, the majority were mainly located in urban areas.
10. Availability of seed in small package sizes	4.95	6.15	Among the four priority crops, maize and bean are planted using seeds. In 2024, 62% of maize and 45% of bean seeds were distributed in small packages of 2 kilograms or less.
11. Status of national seed policy instruments	9.00	8.00	Uganda's seed sector operates under the framework of the Uganda Seed Policy 2018. Additional guiding instruments include the Uganda National Seed Strategy (2018/19 - 2022/23), the Seeds and Plant Act 2006, the Plant Variety Protection Act 2017, the Plant Protection and Health Act 2016, the Seeds and Plant Regulations 2017, the Seeds and Plant Act (Quality Declared Seed Regulations) 2019, as well as the draft Plant Variety Protection Regulations. The strategy for the forthcoming five-year period is presently under review. Implementation of the Plant Variety Protection Act remains pending, contingent upon the approval of the corresponding regulations.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	9.00	Seed Regulations (2017) have been aligned with COMESA Seed Trade Harmonization Regulations, and implementation is ongoing.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
13. Status of national biosafety frameworks for plant breeding and seed production	6.00	6.00	The National Biosafety and Biotechnology Policy was enacted in 2008, following the development of the National Guidelines for Containment for Biotechnology Research in 2007. A National Biosafety Committee and various institutional committees supervise confined field trials of genetically modified organisms. The National Biosafety Bill is currently under review by a multi-sectoral committee who is conducting a regulatory assessment and drafting the principles of the law.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	9.00	8.50	FMSS are acknowledged within the framework of the Seed and Plant Act of 2006. Additionally, FMSS hold recognition under the Quality Declared Seed (QDS) seed class as outlined in the QDS Regulations (2019), which govern production, quality control, and marketing of QDS nationally. The National Seed Policy (2018) explicitly identifies informal seed systems as essential sources of seed for smallholder farmers and advocates for the integration of FMSS into the formal system through participatory variety selection and innovative quality assurance measures. The National Agricultural Research Organization (NARO) collaborates with farmers to enhance local varieties and supports community-based seed production initiatives. MAAIF periodically provides training to farmer groups and NGOs in seed selection, treatment, and preservation practices. Furthermore, MAAIF, in conjunction with the Plant Genetic Resource Centre at NARO, is developing a schedule for the registration of farmer varieties.
15. Adequacy of seed inspection services	6.00	5.00	In 2024, Uganda had 22 public seed inspectors under NSCS, supported by two trained extension officers per district as para-inspectors. The number of inspectors is generally considered sufficient for the country's seed sector and agro-input regulation, and they have resources to access production sites. A digital seed inspection tool has been developed but is pending server hosting.
16. Adequacy of government efforts to combat counterfeit seed	6.00	5.00	The NSCS combats counterfeit seed through enforcement, market and facility surveillance, tamper-proof labels, public education, and seed dealer training. Despite these efforts, control remains insufficient and enforcement is inconsistent.
17. Adequacy of national seed trade association	8.00	7.17	The Uganda Seed Trade Association (USTA) serves as the national association representing registered seed companies. USTA received an overall rating of 7.17 out of 10, with the following sub-scores: 7/10 for engagement on key seed sector issues, 7/10 for delivering value to members, 8/10 for managerial capacity, 6/10 for advocacy effectiveness, 7/10 for democratic practices in elections and governance, and 8/10 for resource mobilization capabilities.
FINAL ASSPI SCORE	**6.47**	**6.12**	Highest scores: in EAC: Kenya, 7.64 in IGAD: Kenya, 7.64 in COMESA: Egypt, 8.13 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Uganda's pluralistic seed sector is in the growth stage, supported by a comprehensive policy framework and a competitive private sector of approximately 30 locally owned seed companies. Transition to the late-growth stage requires addressing the following constraints:

- Increase access to high-quality seeds by improving the supply of certified seeds.
- Help local companies invest in facilities for producing, marketing, researching, and developing seeds.
- Strengthen enforcement of seed laws and regulations to ensure greater consistency.

Data for the ASSPI Uganda report was collected by:

Dr. Mary Teddy Asio

Assistant Commissioner, Seed Inspection and Certification; Head, National Seed Certification Service (NSCS)

African Seed Sector Performance Index (ASSPI) Country Brief – ZAMBIA

OVERVIEW OF THE SEED SECTOR

Zambia's seed industry is in the growth stage of development. The formal seed sector is liberalized, with the private sector taking a leading role in the formal seed sector, which is regulated by the National Seed Authority (NSA). The Seed Control and Certification Institute (SCCI) in the Ministry of Agriculture (MoA) is the national designated authority for seed regulation. The four priority crops, as identified by local seed industry experts, are maize, soya bean, wheat, and rice. Combined, these four crops account for 73% of area harvested to field crops. Zambia is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC).

Overall country score (out of 10):	7.83

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	**684,402**	**56%**
Soya Bean	**157,796**	**13%**
Wheat	**28,052**	**2%**
Rice	**23,162**	**2%**
Total		**73%**

Total arable land:	**3.8 million ha**
Population:	**20,723,965**
Number of farming households:	**2,169,479**
Contribution of agriculture to GDP:	**2.8%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description
1. Quality of variety release and registration process	**9.00**	**9.25**	The Plant Variety and Seeds Act (CAP 236) and the 2018 Seed Regulations clearly outline the variety release process in Zambia. The regulations specify seed quantity, fees, durations and deadlines for submissions for release of a new variety. The Variety Release Committee meets twice a year—in February for irrigated crops and September for rainfed crops. Released varieties are cataloged within 14 days of the meeting. Fees are outlined in the 2018 Seed Regulations. For listed varieties on the regional or international variety catalog to which Zambia is part, such a variety shall be deemed released. On average, the process takes 24 months.
2. Number of varieties released in last 3 years	**9.52**	**8.90**	Between 2022 and 2024, a total of 73 varieties were released across the four major crops: 52 maize, seven soybean, five wheat, and nine rice varieties. Compared to 2022 alone, when 69 maize, nine soybean, and six wheat varieties were released, there has been a noticeable decline in the release of maize, soybean, and wheat varieties. However, the number of rice varieties released more than doubled, increasing from four in 2022 to nine during the 2022–2024 period, highlighting a significant focus on rice variety development.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	7.17	6.75	In 2024, Zambia had a total of 13 active public breeders across four major crops: four for maize, three for soya bean, one for wheat, and five for rice. This number represents a decrease from 2022, when there were 10 maize, eight soya bean, and five wheat breeders. The current number of public breeders is insufficient, evidenced by the score 4.75 out of 10 for adequacy. However, it is important to keep in mind that, at least for maize and soya bean, most breeding is currently handled by seed companies. Funding for public breeding programs received a score of 6.75 out of 10. Maize and wheat breeding efforts are primarily supported by the International Maize and Wheat Improvement Center (CIMMYT), which works with ZARI to supply germplasm and financial resources. Soya bean breeding activity remains low due to limited funding, whereas rice breeding has benefitted from increased cooperation between the Japan International Cooperation Agency (JICA) and ZARI, including funding and improved facilities. The adequacy of public equipment and infrastructure for breeding programs was rated at 8.75 out of 10. Facilities for maize and soya bean breeding are sufficient, with ZARI providing extensive fields for both rainfed and offseason cultivation, along with laboratories and a screenhouses. Wheat breeding facilities are adequate but require modernization to speed up breeding programs. Rice breeding infrastructure has been significantly upgraded by JICA through new and renovated paddy fields and better-equipped laboratories. Crop-specific ratings can be found in Appendix 1.
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	9.00	9.00	The Zambia Agricultural Research Institute (ZARI) conducts both *in-situ* and *ex-situ* conservation, gathering plants from indigenous crops and their wild relatives. It stores seeds for all crops found in Zambia as well as other SADC member nations. ZARI has sufficient personnel with the expertise to carry out germplasm conservation, characterization, and preservation. The institute's gene bank collaborates with non-governmental organizations (NGOs) to train local communities in managing community-based seed banks, using local methods to maintain and preserve crops. While ZARI generally performs its responsibilities effectively, securing steady funding continues to be a significant challenge. A total of 1,130 accessions of the four crops are conserved: 800 of maize, and 330 of rice. Of these accessions, 71% have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	7.67	8.50	Private seed companies in Zambia are responsible for the production and maintenance of their own Early Generation Seed (EGS), while the Zambia Agricultural Research Institute (ZARI) manages EGS for public varieties. The quality of EGS received a rating of 8.50 out of 10, reflecting consistently high standards across maize, soya bean, and wheat seeds. This high quality is attributed to robust quality control measures and strong demand from farmers for superior seed. Recent improvements in rice EGS quality can be linked to capacity building initiatives by JICA targeting rice breeders, as well as enhanced field inspection methods employed by the National Seed Authority. The adequacy of EGS quantity was rated at 8 out of 10. Maize EGS supply is sufficient to meet both domestic and export requirements, whereas soya bean and wheat EGS support local seed production needs. The availability of rice EGS has increased, due in part to government incentives encouraging seed companies to supply rice seed through the Farmer Input Support Program (FISP) and the introduction of new varieties by ZARI with assistance from JICA. EGS delivery timeliness achieved a score of 9 out of 10, based on the consistent year-round availability of seed for all crops except rice, which experiences occasional shortfalls. Significant progress has been made through JICA's interventions, notably by promoting community-based production of Quality Declared Seed (QDS) and supporting the release of improved varieties with desirable traits, thereby boosting demand for EGS. Further crop-specific ratings are detailed in Appendix 2.
6. Availability of crop varietal choice to farmers	8.78	8.97	In 2024, the market featured 149 varieties across four major crops: 124 maize varieties, 17 soya bean varieties, four wheat varieties, and four rice varieties. Compared to 2022, there was an increase in the number of maize varieties (from 113), soya bean varieties (from 11), and rice varieties (from three). Conversely, the number of wheat varieties declined from 12 during the same period.
7. Utilization of quality commercial seed by farmers	9.46	9.20	In 2024, maize seed production reached 131,782 MT, soya bean seed totaled 10,785 MT, wheat seed amounted to 8,493 MT, and rice seed was at 1,090 MT. These quantities fully satisfy the country's needs for maize and wheat seed, while meeting 36% of soya bean seed and 62% of rice seed requirements.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description
8. Clarity and enforcement of seed import/export regulations	9.00	8.00	The seed importation process is clearly established, with plant import permits obtainable via the Zambia Electronic Single Window (ZESW) online portal. Seed importers are required to secure a license from the Seed Control and Certification Institute (SCCI) and submit a phytosanitary certificate issued by the national plant protection office (NPPO) of the exporting country. Regulatory oversight of seed importation is rigorous and complies with relevant legislation and international agreements governing seed trade. Furthermore, for crop varieties that are easily cultivated in Zambia, applicants are encouraged to seek variety release in the country to replace continued imports. In 2024, seed imports totaled 69,593 MT maize, 165 MT soya bean, 113 MT wheat, and 200 MT rice. Exports were 49,877 MT maize, 320 MT soya bean, and 2,160 MT wheat.
9. Adequacy of agro-dealer networks	6.00	7.50	All registered agro-dealers in Zambia are required to hold a valid licence. In 2024, a total of 2,352 different seed licenses were issued countrywide. The introduction of the ZamPortal Digital Government Online Service has streamlined both seed seller licence registration and agro-dealer registration. In addition, the government's adoption of a 100% e-voucher system for distributing Farmer Input Support Programme (FISP) inputs has expanded private-sector participation and broadened the agro-dealer network nationwide.
10. Availability of seed in small package sizes	1.60	0.48	Among the four priority crops, only 5% of maize seeds and 50% of the rice seeds were sold in small packages of 2 kg or less. The most frequently used package sizes for maize are 5 kg and 10 kg. Soybean and wheat seeds are usually packaged in 25 kg bags, while rice is typically sold in 12.5 kg packages.
11. Status of national seed policy instruments	10.00	8.50	Zambia has established and maintains all key seed policy instruments, which are current and actively enforced. The Plant Variety and Seeds Act (CAP 236), introduced in 1967 and amended in 1995, serves as the foundation for quality control and assurance in the national seed sector. The Plant Breeder's Rights Act (No. 18 of 2007) provides intellectual property protection for plant varieties, though its scope is limited to 10 selected genera and species.[33]
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	9.00	10.00	Zambia belongs to both the COMESA and SADC regions and is fully aligned and follows both the COMESA Seed Trade Harmonization Regulations and the SADC Harmonized Seed Regulatory System.
13. Status of national biosafety frameworks for plant breeding and seed production	7.00	9.50	The Biosafety Act, 2007 (No. 10 of 2007) serves as the principal legislation overseeing agricultural biotechnology in Zambia. This Act is active and regulates the importation of genetically modified organisms within seeds and other agricultural commodities. The biosafety framework is implemented through regulations governing the research, development, application, and utilization of GMOs, as well as the import and export of GMO products, including seeds.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	8.00	8.00	FMSS are currently being integrated into the ongoing seed policy development process. FMSS is acknowledged in the Plant Variety and Seeds Act, Volume 14 of the Laws of Zambia. Small-scale farmers receive training as certified seed growers, and seed regulations are adapted through specific schemes for Quality Declared Seed (QDS), facilitating compliance with established standards. Training, advisory services, and licensing support are provided to enhance seed production. In addition, the government advances FMSS by endorsing community-based seed banks that utilize traditional techniques for seed production. This strategy facilitates equitable sharing of FMSS-developed varieties, which may subsequently be utilized at commercial scales.
15. Adequacy of seed inspection services	8.00	6.33	In 2024, Zambia employed 100 seed inspectors—60 public and 40 private. Seed inspection coverage remains limited relative to the total area of crops planted, indicating a need for more inspectors. Public inspectors working on all crops face transport challenges due to a lack of vehicles. The only digital tool in use is GPS for field identification and area measurement.

33 a group of closely-related species, all presumed to have descended from a single common ancestor.

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description
16. Adequacy of government efforts to combat counterfeit seed	7.00	7.00	Government combats counterfeit seed through the revision of the national Seeds Act by strengthening penalties to counterfeit seed offenses. The national seed association is also implementing the code number verification in conjunction with mobile providers aimed inserting specific codes on seed bags that allow farmers to verify authenticity through apps or mobile services. Above the national seed authority in conjunction with national seed association and the police service are involved in farmer and agriculture field staff education and crack down on illegal seed trade. Counterfeit seed issues mainly affect remote areas.
17. Adequacy of national seed trade association	8.00	7.17	The Zambia Seed Trade Association (ZASTA) serves as the national seed trade organization. ZASTA achieved an overall score of 7.17 out of 10, with sub-scores as follows: managerial ability – 7/10; activity on key seed sector issues – 8/10; governance and democracy – 9/10; member value provision – 6/10; resource mobilization capability – 6/10; and advocacy effectiveness – 7/10.
FINAL ASSPI SCORE	**7.89**	**7.83**	Highest scores: in COMESA: Egypt, 8.13 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

In 2023, Zambia's agricultural sector contributed 3% of the country's GDP and employs three-quarters of the population.[34] While most of the land is suitable for crop production, only 15% is currently under cultivation. Availability of ample water resources presents an opportunity for increased crop production. To sustain the current growth momentum of the seed sector, the following issues must be addressed:

- The proliferation of counterfeit seeds in the market.
- The limited availability of early generation seeds (EGS) for legumes, such as groundnuts and cowpea, and cereals, including sorghum, rice, and millet.
- The limited outreach of seed agro-dealers in rural areas.

Data collection for the ASSPI Zambia report was by:

Brian Chisunka

Senior Seeds Officer, Seed Control and Certification Institute in the Ministry of Agriculture

34 https://www.trade.gov/country-commercial-guides/zambia-agriculture Accessed 16 March 2026.

African Seed Sector Performance Index (ASSPI) Country Brief – ZIMBABWE

OVERVIEW OF THE SEED SECTOR

Zimbabwe's seed industry is in the growth-to-maturity stage, comprising both formal and informal sectors. The informal sector involves NGOs, development agencies, and community seed banks, while the formal sector is regulated by the Seed Services Institute (SSI) under the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development. SSI coordinates variety releases and works alongside the Crop Breeding Institute (CBI), which focuses on breeding research. Maize, sorghum, soya bean, and wheat are the top four crops, making up 78% of harvested field area. Zimbabwe is a member of COMESA and SADC.

Overall country score (out of 10):	7.62

Focus crop	Area harvested (ha)	% of total area harvested to cereals, pulses, and oil crops
Maize	**869,536**	**57%**
Sorghum	**175,839**	**12%**
Soya bean	**37,658**	**2%**
Wheat	**111,044**	**7%**
Total		**78%**

Total arable land:	**4.02 million ha**
Population:	**16,340,822**
Number of farming households:	**3,500,000**
Contribution of agriculture to GDP:	**8.7%**

ASSPI PERFORMANCE

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
1. Quality of variety release and registration process	**9.00**	**9.75**	Zimbabwe's variety release system follows international standards, requiring varieties to satisfy Distinctness, Uniformity, and Stability (DUS) criteria and meet minimum Value for Cultivation and Use (VCU) requirements. VCU trials are conducted over at least two seasons across multiple sites, followed by DUS evaluations. The National Variety Release Committee decides on acceptance based on these criteria. Approved varieties are registered in the national plant variety list and may receive Plant Breeders Rights.
2. Number of varieties released in last 3 years	**5.71**	**6.71**	During the 2022-2024 period, a total of 41 varieties were released: 20 maize, seven sorghum, seven soya bean, and seven wheat varieties.
3. Adequacy of national agricultural research institutes' (NARIs) breeding programs	**5.33**	**6.92**	In 2024, there were 54 active breeders working with four crops across public and private sectors: maize had 28 breeders, sorghum 10, soya bean and wheat had eight each. The overall satisfaction regarding breeder numbers averaged 8.25 out of 10, reflecting recent increases—two more breeders each for maize and wheat, and one additional for sorghum since 2022. Funding for breeding programs received an adequacy score of 5.5 out of 10, mostly because financial support for public breeders remains insufficient. Equipment and infrastructure were rated 7 out of 10, owing to the need for modernized research laboratories. Detailed ratings for each crop are provided in Appendix 1.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
4. Status of the national program coordinating Plant Genetic Resources for Food and Agriculture (PGRFA) activities	7.00	6.00	The Genetic Resources and Biotechnology Institute manages the collection, identification, and conservation of plant genetic resources in Zimbabwe. The institute faces major challenges such as insufficient staffing and limited capacity development, which hinder its ability to fulfill its mandate, particularly with respect to engagement with Community Seed Banks. A total of 2,650 accessions of the four crops are conserved: 280 of maize, and 2,370 of sorghum. Of these accessions, 34% have been duplicated.
5. Adequacy of Early Generation Seed (EGS)	8.92	9.17	Most seed companies in Zimbabwe grow and maintain their own Early Generation Seed (EGS). The companies reported high satisfaction with the amount of EGS produced, giving it a score of 9.25 out of 10, as most companies are able to meet their own requirements. Likewise, the quality of the EGS and its timely delivery also received strong ratings - 9.25 and 9 out of 10, respectively. These high scores reflect that companies plan their production ahead of time and that SSI inspects seed fields at specific growth stages and after harvesting to ensure that proper quality control is maintained. Appendix 1 provides crop-specific ratings.
6. Availability of crop varietal choice to farmers	6.73	7.29	In 2024, there were 90 market varieties of four crops: maize (61), sorghum (8), soya bean (11), and wheat (10). This reflects an increase from 82 varieties the previous year; sorghum decreased from the prior count, while maize, soya bean, and wheat all increased.
7. Utilization of quality commercial seed by farmers	10.00	9.49	In 2024, seed production volumes were as follows: maize seed reached 54,137 MT, sorghum seed was 3,200 MT, soya bean seed amounted to 4,800 MT, and wheat seed totaled 11,229 MT. The supply of seeds fully satisfied national requirements for maize and soya bean seed, 80% for sorghum seed and 77% for wheat seed. Compared to 2022, maize seed production increased from 50,480 MT, but there was a decrease in the output of sorghum seed (down from 4,487 MT), soya bean seed (down from 8,750 MT), and wheat seed (down from 12,459 MT).
8. Clarity and enforcement of seed import/export regulations	7.00	9.00	The procedures for seed importation and exportation are straightforward. The government has set up a One-Stop-Shop for issuing seed import permits, and an online permit management system is expected to become operational soon. In 2024, imports included 1,600 MT of maize seed, 950 MT of sorghum seed, 370 MT of soya bean seed, and 492 MT of wheat seed. These figures represent an increase from 2022, when imports were 651 MT of maize seed, 350 MT of soya bean seed, and 10.2 MT of wheat seed, but a decrease from the 987 MT of sorghum seed recorded during that period. Export volumes in 2024 reached 2,191 MT of maize seed, 405 MT of soya bean seed, and 394 MT of wheat seed.
9. Adequacy of agro-dealer networks	7.00	8.00	In 2024, SSI records reflected 960 registered agro-dealers across Zimbabwe, mainly in agricultural zones.
10. Availability of seed in small package sizes	1.26	1.20	Among the four main crops, 15% of maize seed and 20% of sorghum seed were sold in packages weighing 2 kg or less.
11. Status of national seed policy instruments	9.00	8.29	Zimbabwe lacks a national seed policy and relies on the *National Development Strategy 1: 2021-2025* to guide its seed sector. Resource constraints have delayed policy development. Key regulations include the Seed Act (regulating production), Plant Breeders' Rights Act (protecting varieties), Seed Regulations of 1971 (setting quality standards), and the Seed (Certification Scheme) Notice, 2000 (governing variety certification), which aligns with COMESA's 2014 harmonization rules.
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations	8.00	10.00	Zimbabwe is a member of both COMESA and SADC. The country has fully implemented Statutory Instrument 142 (of 2016), which amends national seed regulations to align with the COMESA Seed Trade Harmonization Regulations. In 2021, Zimbabwe acceded to the SADC Harmonized Seed Regulatory Systems (HSRS).
13. Status of national biosafety frameworks for plant breeding and seed production	8.00	9.00	Agricultural biotechnology in Zimbabwe is regulated by the National Biotechnology Authority (NBA) Act of 2006 [Chap. 14:31]. The framework is operational.
14. Status of Farmer-Managed Seed Systems (FMSS) in national seed policy instruments	5.00	5.00	The FMSS regulatory framework is under development. FMSS in Zimbabwe are relevant mostly to traditional grains and legumes but are rarely used with reference to maize, where hybrid seed accounts for 90% of production.

2nd Report on Status of Seed Sector in Africa (2025) Scoring: 0-<2 | 2-<4 | 4-<6 | 6-<8 | 8-10

Indicator	2023 Score (out of 10)	2025 Score (out of 10)	Description of performance
15. Adequacy of seed inspection services	8.00	6.67	In 2024, Zimbabwe had 113 seed inspectors—25 public and 88 private—monitored by the SSI to ensure compliance with OECD Seed Schemes. Transport capacity for public inspectors remains a constraint; however, the introduction of e-certification has improved inspection effectiveness.
16. Adequacy of government efforts to combat counterfeit seed	8.00	8.00	Seed industry regulations impose penalties for violating quality standards. Key measures include licensing seed sellers, monitoring seed distribution, nationwide market surveillance by authorities and police, using tamper-proof labels per OECD guidelines, evaluating parental line samples before production, and post-control checks on certified seeds.
17. Adequacy of national seed trade association	8.67	9.00	The Zimbabwe Seed Association (ZSA) includes both seed companies and distributors among its members. ZSA received an overall score of 9.00, a slight increase from 2023, broken down into sub-scores as follows: 10/10 for managerial ability, 10/10 for involvement in key seed sector issues, 9/10 for governance and democracy, 9/10 for member value, 8/10 for resource mobilization, and 8/10 for advocacy effectiveness.
FINAL ASSPI SCORE	**7.21**	**7.62**	Highest scores: in COMESA: Egypt, 8.13 in SADC: South Africa, 8.64 in Africa: South Africa, 8.64

PRIORITY INTERVENTIONS

Zimbabwe's formal seed system is currently in the growth-to-maturity phase, marked by well-developed breeding initiatives, a comprehensive seed policy framework, an active segment of small- and medium-sized seed enterprises, and an extensive agro-dealer network. The sector is driven primarily by established private firms — both multinational and local — supported by robust breeding programs and an effective regulatory framework.

Despite its strengths, the sector faces challenges arising from deteriorating macroeconomic conditions, which have reduced funding for certain government-supported services. To safeguard the sector's stability and progress, it is essential to prioritize the following actions:

- Enhance financial resources allocated to public breeding programs to support the ongoing development and dissemination of improved seed varieties, especially for non-hybrid varieties.
- Re-evaluate the impact of government subsidy programs for seeds and agricultural inputs, ensuring these interventions do not undermine the efficiency and competitiveness of the seed market.

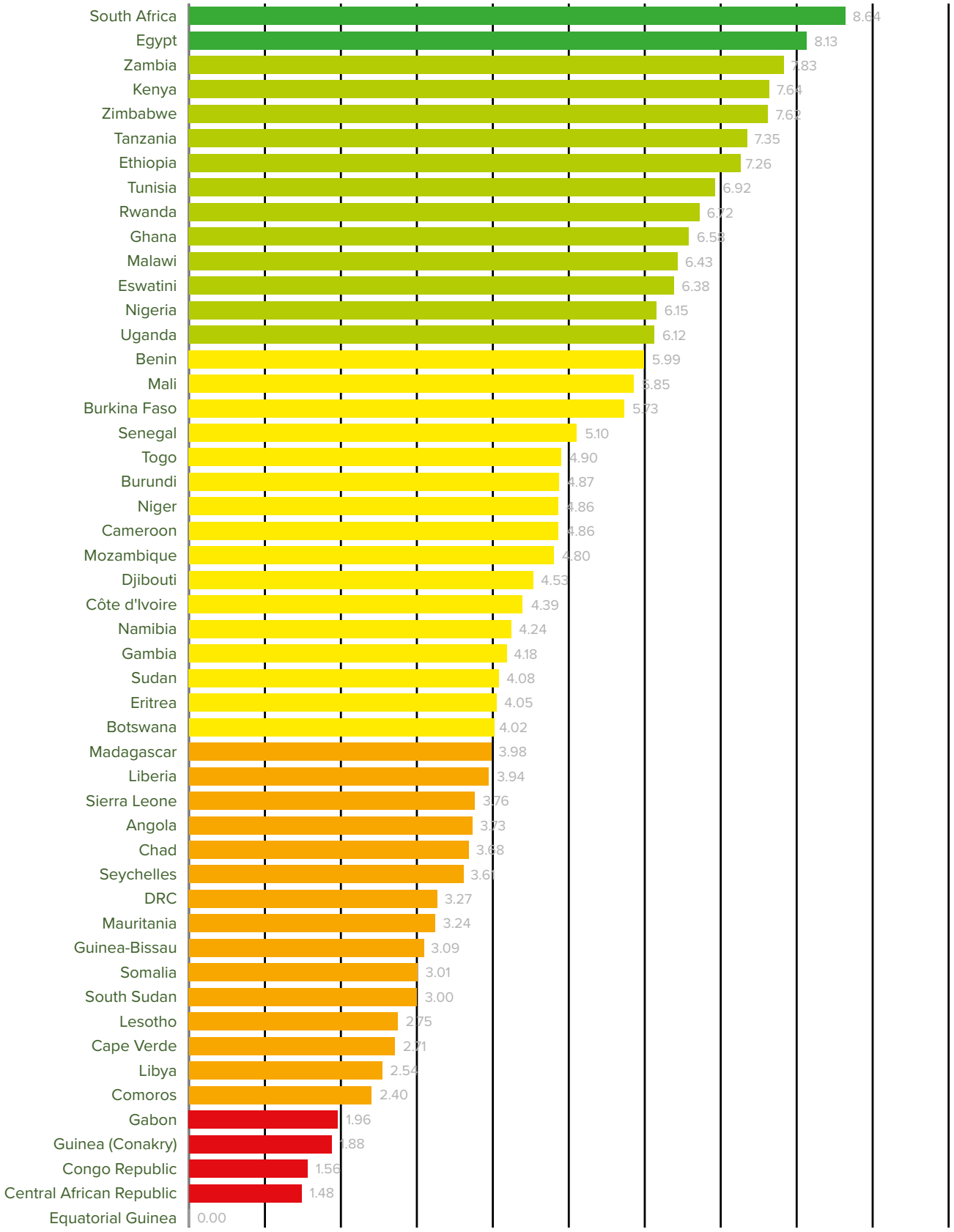
Data for the ASSPI Zimbabwe report was collected by:

Edmore Mtetwa

Head of the Seed Services Institute in the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development.

Section 4: ASSPI Findings by Indicator

FIGURE 2: OVERALL ASSPI COUNTRY SCORES, 2025 (SCORE OUT OF 10)



This section provides a comprehensive summary of the African Seed Sector Performance Index (ASSPI) findings by indicator, presenting country rankings and emerging trends based on the 2025 results. For each indicator, the section first describes the overall pattern of change since 2023, then highlights by name those countries that experienced large score changes, defined as changes of more than 2.5 points. The analysis covers overall country scores and detailed performance on individual indicators, drawing lessons from recent progress and challenges in seed system development across the continent. It is worth noting that, in 2025, some scores improved or declined as a result of refinements made to the indicator, including the addition of sub-indicators. In subsequent rounds, we anticipate greater data accuracy resulting from enhanced clarity of indicators and their sub-indicators. With the addition of further data points, the pilot phase 2023 data will become less significant, allowing for more meaningful and robust comparisons from 2025 data.

Overall ASSPI Country Scores

Figure 2 presents overall ASSPI country scores on a 10-point scale, calculated as the simple average of the 17 indicator scores. South Africa and Egypt led the rankings, achieving "excellent" scores of 8.64 and 8.13, respectively. Twelve countries attained "good" ratings (6.0–7.9), an increase from eleven in 2023, with Ghana and Tunisia newly joining this group due to notable score improvements: Ghana rose from 5.93 to 6.58, and Tunisia from 5.77 to 6.92. The average score for this group was 6.92, an improvement from 6.74 in 2023. Sixteen countries achieved "fair" scores (4.0–5.9), a decrease from 19 countries in 2023; the average score for this category was 4.78, compared with 5.10 in 2023. The decrease in the number of countries scoring "fair" was offset by an increase in the number scoring "poor" (2.0–3.9), which rose from 13 in 2023 to 15 in 2025; the average score for this group was 3.25, compared with 3.18 in 2023.

Gabon, Guinea (Conakry), Congo Republic, the Central African Republic, and Equatorial Guinea scored below 2.0, highlighting persistent challenges in these countries. In 2023, the three lowest-scoring countries were Congo Republic, Djibouti, and Somalia, all of which fell in the "extremely poor" range (0–1.9).

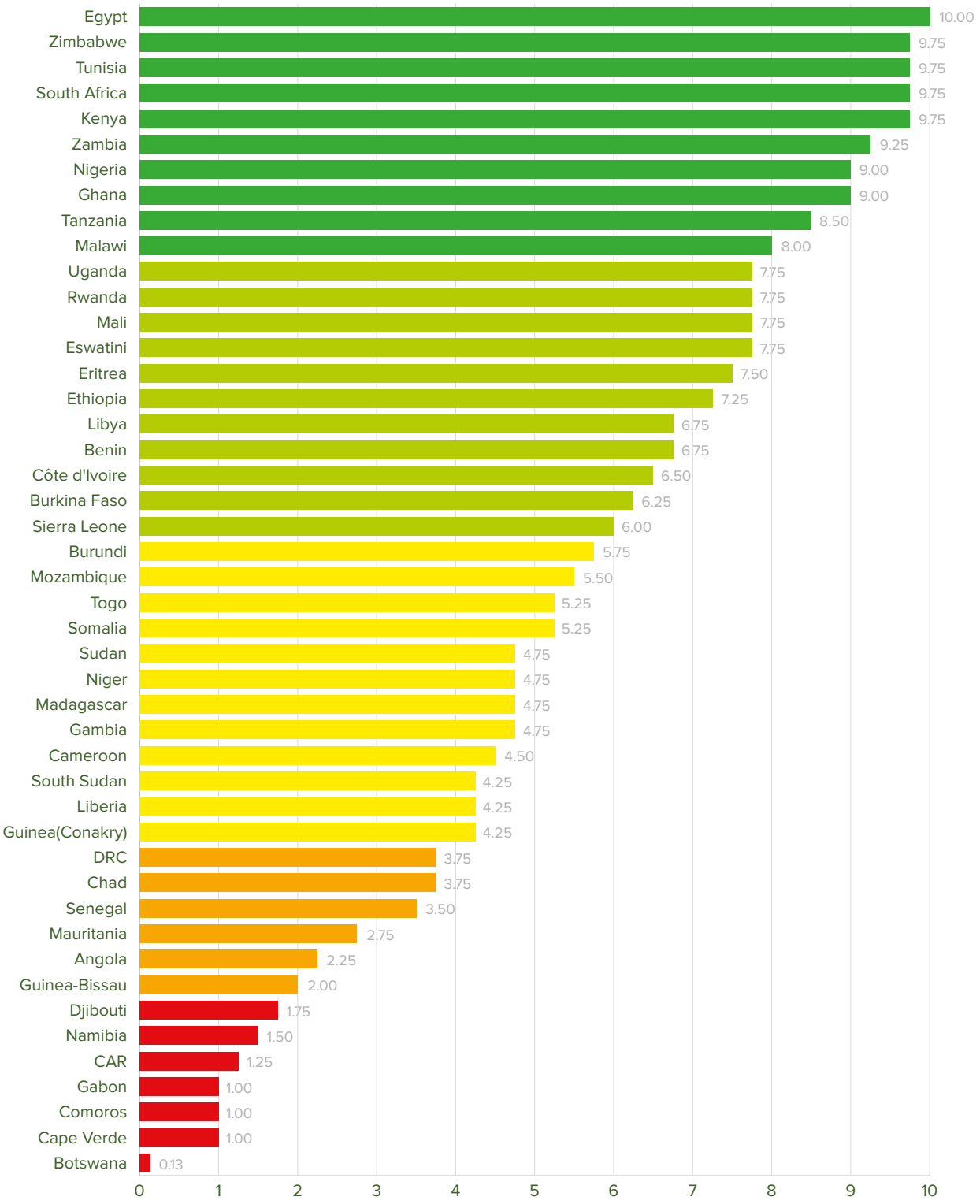
Notable Country-Level Changes Since 2023

Several countries recorded notable improvements in their scores between 2023 and 2025, driven by policy reforms and institutional developments within their seed sectors. At the overall level, Djibouti recorded the largest gain among all 50 countries, with its score rising from 1.35 to 4.53 (a change of +3.18 points). Three additional countries — Somalia, Ethiopia, and Rwanda — are highlighted below for the depth and breadth of the reforms they implemented, which produced large changes (>2.5 points) across multiple individual indicators.

Somalia: Key developments include the passage of the Somalia Agricultural Regulatory and Inspection Services (SARIS) Law No. 32 (2024) and the Seed and Plant Varieties Law No. 35 (2024), as well as the drafting of a National Seed Policy in 2025. Somalia recorded large improvements (>2.5 points) across five indicators: quality of the variety release process (1.0 → 5.25, +4.25), utilization of quality commercial seed by farmers (0.42 → 6.70, +6.28), clarity and enforcement of seed import regulations (2.0 → 6.00, +4.00), completeness of national seed policy instruments (4.0 → 7.25, +3.25), and inclusion of farmer-managed seed systems in policy instruments (1.0 → 4.00, +3.00).

Ethiopia: Ethiopia now implements several seed-related policies, including the 2024 Agricultural and Rural Development Policy, the Plant Variety Release and Registration Directive No. 1065/2025, Provision and Administration of Seed Business Certificate of Competence Directive number 1097/2025, Quality Declared Seed Directive Number 1098/2025, and Service Fee Regulation No. 361/2015. The country has also joined the International Seed Testing Association (ISTA), and its seed laboratory is currently seeking ISTA accreditation. Since 2023, the Ethiopian Agricultural Authority has enforced the Seed Proclamation (No. 1288/2023) and initiated DUS (Distinctness, Uniformity, and Stability) and VCU (Value for Cultivation

FIGURE 3: QUALITY OF THE VARIETY RELEASE AND REGISTRATION PROCESS, 2025 (SCORE OUT OF 10)



Note: The following countries scored zero and are excluded from the chart: Congo Republic, Equatorial Guinea, Lesotho, and Seychelles.

and Use) testing for wheat and barley, with plans to expand these to other priority crops under the COMESA Seed Trade Harmonization Regulations. Ethiopia recorded large improvements (>2.5 points) in three indicators: crop varietal choice available to farmers (3.33 ➔ 6.52, +3.19), alignment of national seed policy instruments with regional regulations (6.0 ➔ 9.0, +3.00), and availability of seed in small package sizes (0.24 ➔ 10.00, +9.76).[35]

Rwanda: Through public-private partnerships enabled by Law No. 14/2016 of 2 May 2016, the Rwanda Agriculture Board (RAB) has assisted two private seed companies in securing public land for potato seed production. Additionally, major seed policy instruments have been enacted and are being implemented. Rwanda recorded a large improvement (>2.5 points) in one indicator: the status of national biosafety frameworks (1.0 ➔ 7.50, +6.50).

Indicator 1: Quality of the Variety Release and Registration Process

Plant variety release is the process in which new varieties undergo tests for distinctiveness, uniformity, and stability (DUS) and value for cultivation and use (VCU). Varieties that perform satisfactorily in these tests are approved for release by the relevant authorities. A vibrant seed sector has a functional variety release system that is well understood by the relevant actors and followed diligently. This indicator measures the extent to which the variety release and registration process is clearly defined, understood, and followed by both public and private breeders. Figure 3 presents country scores for the quality of the variety release and registration process, ranked from highest to lowest.

Between 2023 and 2025, scores on this indicator were broadly mixed, with approximately equal numbers of countries improving and declining. Of the 47 countries with comparable data from both rounds, 40% recorded small changes (0.5 points or fewer), and 49% recorded moderate changes (0.5–2.5 points). Five countries (11%) recorded large changes of more than 2.5 points: Egypt and Somalia improved significantly, while Senegal, Guinea-Bissau, and Comoros experienced large declines.

Ten countries achieved "excellent" scores (8-10): Egypt, Kenya, South Africa, Zimbabwe, Tunisia, Zambia, Ghana, Nigeria, Tanzania, and Malawi. These countries have clear, well-functioning variety release systems with consistent processes. Egypt achieved a perfect score of 10.0, up from 7.0 in 2023 — a large improvement (+3.0 points) reflecting refinements in its regulatory framework. The other nine countries in this group consistently scored above 9.0 across all measured aspects — clarity of processes, adherence to meeting schedules, timely catalog updates, and transparent cost structure.

Eleven countries scored "good" (6 to <8): Rwanda, Uganda, Mali, Eritrea, Ethiopia, Côte d'Ivoire, Benin, Libya, Burkina Faso, Sierra Leone, and Eswatini. While these countries have functional variety release systems, they face occasional delays in updating catalogs or adhering to meeting schedules, and cost transparency remains inconsistent in some cases. Scores in this group were broadly stable between 2023 and 2025, with only small to moderate changes across all eleven countries.

Twelve countries scored "fair" (4 to <6): Variety release processes exist in these countries but face implementation challenges. Somalia recorded a large improvement, rising from 1.0 to 5.25 (+4.25 points) following passage of the Somalia Agricultural Regulatory and Inspection Services (SARIS) Law No. 32 (2024) and the Seed and Plant Varieties Law No. 35 (2024), which established clearer regulatory frameworks. In these countries, release committees may meet irregularly, catalogs are updated inconsistently, and costs are sometimes set arbitrarily.

Six countries scored "poor" (2 to <4): Chad, the Democratic Republic of the Congo, Senegal, Mauritania, Angola, and Guinea-Bissau. These countries have weak variety release systems with significant implementation gaps. For example, in Chad, although variety release regulations exist, the release

35 This large change is due to a refinement in the methods following the pilot studies; as such, it is a reflection of more accurate measurement as opposed to actual change on the ground. See the Methods section and description of the findings for Indicator 10 below for a detailed explanation.

committee meets sporadically, costs vary unpredictably, and the national catalog is rarely updated. Two large declines (>2.5 points) occurred in this group: Senegal fell from 7.0 to 3.5 (-3.5 points), reflecting a deterioration of its previously functional system, and Guinea-Bissau dropped from 6.0 to 2.0 (-4.0 points).

Eleven countries scored "extremely poor" (0 to <2): where variety release processes are unclear and largely nonfunctional. Namibia declined from 4.0 to 1.5 (-2.50 points); while the Seed and Seed Variety Act outlines the process, implementing regulations remain unfinalized. Comoros recorded a large decline, falling from 4.0 to 1.0 (-3.0 points), representing a near-complete breakdown of its variety release system. In the Central African Republic, variety registration began in 2022, but the process lacks clarity, has no functioning release committee, and catalogs are rarely updated.

Four countries have no variety release process at all and scored 0: Congo Republic, Equatorial Guinea, Lesotho, and Seychelles.

Indicator 2: Number of Varieties Released in the Last 3 Years

The number of varieties released is a useful measure of the functioning of the variety development and release system. The greater the number of varieties released in a country, the higher the chances of enhancing smallholders' access to improved seed. In addition to higher yields, new varieties often carry desired traits such as climate resilience, disease and pest resistance, and nutritional enhancements. However, to improve accessibility for farmers, the introduction of new varieties must be accompanied by efforts to ensure adequate seed production and distribution systems. Figure 4 presents the number of varieties released in the last three years by country.

Six countries scored "excellent" (8-10) on this indicator: South Africa, Zambia, Egypt, Nigeria, Burkina Faso, and Mali, reflecting robust variety development pipelines that consistently deliver new options to farmers. Of these, Burkina Faso (+7.15 points), Egypt (+3.64 points), and Nigeria (+3.35 points) recorded large improvements since 2023.

Seven countries scored "good" (6 to <8): Ethiopia, Rwanda, Eswatini, Madagascar, Burundi, Kenya, and Zimbabwe. While these countries have functional variety release systems, there remains scope to expand variety pipelines across all four priority crops.

Six countries scored "fair" (4 to <6): Malawi, Tanzania, Benin, Angola, Libya, and Ghana. Benin recorded a large improvement, rising from 0 to 4.14 (+4.14 points), reflecting a strengthened breeding program and more consistent variety release processes.

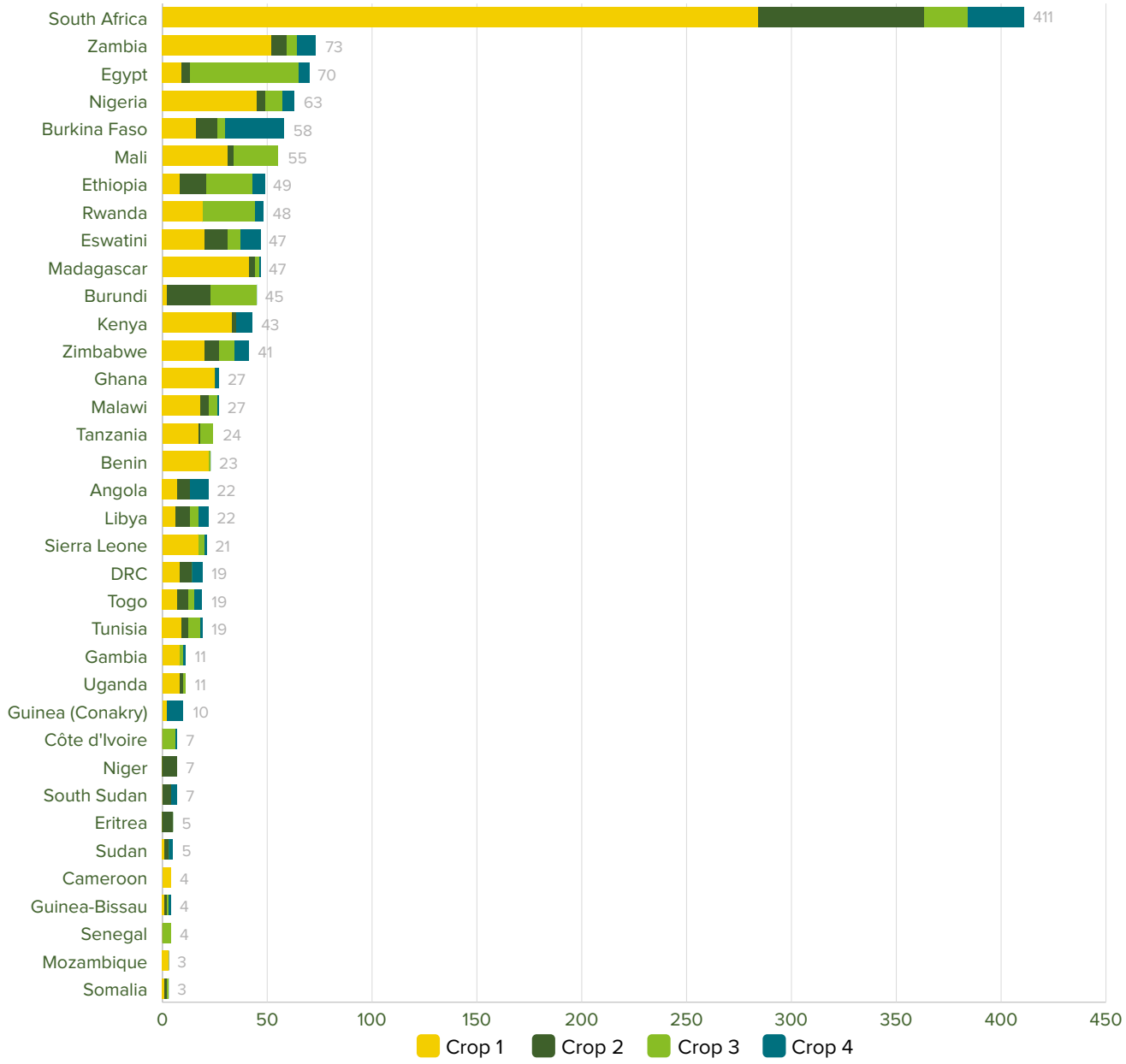
Seven countries scored "poor" (2 to <4): Sierra Leone, the Democratic Republic of the Congo, Togo, Tunisia, The Gambia, Uganda, and Guinea (Conakry). While some countries in this category released a few varieties during the period, a lack of improved varieties severely constrains farmers' access to seed with desirable traits such as drought tolerance or disease resistance.

Ten countries scored "extremely poor" (0 to <2): Cameroon, Côte d'Ivoire, Eritrea, Guinea-Bissau, Mozambique, Niger, Senegal, Somalia, South Sudan, and Sudan, each releasing between one and three varieties.

Fourteen countries released no new varieties at all and scored 0: Botswana, Cape Verde, the Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Equatorial Guinea, Gabon, Lesotho, Liberia, Mauritania, Namibia, and Seychelles, signaling absent or severely constrained breeding pipelines.

Between 2023 and 2025, scores on this indicator improved for a majority of countries with comparable data. Of the 47 countries with data from both rounds, 38% recorded small changes (0.5 points or fewer), and 51% recorded moderate changes (0.5–2.5 points). Five countries (11%) recorded large improvements (>2.5 points): Burkina Faso, Madagascar, Benin, Egypt, and Nigeria. No country recorded a large decline on this indicator. Figure 5 presents the scores based on the number of varieties released in the last three years, ranked from highest to lowest.

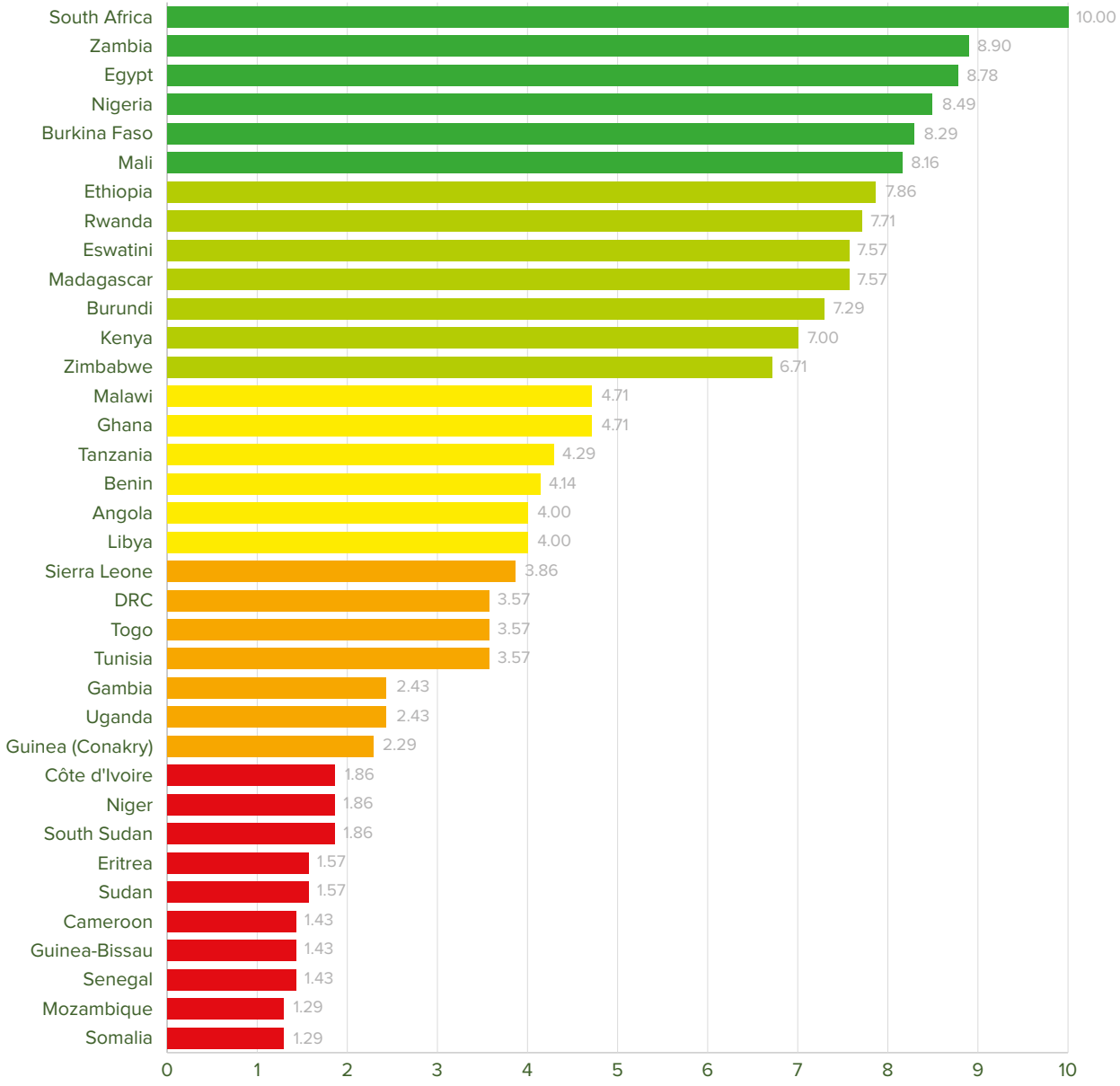
FIGURE 4: NUMBER OF VARIETIES RELEASED IN THE LAST THREE YEARS (2022-2024)



Note: The following countries scored zero and are excluded from the chart: Botswana, Cape Verde, the Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Equatorial Guinea, Gabon, Lesotho, Liberia, Mauritania, Namibia, and Seychelles.

Table 10 shows the number of varieties released by crop in countries that released more than 40 varieties between 2022 and 2024, together with their scores. Table 11 shows the top five countries that released the most varieties for maize, rice, and bean. For maize, the leading five countries were South Africa (284 out of 411 varieties released), Zambia (52 out of 73), Egypt (52 out of 70, a large improvement of +3.64 points), Nigeria (45 out of 63, a large improvement of +3.35 points), and Kenya (33 out of 43). Rice accounted for 22% of varieties released among the priority crops. The leading five countries were Madagascar (41 out of 47, a large improvement of +4.57 points), Mali (31 out of 55), Burundi (22 out of 45), Sierra Leone (17

FIGURE 5: SCORES BASED ON THE NUMBER OF VARIETIES RELEASED IN THE LAST 3 YEARS (SCORE OUT OF 10)



out of 21), and Zambia (9 out of 73). Bean saw the third highest number of variety releases; broken down by country, the top five are Rwanda (19 out of 48), Angola (6 out of 22), Tanzania (6 out of 24), Eswatini (6 out of 47), and Malawi (4 out of 27).

TABLE 10: NUMBER OF VARIETIES RELEASED BY CROP

Country	Number of varieties	Score
South Africa	411	10.00
Zambia	73	8.90
Egypt	70	8.78
Nigeria	63	8.49
Burkina Faso	58	8.29

Country	Number of varieties	Score
Mali	55	8.16
Ethiopia	49	7.86
Rwanda	48	7.71
Eswatini	47	7.57
Madagascar	47	7.57
Burundi	45	7.29
Kenya	43	7.00
Zimbabwe	41	6.71

TABLE 11: TOP FIVE COUNTRIES FOR VARIETY RELEASES, BY CROP AND PERCENTAGE OF THE TOTAL NUMBER OF VARIETIES RELEASED

Country	Maize (% of total)
South Africa	284 (69%)
Zambia	52 (71%)
Egypt	52 (74%)
Nigeria	45 (71%)
Kenya	33 (77%)

Country	Rice (% of total)
Madagascar	41 (87%)
Mali	31 (56%)
Burundi	22 (49%)
Sierra Leone	17 (81%)
Zambia	9 (12%)

Country	Bean (% of total)
Rwanda	19 (40%
Angola	6 (27%)
Tanzania	6 (25%)
Eswatini	6 (13%)
Malawi	4 (15%)

Indicator 3: Adequacy of National Agricultural Research Institutes' (NARIs) Breeding Programs

A functioning seed system needs vibrant breeding programs to develop improved varieties that respond to farmer and consumer needs. This indicator assesses three key aspects of national agricultural research institutes (NARIs): the adequacy of the number of breeders for priority crops, the adequacy of funding for breeding programs, and the quality of breeding infrastructure. In short, the indicator assesses the extent to which public research institutions have adequate human, financial, and physical resources to develop and maintain improved varieties. Figure 6 presents country scores for the adequacy of NARIs' breeding programs, ranked from highest to lowest.

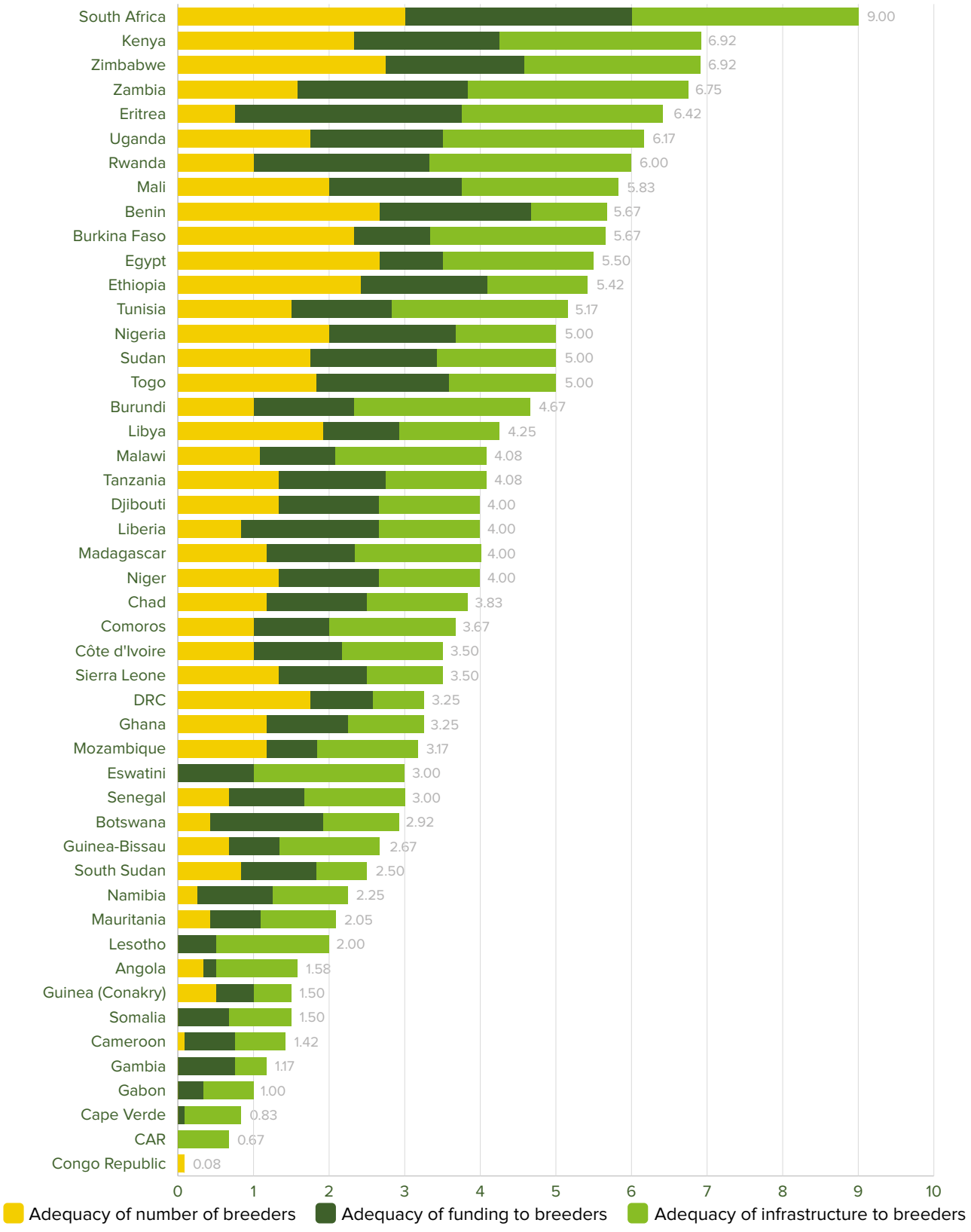
Between 2023 and 2025, the overall pattern on this indicator was one of modest decline, with more countries recording falling scores than improving ones. Of the 47 countries with comparable data, 28% recorded small changes (0.5 points or fewer), 60% recorded moderate changes (0.5–2.5 points), and 13% (six countries) recorded large changes (>2.5 points). Four of the six large changes were declines, reflecting deterioration in breeder capacity, infrastructure, or funding in several countries that had previously performed reasonably well.

Only South Africa scored "excellent" (9.0), with a score of 9.0, reflecting well-resourced breeding programs with adequate numbers of breeders, consistent funding, and modern infrastructure. South Africa's score was unchanged since 2023.

Six countries scored "good" (6 to <8): Kenya, Zimbabwe, Zambia, Eritrea, Uganda, and Rwanda. These countries maintain functional breeding programs, though they rely on a mix of public funding supplemented by donor support. Scores in this group changed by small to moderate amounts between 2023 and 2025.

Seventeen countries scored "fair" (4 to <6), including Mali, Benin, Burkina Faso, Egypt, Ethiopia, Nigeria, Sudan, Djibouti, and Tunisia. In these countries, breeding programs function but face constraints from inadequate and often delayed public funding, leaving them overly reliant on unpredictable donor support. Egypt's decline from 7.58 to 5.50 (-2.08 points) reflects reduced public investment despite strong historical capacity. Two countries in this group recorded large improvements: Djibouti rose from 0 to 4.00 (+4.00 points), establishing basic breeding capacity where none previously existed, and Benin improved from 3.0 to 5.67 (+2.67 points), reflecting investment in its national research programs.

FIGURE 6: ADEQUACY OF NARIS' BREEDING PROGRAMS, 2025 (SCORE OUT OF 10)



Note: Equatorial Guinea and Seychelles scored zero and are excluded from the chart.

Fifteen countries scored "poor" (2 to <4). These countries face serious constraints: too few breeders, obsolete or dilapidated infrastructure, and heavy dependence on external funding. Comoros falls in this group, having improved from 1.83 to 3.67 (+1.84 points). Botswana recorded a large decline, falling from 6.0 to 2.92 (-3.08 points), reflecting infrastructure deterioration and breeder attrition.

Eleven countries scored "extremely poor" (0 to <2): Angola, Somalia, Cameroon, The Gambia, Gabon, Cape Verde, the Central African Republic, Congo Republic, Guinea (Conakry), Equatorial Guinea, and Seychelles. Most have fewer than two breeders per priority crop, erratic donor funding, and deteriorating or absent infrastructure. Available breeders, if any, are often seed technicians or agronomists rather than trained plant breeders. Three countries in this group recorded large changes: Cameroon declined from 4.83 to 1.42 (-3.41 points), Congo Republic fell from 2.67 to 0.08 (-2.59 points), and The Gambia dropped from 3.67 to 1.17 (-2.50 points), all reflecting a loss of breeding capacity. Equatorial Guinea and Seychelles have no active breeding programs for any of the four priority crops.

Indicator 4: Effectiveness of the National Program Coordinating Activities on Plant Genetic Resources for Food and Agriculture (PGRFA)

The conservation of plant genetic resources maintains the genetic diversity of plants with known or potential value for crop improvement by present and future generations. This indicator assesses the existence and functioning of a national program — which may include an institute, department, or agency — mandated to carry out or coordinate activities related to plant genetic resources for food and agriculture. These entities are responsible for the collection, characterization, conservation, and sustainable use of plant genetic resources. They undertake both in-situ conservation in natural habitats and ex-situ conservation in facilities such as national gene banks and botanical gardens. Figure 7 presents country scores for the status of the national PGRFA coordination program, ranked from highest to lowest.

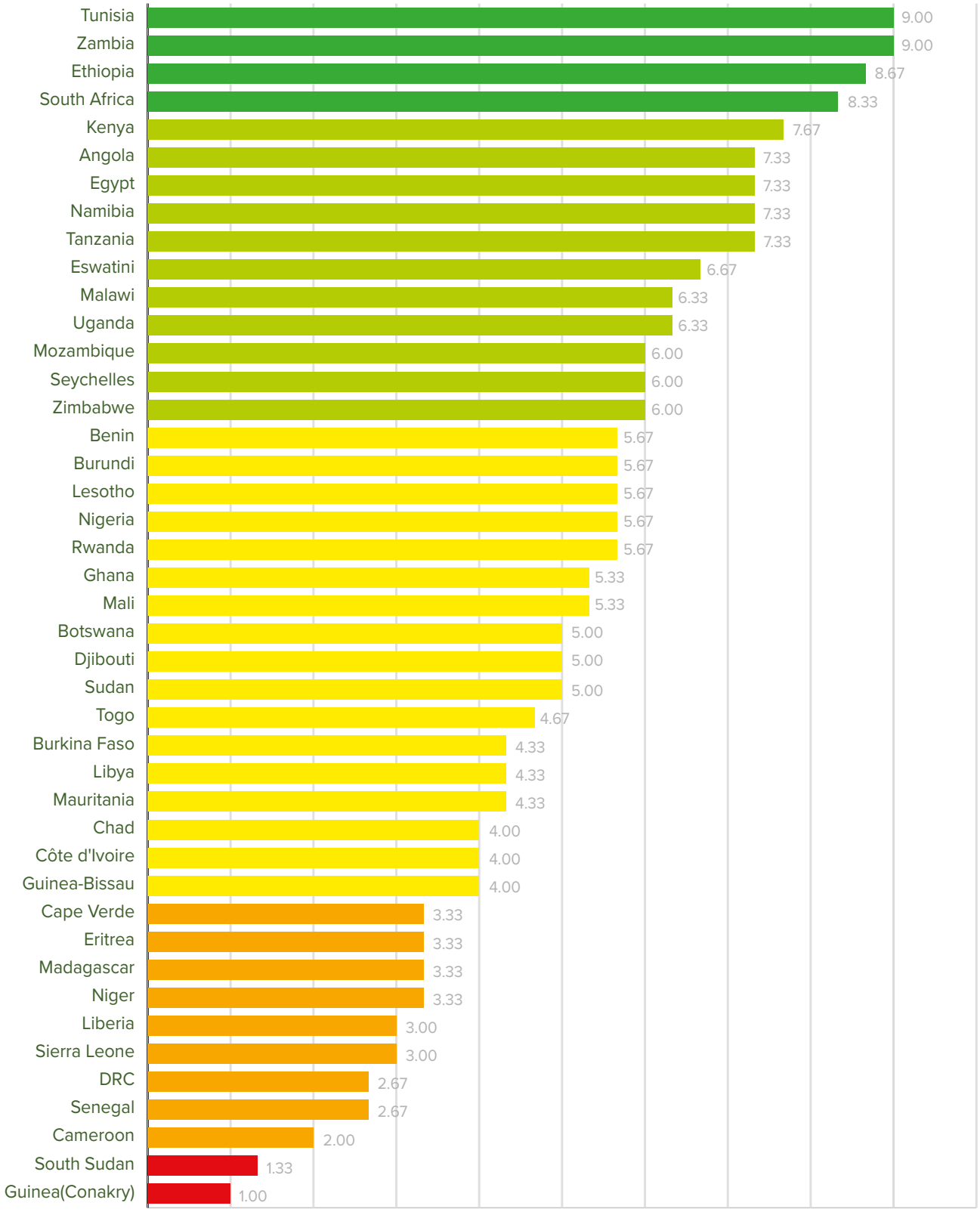
Between 2023 and 2025, this indicator showed the most widespread change of any indicator in the ASSPI, with 40% of comparable countries (19 of 47) recording large changes of more than 2.5 points. Of the remaining 28 countries, 19 recorded moderate changes and 9 recorded small changes. The pattern is divided: a group of countries — largely those with no previous PGRFA program — established basic coordination mechanisms and improved significantly, while a larger group of previously functional programs experienced substantial declines, reflecting funding cuts, staff losses, or suspended activities.

Most African countries (43 of 50) have established programs to coordinate PGRFA, though their effectiveness varies widely. In 15 countries, the entity is a stand-alone or semi-autonomous government institution, for example, the Centro Nacional de Recursos Fitogenéticos (National Center for Plant Genetic Resources) in Angola, the Plant Genetic Resource Research Institute in Ghana, the Ethiopian Biodiversity Institute, the National Botanic Research Institute in Namibia, the Malawi Plant Genetic Resources Centre, or the National Gene Bank Agriculture Research Center in Egypt. In the other 28 countries, the entity is a department or unit in the Ministry of Agriculture or in the National Agricultural Research Institution. The major challenge faced by these entities is the lack of sufficient funding, which limits their capacity to collect, characterize, and conserve plant genetic resources.

Four countries scored "excellent" (8-10): Tunisia (9.0), Zambia (9.0), Ethiopia (8.67), and South Africa (8.33). These countries have fully adequate PGRFA programs with dedicated institutions, systematic collection and conservation activities, and regular collaboration with international gene banks. Tunisia recorded a large improvement (+3.0 points, from 6.0 to 9.0), reflecting strengthened operational capacity and enhanced documentation systems.

Eleven countries scored "good" (6 to <8): Kenya, Egypt, Angola, Namibia, Tanzania, Eswatini, Malawi, Uganda, Mozambique, Seychelles, and Zimbabwe. While these countries have functional PGRFA programs, they face constraints in systematic characterization or documentation activities. Two large changes

FIGURE 7: STATUS OF THE NATIONAL PGRFA COORDINATION PROGRAM, 2025 (SCORE OUT OF 10)



Note: Countries that scored 0 (Central African Republic, Comoros, Congo Republic, Equatorial Guinea, Gabon, The Gambia, and Somalia) are not included in this chart.

occurred in this group: Egypt recorded a large decline, falling from 10.0 to 7.33 (-2.67 points), reflecting reduced operational capacity despite strong institutional frameworks, and Mozambique recorded a large improvement, rising from 3.0 to 6.0 (+3.0 points).

Seventeen countries scored "fair" (4 to <6), where PGRFA coordination exists but with notable gaps. This group recorded the largest concentration of large changes of any category, with eight countries experiencing large improvements or declines. Three countries established basic coordination mechanisms where none previously existed: Djibouti rose from 0 to 5.0 (+5.0 points), Libya from 0 to 4.33 (+4.33 points), and Chad from 0 to 4.0 (+4.0 points). Mauritania also improved substantially, from 1.0 to 4.33 (+3.33 points). By contrast, several previously well-performing programs experienced large declines: Burkina Faso fell from 8.0 to 4.33 (-3.67 points). Botswana fell from 8.00 to 5.00 (-3.00 points). Sudan declined from 8.0 to 5.0 (-3.0 points), Côte d'Ivoire dropped from 7.0 to 4.0 (-3.0 points), all reflecting reduced operational effectiveness.

Nine countries scored "poor" (2 to <4): Cameroon, Cape Verde, the Democratic Republic of the Congo, Eritrea, Liberia, Madagascar, Niger, Senegal, and Sierra Leone. Several of these countries recorded large declines: Eritrea fell from 8.0 to 3.33 (-4.67 points), Niger declined from 7.0 to 3.33 (-3.67 points), Senegal dropped from 6.0 to 2.67 (-3.33 points), and Cameroon fell from 5.0 to 2.0 (-3.0 points), all reflecting deteriorated coordination, reduced staffing, or suspended activities.

Nine countries scored "extremely poor" (0 to <2). Two countries scored above zero in this range: Guinea (Conakry) (1.0, a large decline of -4.0 points from 5.0) and South Sudan (1.0, unchanged). In Guinea, PGRFA activities were formerly coordinated by the Foulaya Regional Agricultural Research Center, but the plant genetic resources laboratory now has no staff. South Sudan has no active PGRFA program, though relevant activities are nominally coordinated by the Ministry of Agriculture.

Seven countries have no PGRFA programs and scored 0: the Central African Republic, Comoros (down from 4.0, -4.0 points), Congo Republic (down from 4.0, -4.0 points), Gabon, Equatorial Guinea, The Gambia (down from 5.0, -5.0 points), and Somalia. The four large declines to zero — Comoros, Congo Republic, The Gambia, and Guinea (Conakry) — represent programs that were previously functional but have since ceased operating.

Indicator 5: Adequacy of Early-Generation Seed (EGS)

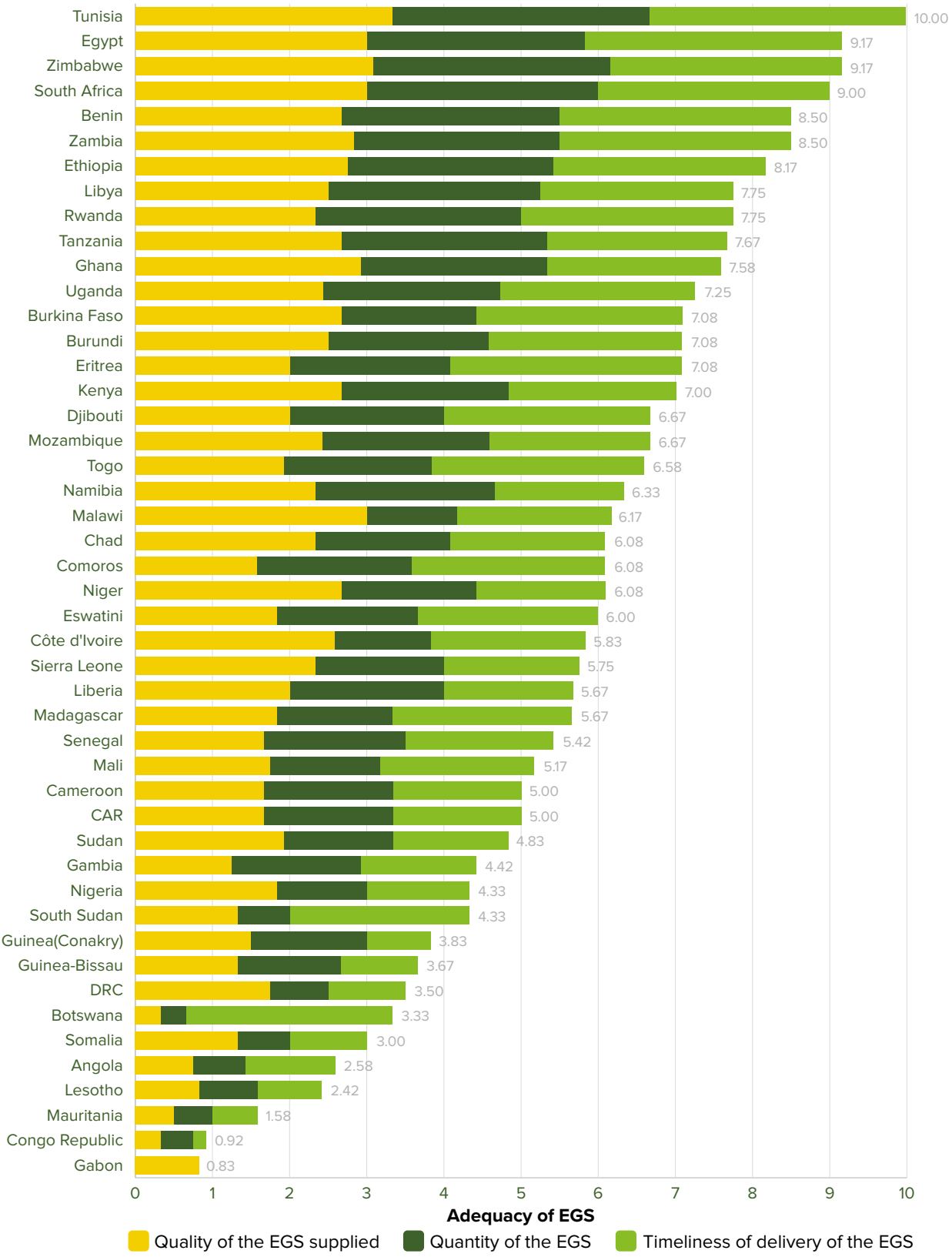
Seed companies use early-generation seed (EGS) — also known as foundation seed or basic seed — to produce the certified seed they sell to farmers. In many African countries, limited access to EGS from public research institutions constrains the ability of seed companies to scale up production. This indicator evaluates three critical aspects of EGS access: the quantity and quality of EGS supplied, and the timeliness of its delivery. The three sub-indicator scores are averaged to generate the composite score. Figure 8 presents country scores for the adequacy of early-generation seed, ranked from highest to lowest.

All three aspects of EGS have a strong positive correlation with the availability of resources for breeding and variety maintenance in the country. Countries with limited resources perform poorly on all three sub-indicators, while countries with well-resourced institutions perform well across all areas.

Between 2023 and 2025, scores on this indicator were broadly stable for the majority of countries, though with notable exceptions in both directions. Of the 47 countries with comparable data, 49% recorded small changes (0.5 points or fewer) and 36% recorded moderate changes (0.5–2.5 points). Seven countries (15%) recorded large changes (>2.5 points): Djibouti, Mozambique, and Comoros improved substantially, while Botswana, Seychelles, Malawi, and Angola experienced large declines.

Seven countries scored "excellent" (8-10): Tunisia (10.0), Egypt (9.17), Zimbabwe (9.17), South Africa (9.0), Zambia (8.5), Benin (8.5), and Ethiopia (8.17). These countries deliver high-quality EGS in sufficient quantities and on schedule, enabling seed companies to reliably scale production. Scores in this group were broadly stable or modestly improved since 2023, with no large changes recorded.

FIGURE 8: ADEQUACY OF EARLY-GENERATION SEED (EGS), 2025 (SCORE OUT OF 10)



Note: Cape Verde, Equatorial Guinea, and Seychelles scored zero and are excluded from the chart.

Eighteen countries scored "good" (6 to <8): Burkina Faso, Burundi, Chad, Comoros, Djibouti, Eritrea, Eswatini, Ghana, Kenya, Libya, Malawi, Mozambique, Namibia, Niger, Rwanda, Tanzania, Togo, and Uganda. Four countries in this group recorded large changes: Djibouti rose from 0 to 6.67 (+6.67 points), establishing EGS production capacity where none previously existed; Comoros improved from 2.33 to 6.08 (+3.75 points); Mozambique improved from 3.08 to 6.67 (+3.59 points); and Malawi declined from 8.75 to 6.17 (-2.58 points), reflecting reduced foundation seed production capacity. Seed companies in the remaining countries in this group report generally adequate access to EGS, though occasional delays or quality variations occur.

Twelve countries scored "fair" (4 to <6). Cameroon, the Central African Republic, Côte d'Ivoire, The Gambia, Liberia, Madagascar, Mali, Nigeria, Senegal, Sierra Leone, South Sudan, and Sudan. EGS access in these countries is constrained primarily by limited quantities, forcing seed companies to ration supplies or pre-order far in advance. Scores in this group changed by small to moderate amounts between 2023 and 2025, with no large changes recorded.

Seven countries scored "poor" (2 to <4): Angola, Botswana, the Democratic Republic of the Congo, Guinea (Conakry), Guinea-Bissau, Lesotho, and Somalia. These countries have severely limited EGS availability. Two large declines occurred in this group: Botswana fell from 6.75 to 3.33 (-3.42 points), reflecting deterioration of its foundation seed system, and Angola declined from 5.33 to 2.58 (-2.75 points).

Six countries scored "extremely poor" (0 to <2). Gabon (0.92), Congo Republic (0.92), and Mauritania (1.58) have extremely limited or unreliable EGS. Three countries scored 0: Cape Verde, Equatorial Guinea, and Seychelles. Seychelles recorded a large decline, falling from 6.17 to 0 (-6.17 points), representing a complete collapse of its foundation seed system. In these countries, EGS is either unavailable or of such poor quality that seed companies cannot rely on it.

Indicator 6: Availability of Crop Varietal Choice to Farmers

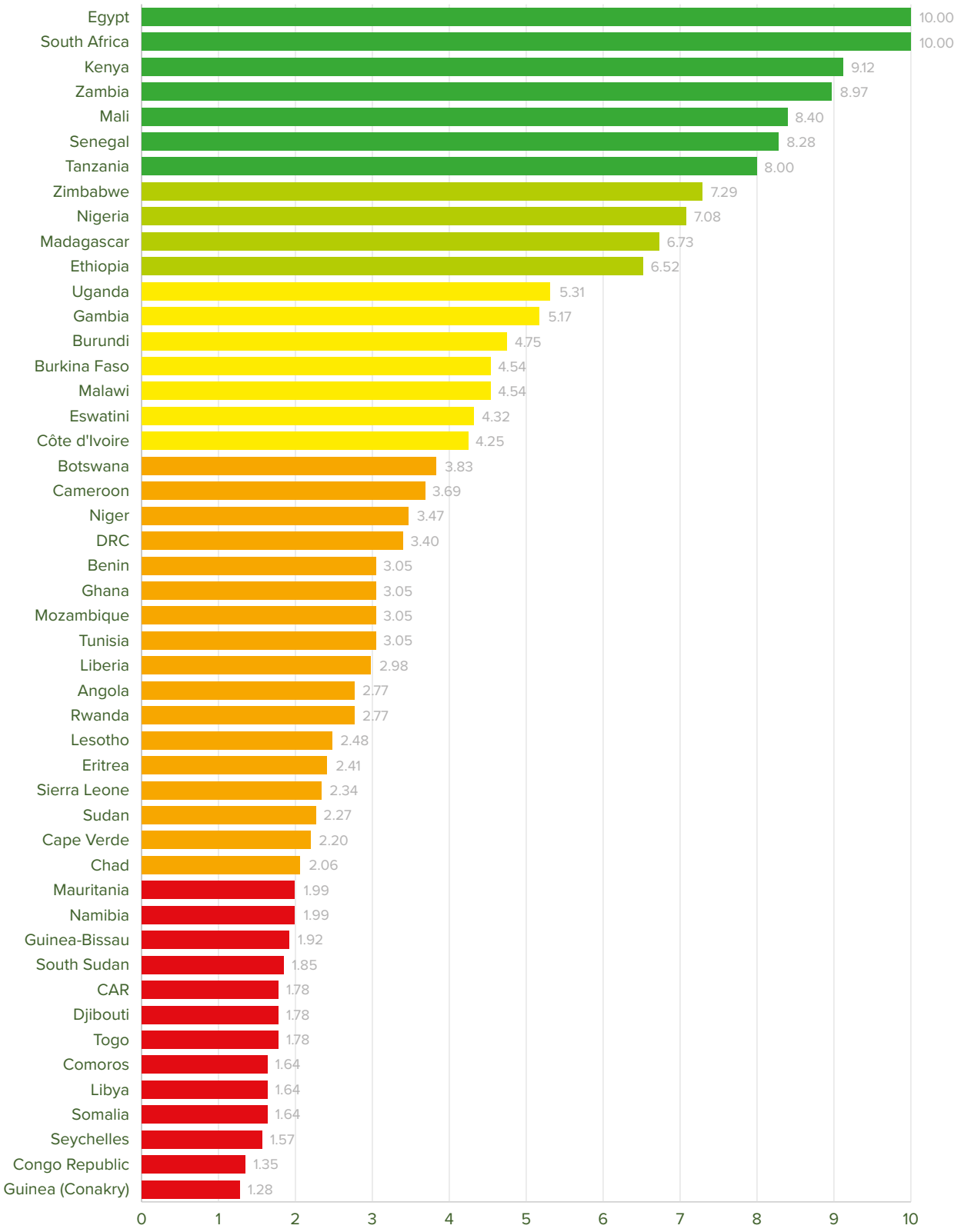
This indicator tracks the number of varieties sold to farmers for the four priority crops in the most recent year for which data are available. As shown in Table 12, the top seven countries with the highest number of varieties sold to farmers are South Africa (1,707), Egypt (294), Kenya (156), Zambia (149), Mali (121), Senegal (115), and Tanzania (101). Broken down by crop, other notable countries with high numbers of varieties on the market for a specific crop are South Africa (1,206), Egypt (217), Zambia (124), and Kenya (103) for maize; Senegal (64) and Mali (54) for rice; and Mali (25) and Kenya (13) for sorghum. These countries offer farmers substantial varietal choice, enabling them to select varieties suited to their specific conditions, such as drought-prone areas or pest-prevalent zones. Figure 9 presents country scores for the availability of crop varietal choice to farmers, ranked from highest to lowest.

Between 2023 and 2025, scores on this indicator were broadly stable, with 43% of comparable countries recording small changes (0.5 points or fewer) and 47% recording moderate changes. Five countries (11%) recorded large changes: The Gambia and Ethiopia improved substantially, while Cameroon, the Democratic Republic of the Congo, and Guinea (Conakry) experienced large declines.

Seven countries scored "excellent" (8-10): South Africa (10.0), Egypt (10.0), Kenya (9.12), Zambia (8.97), Mali (8.40), Senegal (8.28), and Tanzania (8.0). These countries offer farmers the widest varietal choice on the continent. Egypt's improvement of +2.49 points reflects expanded private sector variety development and better seed company distribution networks

Four countries scored "good" (6 to <8): Zimbabwe (7.29), Nigeria (7.08), Madagascar (6.73), and Ethiopia (6.52). Ethiopia recorded a large improvement, rising from 3.33 to 6.52 (+3.19 points), reflecting increased private sector participation in variety development and expanded seed company operations, making more varieties accessible to farmers across diverse agroecological zones.

FIGURE 9: AVAILABILITY OF CROP VARIETAL CHOICE TO FARMERS, 2025 (SCORE OUT OF 10)



Note: Equatorial Guinea and Gabon scored zero and are excluded from the chart.

Seven countries scored "fair" (4 to <6): Uganda (5.31), The Gambia (5.17), Burundi (4.75), Burkina Faso (4.54), Malawi (4.54), Eswatini (4.32), and Côte d'Ivoire (4.25). The Gambia recorded a large improvement, rising from 1.71 to 5.17 (+3.46 points), reflecting enhanced seed company operations and better variety registration processes that expanded options available to smallholder farmers.

Seventeen countries scored "poor" (2 to <4), where varietal choice is severely limited: Angola, Benin, Botswana, Cameroon, Cape Verde, Chad, the Democratic Republic of the Congo, Eritrea, Ghana, Lesotho, Liberia, Mozambique, Niger, Rwanda, Sierra Leone, Sudan, and Tunisia. Two large declines occurred in this group: Cameroon fell from 7.29 to 3.69 (-3.60 points) and the Democratic Republic of the Congo declined from 6.37 to 3.40 (-2.97 points).

Fifteen countries scored "extremely poor" (0 to <2). the Central African Republic, Comoros, the Congo Republic, Djibouti, Guinea (Conakry), Guinea-Bissau, Libya, Mauritania, Namibia, Seychelles, Somalia, South Sudan, and Togo — plus Equatorial Guinea and Gabon, which scored 0. In most of these countries, farmers can access fewer than 10 varieties across the four priority crops. Guinea (Conakry) recorded a large decline, falling from 4.04 to 1.28 (-2.76 points), representing a near-complete collapse of its seed distribution system.

Two countries had no improved varieties available for any of the four priority crops and scored 0: Equatorial Guinea and Gabon.

TABLE 12: DATA AND SCORES FOR COUNTRIES THAT SCORED 8 AND ABOVE IN CROP VARIETAL CHOICE

Country	Number of varieties					Score
	Crop 1	Crop 2	Crop 3	Crop 4	Total	
South Africa	1,206	246	125	130	1,707	10.00
Egypt	36	20	217	21	294	10.00
Kenya	103	29	11	13	156	9.11
Zambia	124	17	4	4	149	8.97
Mali	54	29	25	13	121	8.40
Senegal	29	11	64	11	115	8.28
Tanzania	67	3	13	18	101	8.00

Indicator 7: Utilization of quality commercial seed by farmers

This indicator tracks the utilization of quality commercial seed by farmers, expressed as the ratio of the quantity of commercial seed available for the four priority crops to the national seed requirement for those crops. Table 13 presents seed utilization rates by crop in 2024 for the 46 countries where data were available. Equatorial Guinea, Gabon, Libya, and Seychelles did not have data on seed production, imports, or exports and are listed as missing data (MD) in the table.

For each crop, the numerator consists of commercial seed volume (local production plus imports minus exports), hybrid seed proportion, and OPV replacement frequency; the denominator is the national seed requirement, which depends on cultivated land, seeding rate, and seed replacement rate. The indicator score sums area-weighted seed use rates for four crops. Each rate is available seed volume divided by national requirement, weighted by cultivated land. The final score is out of 10.

TABLE 13: SEED UTILIZATION BY CROP

Country	Crop 1		Crop 2		Crop 3		Crop 4		Score
Angola	maize	9%	bean	5%	soya bean	4%	rice	57%	0.85
Benin	maize	4%	rice	14%	soya bean	6%	cassava	0%	0.42
Botswana	maize	100%	sorghum	0%	cowpea	97%	millet	100%	7.05
Burkina Faso	sorghum	16%	maize	85%	millet	37%	rice	20%	4.11
Burundi	bean	5%	maize	58%	rice	8%	potato	17%	1.69
Cameroon	maize	17%	sorghum	12%	rice	79%	cassava	1%	1.61
Cape Verde	tomato	100%	sweet potato	100%	banana	6%	sugar cane	0%	3.43
CAR	maize	0%	groundnut	0%	bean	19%	sorghum	1%	0.03
Chad	millet	2%	sorghum	6%	groundnut	2%	sesame	2%	0.33
Comoros	banana	0%	cassava	0%	maize	4%	pigeon pea	0%	0.02
Congo Republic	cassava	4%	maize	40%	groundnut	6%	banana	0%	1.15
Côte d'Ivoire	yam	0%	cassava	0%	rice	2%	maize	2%	0.09
Dem Rep of Congo	maize	25%	rice	18%	bean	24%	soya bean	20%	2.39
Djibouti	tomato	100%	onion	100%	chili pepper	100%	okra	54%	9.35
Egypt	wheat	75%	rice	47%	maize	50%	broad bean	63%	6.08
Equatorial Guinea	cassava	0%	banana	0%	groundnut	0%	maize	0%	0.00
Eritrea	sorghum	3%	wheat	27%	millet	1%	chickpea	2%	0.48
Eswatini	maize	57%	groundnut	17%	bean	100%	sweet potato	1%	5.39
Ethiopia	teff	8%	maize	32%	wheat	60%	sorghum	12%	2.70
Gabon	cassava	MD	banana	MD	maize	MD	vegetables	MD	0.00
Gambia	rice	40%	millet	0%	groundnut	5%	maize	88%	2.79
Ghana	maize	62%	rice	67%	soya bean	62%	sorghum	17%	5.75
Guinea (Conakry)	rice	1%	maize	3%	fonio	0%	groundnut	2%	0.13
Guinea-Bissau	rice	35%	maize	100%	millet	97%	cowpea	100%	5.49
Kenya	maize	76%	bean	11%	cowpea	12%	sorghum	72%	5.26
Lesotho	maize	43%	sorghum	32%	wheat	6%	bean	6%	3.50
Liberia	rice	9%	maize	0%	groundnut	3%	cowpea	7%	0.71
Libya	barley	0%	wheat	0%	green peas	0%	broad bean	0%	0.00
Madagascar	rice	7%	maize	11%	bean	5%	groundnut	2%	0.74
Malawi	maize	98%	groundnut	4%	bean	4%	soya bean	9%	6.57
Mali	rice	24%	maize	17%	sorghum	4%	millet	4%	1.00
Mauritania	sorghum	0%	rice	46%	maize	0%	cowpea	0%	1.26
Mozambique	maize	11%	groundnut	4%	rice	11%	cowpea	19%	1.08
Namibia	millet	27%	maize	4%	sorghum	10%	cowpea	100%	2.36
Niger	millet	27%	cowpea	3%	sorghum	5%	rice	39%	1.38
Nigeria	maize	49%	sorghum	9%	rice	46%	cowpea	5%	2.70
Rwanda	bean	3%	cassava	0%	maize	100%	potato	9%	3.10
Senegal	groundnut	99%	millet	52%	rice	55%	maize	100%	7.69
Seychelles	citrus	0%	banana	0%	pawpaw	0%	pineapple	0%	0.00
Sierra Leone	rice	24%	maize	100%	sorghum	0%	groundnut	0%	2.50
Somalia	maize	66%	sorghum	41%	cowpea	34%	sesame	100%	6.70
South Africa	maize	50%	soya bean	34%	sunflower	100%	wheat	76%	5.48
South Sudan	groundnut	57%	sorghum	15%	sesame	20%	maize	82%	2.76
Sudan	sorghum	73%	millet	5%	wheat	100%	groundnut	0%	3.93
Tanzania	maize	31%	rice	2%	bean	0%	sunflower	66%	2.64
Togo	maize	11%	rice	14%	sorghum	0%	soya bean	34%	1.27
Tunisia	durum wheat	66%	barley	56%	soft wheat	32%	triticale	0%	7.29
Uganda	maize	60%	bean	5%	banana	0%	cassava	1%	3.02
Zambia	maize	100%	soya bean	36%	wheat	100%	rice	62%	9.20
Zimbabwe	maize	100%	sorghum	80%	soya bean	100%	wheat	77%	9.49

Between 2023 and 2025, this indicator recorded the second-highest rate of large changes of any indicator in the ASSPI. Of the 44 countries with comparable data from both rounds, 25% (11 countries) recorded large changes of more than 2.5 points, 52% recorded moderate changes, and 23% recorded small changes. The pattern is sharply divided: Somalia and Djibouti recorded very large improvements, while a group of seven countries — including several that previously had strong utilization scores — experienced large declines. Notable large declines include Togo (8.32 → 0.85, -7.47 points), South Africa (10.0 → 5.48, -4.52 points), Eswatini (9.68 → 5.39, -4.29 points), Guinea-Bissau (9.72 → 5.49, -4.23 points), Mauritania (5.43 → 1.26, -4.17 points), Ghana (9.91 → 5.75, -4.16 points), and Eritrea (3.69 → 0.48, -3.21 points). In South Africa, the change is due to declines in maize, soya bean and wheat seed production. In Eswatini, Ghana and Togo, there was a notable increase in land under the four priority crops. In Guinea-Bissau and Mauritania, there was an increase in the area under three of the four priority crops. In Eritrea, there was a change from barley to chickpea, which had low seed production. Notable large improvements include Somalia (0.42 → 6.70, +6.28 points), Djibouti (3.63 → 9.35, +5.72 points), Tunisia (2.48 → 5.87, +3.39 points), and Burkina Faso (1.17 → 4.11, +2.94 points). For Somalia, it was due to huge increase in production of maize, and sorghum seed, while in Djibouti, it was a change of crops from citrus and melon to chili and okra in 2023. In Tunisia, the change was due to a decrease in the production of durum wheat seed. In Burkina Faso, there was a decrease in production of sorghum, millet and rice seed.

In 2024, none of the 46 countries with available data met 100% utilization of quality commercial seed for all four priority crops. Table 14 shows the volumes of seed produced for the four priority crops and the national seed requirement in the countries surveyed by ASSPI. Djibouti met 100% utilization for three of its four priority crops, while Zambia met 100% for maize and wheat, and Zimbabwe met 100% for maize and soya bean. An additional 14 countries met at least 50% of their national seed requirement for at least one crop. At the other end of the spectrum, 28% of the countries (14 out of 50) met less than 25% of the national seed requirement for all four of their priority crops.

Crops with high utilization rates for certified seed

Maize is by far the crop with the highest certified seed utilization rate, exceeding 50% in 20 countries — more than double the next closest crop. For wheat, six countries exceeded 50%; for rice, five countries; and for sorghum, four countries.

Maize: Of the 41 countries that listed maize as a priority crop, 20 met more than 50% of the national requirement for maize seed. These countries span virtually every sub-region of Africa: Southern Africa (Botswana, Eswatini, Lesotho, Malawi, South Africa, Zambia, and Zimbabwe), East Africa (Burundi, Kenya, Rwanda, Somalia, South Sudan, and Uganda), West Africa (Burkina Faso, The Gambia, Ghana, Guinea-Bissau, Senegal, and Sierra Leone), and North Africa (Egypt). Maize is Africa's most widely grown cereal and a dietary staple across these regions. It features prominently in government food security priorities and, in many countries, in subsidized input schemes. This is reinforced by a well-developed private seed sector, with multinational and local seed companies investing heavily in hybrid variety development and distribution. Because saved hybrid seed underperforms, farmers must purchase new seed each season, creating sustained demand and higher utilization rates. Furthermore, improved maize varieties exist for highland, lowland, drought-prone, and humid environments, enabling adoption across diverse climates.

Wheat countries: Nine countries identified wheat as one of the four priority crops. Six of these countries, Egypt, Ethiopia, South Africa, Sudan, Zambia, and Zimbabwe, met more than 50% of the national wheat seed requirements. The countries **are in two distinct zones —** North/Northeast Africa **(Egypt, Sudan, Ethiopia)** and Southern Africa **(South Africa, Zambia, Zimbabwe).** This is reinforced by climate suitability in that wheat requires cooler temperatures and is best suited to high altitude areas. The notable absence of West and Central African countries is due to climatic unsuitability. In addition, the southern Africa region, South Africa, Zambia, and Zimbabwe have large-scale commercial farming sectors that rely heavily on certified seed. Further Egypt and Sudan are major wheat consumers and have strong government programs that boost domestic wheat production, driving high seed utilization. Both countries utilize Nile-fed irrigation systems to support intensive wheat production with high-quality seed inputs.

Rice: Twenty-five countries listed rice as a priority crop. Of these, five — Angola, Cameroon, Ghana, Senegal, and Zambia — met more than 50% of the national requirement for rice seed. These countries span West Africa (Ghana and Senegal), Central Africa (Cameroon), and Southern Africa (Angola and Zambia). Although rice is grown in East Africa, no East African country features in the list of high-utilization countries. Ghana and Senegal have long rice-growing traditions and have benefited from the support of AfricaRice, headquartered in Abidjan, Côte d'Ivoire, which promotes improved rice varieties across the region. All five countries are significant rice importers and have invested in domestic rice production programs, creating policy-driven demand for improved seed. Senegal's irrigated rice systems in the Senegal River Valley, and Ghana's irrigation projects, have enabled adoption of improved high-yielding varieties that require certified seed**.**

Sorghum: Twenty-one countries listed sorghum as a priority crop. Of these, three countries — Kenya, Sudan, and Zimbabwe — met more than 50% of the national sorghum seed requirement. These countries are geographically scattered: East Africa (Kenya), Northeast Africa (Sudan), and Southern Africa (Zimbabwe), with a conspicuous absence of West Africa's Sahel, which is the world's largest sorghum-growing region. Sudan's high utilization reflects the country's significant investment in national sorghum breeding programs, sorghum being its primary staple. Demand for certified sorghum seed is also driven by use in livestock feeding and the brewing industry. The striking absence of Burkina Faso, Mali, Niger, Chad, and Nigeria — the heartland of sorghum cultivation in Africa — from this list points to a major seed system gap. Farmers in the Sahel predominantly use saved or recycled sorghum seed, and improved variety adoption remains very low despite sorghum being the primary food crop in the region. The open-pollinated nature of most sorghum varieties allows farmers to save seed without yield penalty, reducing demand for certified seed**.**

TABLE 14: SEED PRODUCTION AND COMPUTED NATIONAL SEED REQUIREMENTS

Country	Seed Production (in MT)				National Seed Requirements (in MT)			
	Crop 1	Crop 2	Crop 3	Crop 4	Crop 1	Crop 2	Crop 3	Crop 4
Angola	2,757	890	0	0	48,427	19,950	805	240
Benin	690	268	666	4,000,000*	22,807	1,928	11,167	1,492,820,000*
Botswana	117	0	31.5	0	583	36	147	4
Burkina Faso	745	5,273	475	1,135	4,783	6,250	1,284	5,661
Burundi	2,047	4,214	151	13,665	39,213	11,182	1,960	82,086
Cameroon	1,376	630	720	7,000,000*	8,606	5,320	909	1,004,897,500*
Cape Verde	0	24*	0*	0*	0	24*	305,833*	13,088*
Central African Republic	6	2	8	0	2,300	3,314	39	68
Chad	125	159	217	100	5,780	2,514	10,083	5,722
Comoros	0*	0*	0	0	38,302,000*	38,333,333*	22	108
Congo Republic	21,185,500*	-	-	-*	519,330,000*	402	260	10,012*
Côte d'Ivoire	0*	0*	128	0	1,276,812*	2,877,486,667*	10,816	6,008
Dem Rep of Congo	6,412	2,058	2,936	243	25,488	11,250	12,013	1,200
Djibouti	20	18	0.1	0.02	0	1	0	0
Egypt	138,416	19,255	17,589	2,940	184,575	40,736	38,571	4,640
Equatorial Guinea	MD	MD	MD	MD	MD	MD	MD	MD
Eritrea	24	300	3	4	928	1,091	229	249
Eswatini	40	5	72	12*	1,750	345	106	903*
Ethiopia	984	18,938	56,148	536	12,219	58,441	93,352	4,502
Gabon	MD	MD	MD	MD	MD	MD	MD	MD
Gambia	209	-	28	95	639	97	593	176
Ghana	11,766	10,629	1,860	157	25,850	15,928	3,193	918
Guinea (Conakry)	216	48	-	60	33,043	4,903	784	3,694
Guinea-Bissau	244	26	34	1	2,802	347	241	51
Kenya	27,502	1,775	196	501	60,750	16,266	1,663	692
Lesotho	31	0	0	15	3,404	43	1,924	812

Country	Seed Production (in MT)				National Seed Requirements (in MT)			
	Crop 1	Crop 2	Crop 3	Crop 4	Crop 1	Crop 2	Crop 3	Crop 4
Liberia	225	0	0	0	2,618	595	286	170
Libya	0	0	0	0	2,475	22,500	1	0
Madagascar	1,328	328	71	56	18,000	3,067	1,520	3,240
Malawi	15,095	1,047	364	1,703	47,035	31,382	12,133	20,021
Mali	3,684	2,691	193	155	15,648	16,685	4,898	4,365
Mauritania	0	4,900	0	0	1,540	10,660	320	1,125
Mozambique	3,914	424	2,044	657	34,886	11,516	18,290	3,484
Namibia	107	1	5	5	448	161	47	3
Niger	6,048	1,265	552	342	22,682	37,156	11,429	882
Nigeria	61,759	5,935	52,449	6,395	126,576	65,580	114,324	120,859
Rwanda	440	124,244*	5,620	11,802	13,221	482,940,000*	6,848	130,913
Senegal	54,278	1,318	10,622	35,673	54,605	2,554	19,198	2,638
Seychelles	0	0*	0	0	N/A	N/A*	36	N/A
Sierra Leone	4,564	428	0	0	19,094	404	137	1,015
Somalia	549	337	103	314	833	833	300	313
South Africa	32,745	10,071	2,967	12,857	57,830	30,693	2,007	16,843
South Sudan	2,540	550	327	1,450	4,454	3,678	1,613	1,763
Sudan	15,353	288	22,628	397	20,955	5,944	20,160	135,449
Tanzania	20,201	585	93	846	100,399	36,597	21,671	3,869
Togo	1,089	658	1	1,593	10,095	4,553	1,625	13,663
Tunisia	34,100	12,200	1,900	0	36,000	21,667	6,000	433
Uganda	7,240	658	100,320*	22,650,000*	34,572	13,333	250,500,000*	1,666,666,667*
Zambia	131,781	10,785	8,493	1,090	48,876	29,418	2,317	2,078
Zimbabwe	54,137	3,200	4,800	11,229	45,984	5,164	4,011	14,638

* Numbers marked with * represent vegetatively propagated crops, whose volumes are counted in cuttings, not MT.
N/A means that the requirement could not be computed due to a lack of data.

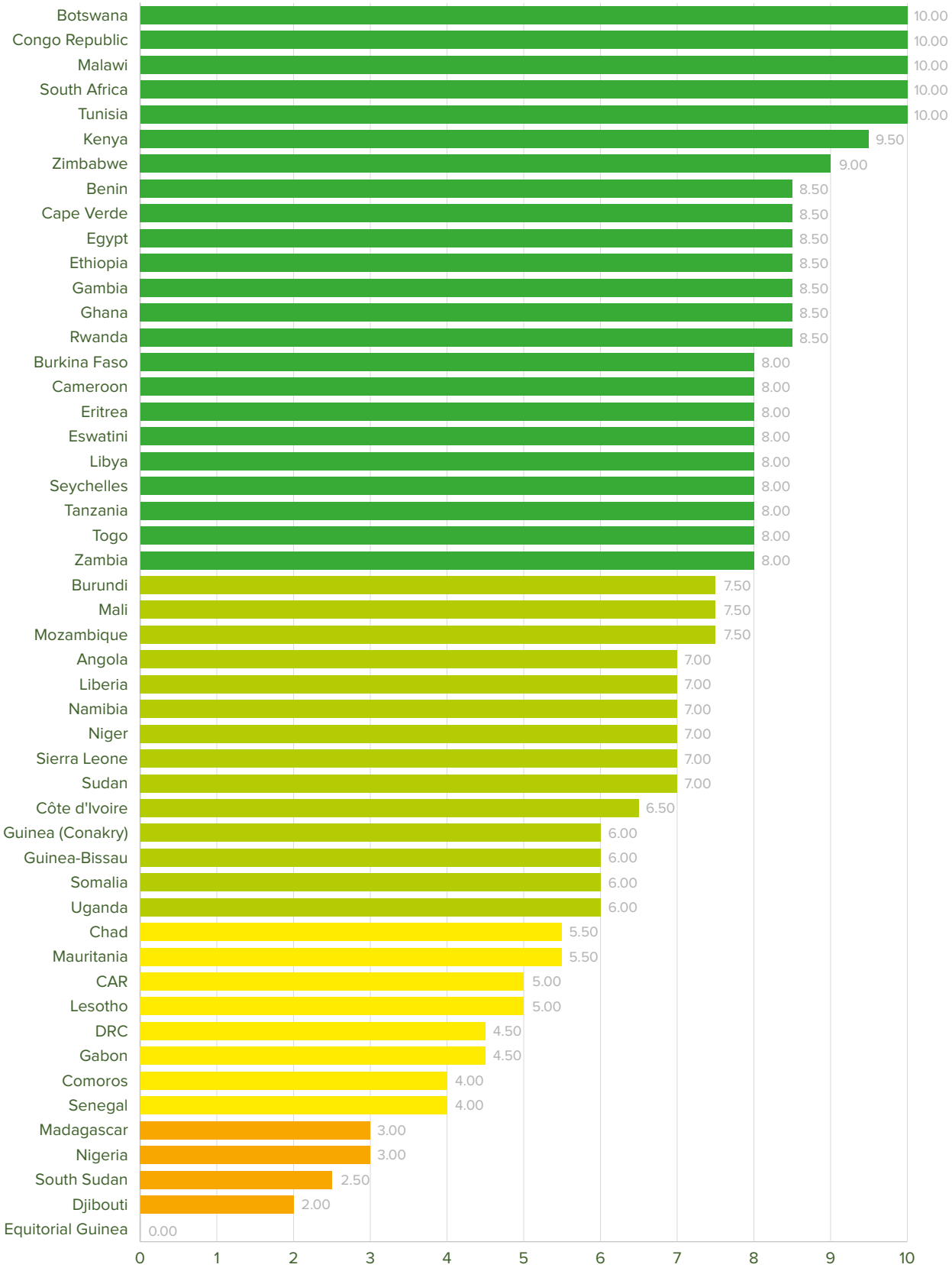
Indicator 8: Clarity and Enforcement of Seed Import/Export Regulations

Efficient seed import processes extend the seed market beyond national borders, allowing seed companies to access wider markets and giving farmers access to additional varieties from the region and beyond. This indicator measures the degree of clarity and consistency in the enforcement of seed import regulations. These regulations provide guidelines on how to obtain import documentation, including import permits, phytosanitary certificates, and the Orange International Seed Lot Certificate, where applicable.

Between 2023 and 2025, scores on this indicator were broadly stable, with 40% of comparable countries recording small changes and 49% recording moderate changes. Five countries (11%) recorded large changes of more than 2.5 points: Congo Republic, Malawi, Eritrea, and Somalia all improved substantially, while Uganda experienced a large decline.

Nearly half the countries surveyed (23 of 50) scored "excellent" (8-10) on the clarity and enforcement of seed import regulations (Figure 10). These include Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Congo Republic, Egypt, Eritrea, Eswatini, Ethiopia, The Gambia, Ghana, Kenya, Libya, Malawi, Rwanda, Seychelles, South Africa, Tanzania, Togo, Tunisia, Zambia, and Zimbabwe. In these countries, seed importation regulations are well-defined, widely understood, and consistently enforced at border points. Three countries in this group recorded large improvements: Congo Republic rose from 5.0 to 10.0 (+5.0 points), Malawi improved from 7.0 to 10.0 (+3.0 points), and Eritrea improved from 5.0 to 8.0 (+3.0 points).

FIGURE 10: CLARITY AND ENFORCEMENT OF SEED IMPORT REGULATIONS.



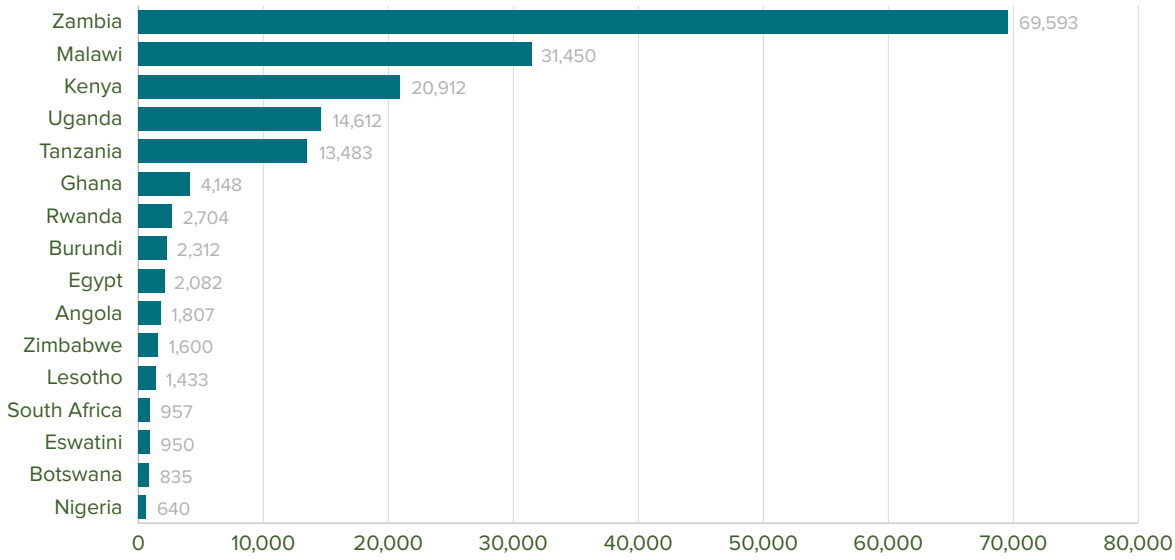
Fourteen countries scored "good" (6 to <8), Angola, Burundi, Côte d'Ivoire, Guinea (Conakry), Guinea-Bissau, Liberia, Mali, Mozambique, Namibia, Niger, Sierra Leone, Somalia, Sudan, and Uganda. While regulations exist and are generally clear, implementation inconsistencies occasionally delay imports, often due to limited capacity among border officials or bureaucratic bottlenecks. Two large changes occurred in this group: Somalia improved from 2.0 to 6.0 (+4.0 points), and Uganda declined from 9.0 to 6.0 (-3.0 points).

Eight countries scored "fair" (4 to <6), the Central African Republic, Chad, Comoros, the Democratic Republic of the Congo, Gabon, Lesotho, Mauritania, and Senegal. These countries face significant implementation challenges, often experiencing delays due to unclear documentation requirements or inconsistent application of regulations.

Four countries scored "poor" (2 to <4): Djibouti, Madagascar, Nigeria, and South Sudan. In these countries, seed import regulations are either unclear or inconsistently applied, creating uncertainty for seed companies. In Nigeria, seed imports and exports involve multiple agencies — including the Federal Ministry of Finance, the Central Bank, and Customs — whose policies often conflict with the Seed Act, complicating the process and having caused some multinational seed companies to leave the country. The other three countries have no formally approved seed regulations defining procedures for seed trade; existing drafts have not yet been approved. Equatorial Guinea scored 0, indicating no functional seed import regulations

In 2024, 37 of the 50 countries imported seed of at least one of the four priority crops. The five leading maize seed importers in 2024 were Zambia, Malawi, Kenya, Uganda, and Tanzania (Figure 11). The five leading exporters are South Africa, Zambia, Zimbabwe, Kenya and Tanzania.

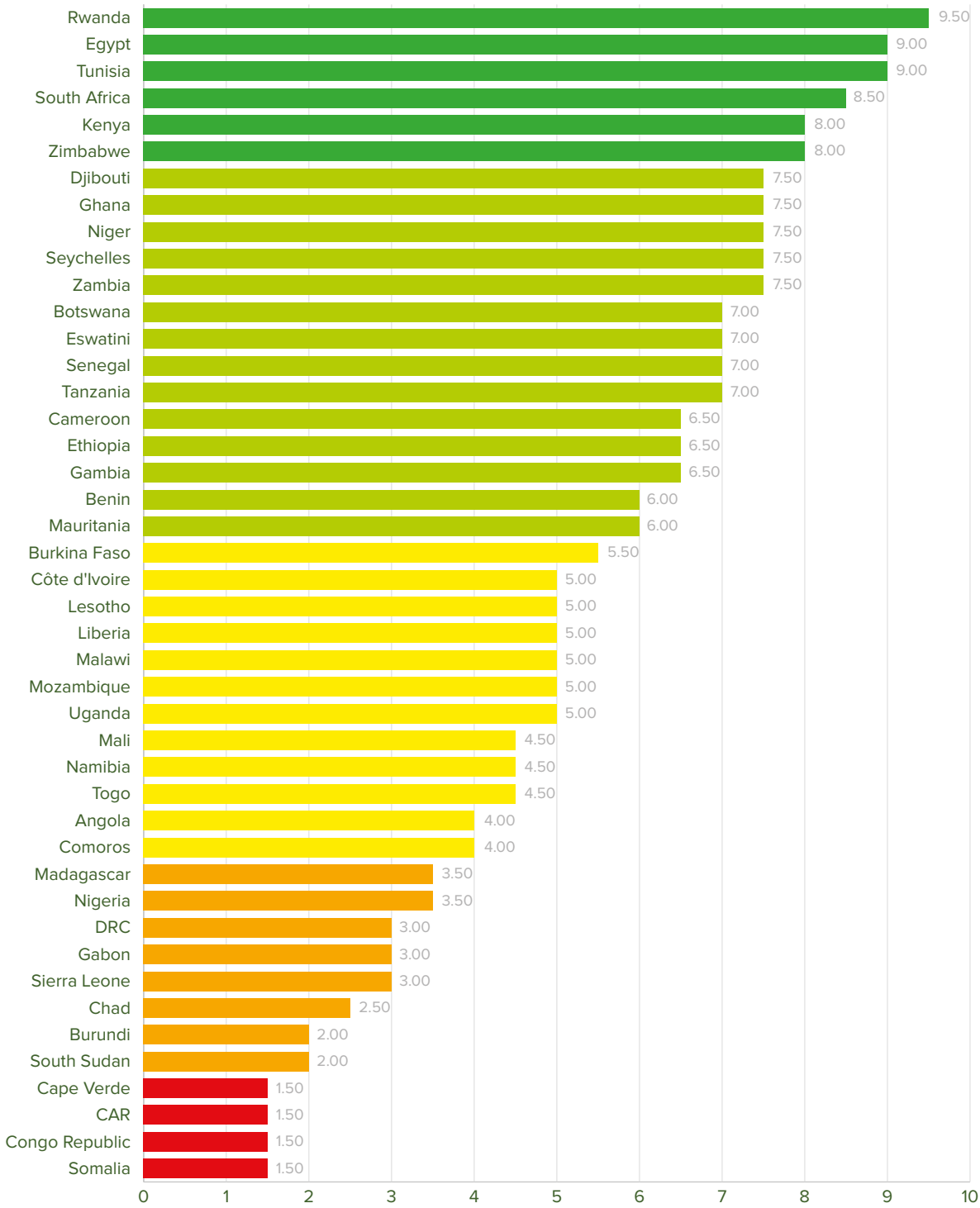
FIGURE 11: LEADING MAIZE SEED IMPORTING COUNTRIES AND VOLUMES IN 2024



Indicator 9: Adequacy of Agro-dealer Networks

Agro-dealers play a key role in expanding the reach of Africa's seed distribution systems, connecting seed companies to individual farmers, especially in hard-to-reach rural areas. They include seed shops, agro-input stores, and agricultural service providers. This indicator measures stakeholder perceptions of how adequately agro-dealer networks serve farmers across different regions of the country. Figure 12 presents country scores for the adequacy of agro-dealer networks, ranked from highest to lowest.

FIGURE 12: ADEQUACY OF AGRO-DEALER NETWORKS, 2025 (SCORE OUT OF 10)



Note: The following countries scored zero and are excluded from the chart: Equatorial Guinea, Eritrea, Guinea (Conakry), Guinea-Bissau, Libya, and Sudan.

Between 2023 and 2025, scores on this indicator changed substantially in a minority of countries, while remaining stable in most. Of the 46 countries with comparable data, 35% recorded small changes and 52% recorded moderate changes. Six countries (13%) recorded large changes: Djibouti and Seychelles each improved notably, Mauritania also recorded a large gain, while Libya, Congo Republic, and Sudan all experienced large declines.

The number of registered agro-dealers ranges widely; however, sheer numbers don't always correlate with adequacy—coverage depends heavily on geographic distribution, with rural areas often underserved even in countries with large networks. Further, in many countries the exact number of agro-dealers is not known, and the figure represents an estimate obtained from extension services. The countries with the highest number of agro-dealers are Tanzania (7,894), Ghana (7,887), Egypt (7,482), South Africa (5,000), Kenya (5,000), Rwanda (2, 871) and Ethiopia (1,992). Cape Verde, The Central African Republic, Equatorial Guinea, Eritrea, Guinea-Bissau, and Somalia have no registered agro-dealers, while in Burundi, The Gambia, Guinea (Conakry), Libya, and Madagascar the number of active agro-dealers (even approximately) is not known.

Six countries scored "excellent" (8-10): Rwanda (9.5), Egypt (9.0), Tunisia (9.0), South Africa (8.5), Kenya (8.0), and Zimbabwe (8.0), signaling agro-dealer networks that function well overall and meet most farmers' needs. These countries have relatively dense networks with good geographic coverage, including in rural areas. Scores in this group were broadly stable since 2023, with no large changes recorded.

Fourteen countries scored "good" (6 to <8): Benin, Botswana, Cameroon, Djibouti, Eswatini, Ethiopia, The Gambia, Ghana, Mauritania, Niger, Senegal, Seychelles, Tanzania, and Zambia. While these countries have functional networks, coverage gaps persist in remote rural areas. Three large improvements occurred in this group: Djibouti rose from 4.0 to 7.5 (+3.5 points), Seychelles improved from 4.0 to 7.5 (+3.5 points), and Mauritania increased from 3.0 to 6.0 (+3.0 points).

Twelve countries scored "fair" (4 to <6): Angola, Burkina Faso, Comoros, Côte d'Ivoire, Lesotho, Liberia, Malawi, Mali, Mozambique, Namibia, Togo, and Uganda. Agro-dealer networks exist in these countries but are concentrated in urban areas or specific regions, leaving rural farming communities underserved. Scores in this group changed by small to moderate amounts since 2023, with no large changes recorded.

Eight countries scored "poor" (2 to <4), including Burundi, Chad, Democratic Republic of the Congo, Gabon, Madagascar, Nigeria (down 2.10 points from 5.60), Sierra Leone, and South Sudan. These countries have limited agro-dealer presence.

Ten countries scored "extremely poor" (0 to <2): Four of these — Congo Republic, Cape Verde, the Central African Republic, and Somalia — scored above zero but below 2.0. Of these, Congo Republic recorded a large decline, falling from 5.0 to 1.5 (-3.5 points).

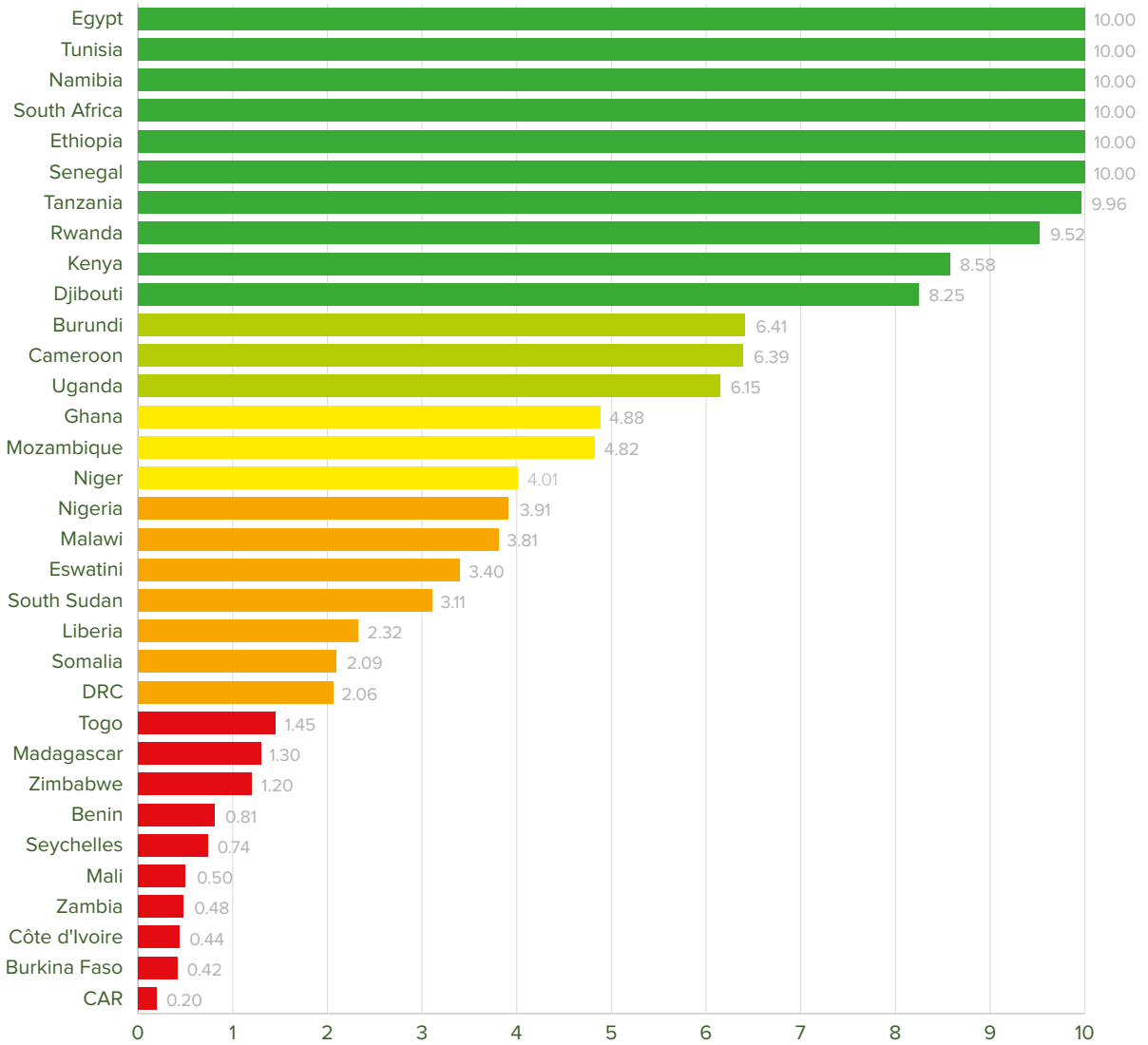
The remaining six countries scored 0, indicating no functional formal agro-dealer networks: Equatorial Guinea, Eritrea, Guinea-Bissau, Guinea (Conakry), Libya, and Sudan. Two of these represent large declines: Libya fell from 7.0 to 0 (-7.0 points) and Sudan dropped from 3.0 to 0 (-3.0 points). In countries scoring 0, farmers must rely on informal sources or direct purchases from limited outlets, severely constraining access to quality seed.

Indicator 10: Availability of Seed in Small Package Sizes

Most farmers in Sub-Saharan Africa operate on a small scale, so making seed available in small — and therefore more affordable — packages is an important way to increase certified seed adoption among this group. This indicator measures the percentage of commercial seed sold in packages of 2 kg or less for the four priority crops. Figure 13 presents country scores for the availability of seed in small package sizes, ranked from highest to lowest.

Between 2023 and 2025, this indicator showed widespread large changes, with 21% of comparable countries (9 of 42) recording changes of more than 2.5 points. Of these nine, eight were large improvements and only one — Seychelles — was a large decline. The pattern of large improvements reflects an important methodological clarification applied in 2025: countries where larger standard package sizes demonstrably meet the needs of smallholder farmers (such as Egypt, Senegal, South Africa, and Tunisia) now receive credit for this, even where no seed is sold in packages of 2 kg or less. This accounts for several countries moving from a score of 0 in 2023 to 10 in 2025.

FIGURE 13: AVAILABILITY OF SEED IN SMALL PACKAGE SIZES, 2025 (SCORE OUT OF 10)



Note: The following countries scored zero and are excluded from the chart: Cape Verde, Chad, Comoros, Equatorial Guinea, Eritrea, The Gambia, Guinea (Conakry), Guinea-Bissau, Lesotho, Mauritania, Sierra Leone, and Sudan. Countries with missing data (Angola, Botswana, Congo Republic, Gabon, and Libya) are also excluded.

In nearly half (24) of the 50 countries, less than 30% of the seed for the four priority crops is sold in packages of 2 kg or less. In some cases, the absence of small packages is not necessarily a problem, as the available package sizes — even if larger — do meet the needs of most farmers. In several countries, standard package sizes are set by government. In Egypt, the minimum allowed package size is 5 kg. In Ethiopia, the government sets standard package sizes for each crop: 12.5 kg for maize, 50 kg for wheat, 15 kg for teff, and 10 kg for sorghum, although some programs are promoting smaller packages. In Senegal,

the standard sizes are 50 kg for groundnut, 40 kg for both rainfed and irrigated rice (80 kg for irrigated), 16 kg for maize, and 4 kg for millet. In Tunisia, seed for the four priority crops is available in 50 kg packages, which meets the needs of most farmers. In South Africa, the limited availability of small packages is not due to government regulation but to the structure of the farming sector: the private sector sells less than 5% of OPV maize and less than 1% of hybrid maize in small packages, while soya bean, sunflower, and wheat seed is not sold in packages of 2 kg or less, as most production is carried out by large-scale commercial farmers. Egypt, Tunisia, Senegal, and South Africa all received a score of 10 in 2025, reflecting the fact that, while no seed for their priority crops is available in packages of 2 kg or less, the standard package sizes in use do meet the needs of most farmers in those countries.

Ten countries scored "excellent" (8-10): Egypt (10.0), Ethiopia (10.0), Namibia (10.0), Rwanda (9.52), Senegal (10.0), South Africa (10.0), Tanzania (9.96), Tunisia (10.0), Djibouti (8.25), and Kenya (8.58). Six of these countries recorded large improvements since 2023: Egypt, Senegal, South Africa, and Tunisia all rose from 0 to 10.0 (+10.0 points each), reflecting the methodological recognition that their standard package sizes meet smallholder needs; Ethiopia improved from 0.24 to 10.0 (+9.76 points); and Djibouti improved from 0.12 to 8.25 (+8.13 points). Namibia, Rwanda, Tanzania, and Kenya were already in the "excellent" range in 2023 and recorded only small changes.

Three countries scored "good" (6 to <8): Burundi (6.41), Cameroon (6.39), and Uganda (6.15). Cameroon recorded a large improvement, rising from 2.50 to 6.39 (+3.89 points), reflecting expanded availability of small packages. Burundi and Uganda also improved since 2023, though by moderate amounts.

Three countries scored "fair" (4 to <6): Ghana (4.88), Mozambique (4.82), and Niger (4.01). Mozambique recorded a large improvement, rising from 0.63 to 4.82 (+4.19 points), reflecting a significant expansion in the availability of small packages.

Seven countries scored "poor" (2 to <4): the Democratic Republic of the Congo (2.06), Eswatini (3.40), Liberia (2.32), Malawi (3.81), Nigeria (3.91), Somalia (2.09), and South Sudan (3.11). Seed packaging in these countries remains oriented toward larger commercial operations, limiting access for smallholder farmers. Malawi improved moderately, from 1.71 to 3.81 (+2.10 points).

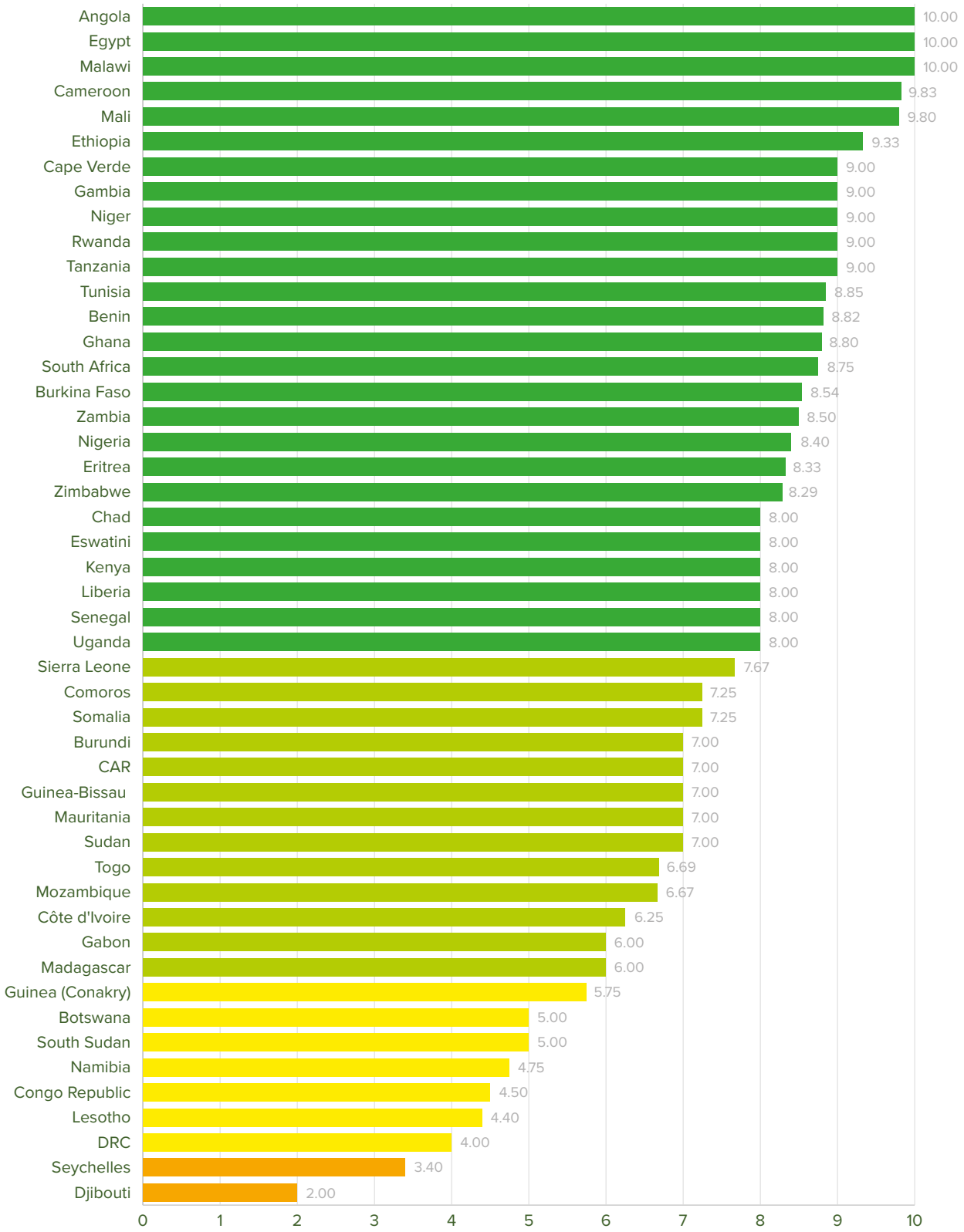
Twenty-two countries scored "extremely poor" (below 2.0), of which ten scored above zero (with less than 10% of seed sold in small packages) and twelve scored 0. Of the ten countries with scores above zero, Seychelles recorded a large decline, falling from 4.47 to 0.74 (-3.73 points). The Central African Republic's score also fell, from 2.10 to 0.20 (-1.90 points), though this is a moderate change. The twelve countries scoring 0 are: Cape Verde, Chad, Comoros, Equatorial Guinea, Eritrea, The Gambia, Guinea (Conakry), Guinea-Bissau, Lesotho, Mauritania, Sierra Leone, and Sudan. In all countries scoring extremely poor or zero, smallholder farmers are forced to purchase unaffordable large packages, split packages informally — risking quality degradation — or forgo certified seed entirely. Five countries did not have data on seed sold in small packages and are listed as missing data (MD): Angola, Botswana, Congo Republic, Gabon, and Libya.

Indicator 11: Completeness of Relevant National Seed Policy Instruments

Well-functioning formal seed sectors are underpinned by clearly defined legal instruments that are regularly updated. This indicator tracks the status of six key policy instruments: seed policy, seed law, seed regulations, plant variety protection (PVP), phytosanitary regulations, and biosafety regulations. Figure 14 presents country scores for the status of national seed policy instruments, ranked from highest to lowest.

Between 2023 and 2025, scores on this indicator were mixed, with a slight bias toward decline. Of the 47 countries with comparable data, 28% recorded small changes (0.5 points or fewer) and 60% recorded moderate changes. Six countries (13%) recorded large changes: Eritrea, Comoros, Somalia, and Guinea-Bissau all improved substantially, while Togo and Burundi experienced large declines.

FIGURE 14: STATUS OF NATIONAL SEED POLICY INSTRUMENTS, 2025 (SCORE OUT OF 10)



Note: Equatorial Guinea and Libya scored zero; the status of their seed policy instruments is unknown.

Twenty-six of 50 countries scored "excellent" (8–10), indicating that these countries have made significant efforts to have up-to-date seed policy instruments that promote competitive seed sectors. These are Angola, Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Egypt, Eritrea, Eswatini, Ethiopia, The Gambia, Ghana, Kenya, Liberia, Malawi, Mali, Niger, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Tunisia, Uganda, Zambia, and Zimbabwe. In countries that scored 9 or above, some policy instruments may still be under review. For example, Ethiopia's Plant Breeders' Rights Proclamation No. 1068/2017 and the associated directive (No. 769/2021) have not yet been operationalized, and Uganda's national seed strategy is under review. Two large improvements brought countries into this category: Eritrea rose from 3.0 to 8.33 (+5.33 points) and Comoros improved from 3.0 to 7.25 (+4.25 points) — though note that Comoros at 7.25 falls in the "good" range, not "excellent".

Fourteen countries scored "good" (6 to <8): Burundi (7.0), the Central African Republic (7.0), Comoros (7.25), Côte d'Ivoire (6.25), Gabon (6.0), Guinea-Bissau (7.0), Madagascar (6.0), Mauritania (7.0), Mozambique (6.67), Sierra Leone (7.67), Somalia (7.25), Sudan (7.0), and Togo (6.69). In Sierra Leone, the National Seed Policy (2009) was reviewed in 2024 but has not yet been approved by Cabinet. In these countries, most policy instruments are current and in place, though some gaps remain — such as outdated seed laws or missing PVP regulations. Four large changes occurred in this group: Guinea-Bissau improved from 3.0 to 7.0 (+4.0 points), Somalia improved from 4.0 to 7.25 (+3.25 points), Togo declined from 10.0 to 6.69 (-3.31 points), and Burundi fell from 10.0 to 7.0 (-3.0 points).

Seven countries scored "fair" (4 to <6): Botswana (5.0), Congo Republic (4.5), the Democratic Republic of the Congo (4.0), Guinea (Conakry) (5.75), Lesotho (4.40), Namibia (4.75), and South Sudan (5.0). In these countries, a fair number of seed policy instruments are in place, but some are outdated or incomplete.

Two countries scored "poor" (2 to <4): Djibouti (2.0) and Seychelles (3.40). These countries have insufficient or significantly outdated seed policy instruments, which constrains performance across all other areas of the seed sector.

Two countries scored 0: Equatorial Guinea and Libya. Equatorial Guinea has no seed policy instrument, and in Libya the status of seed policy instruments is unknown.

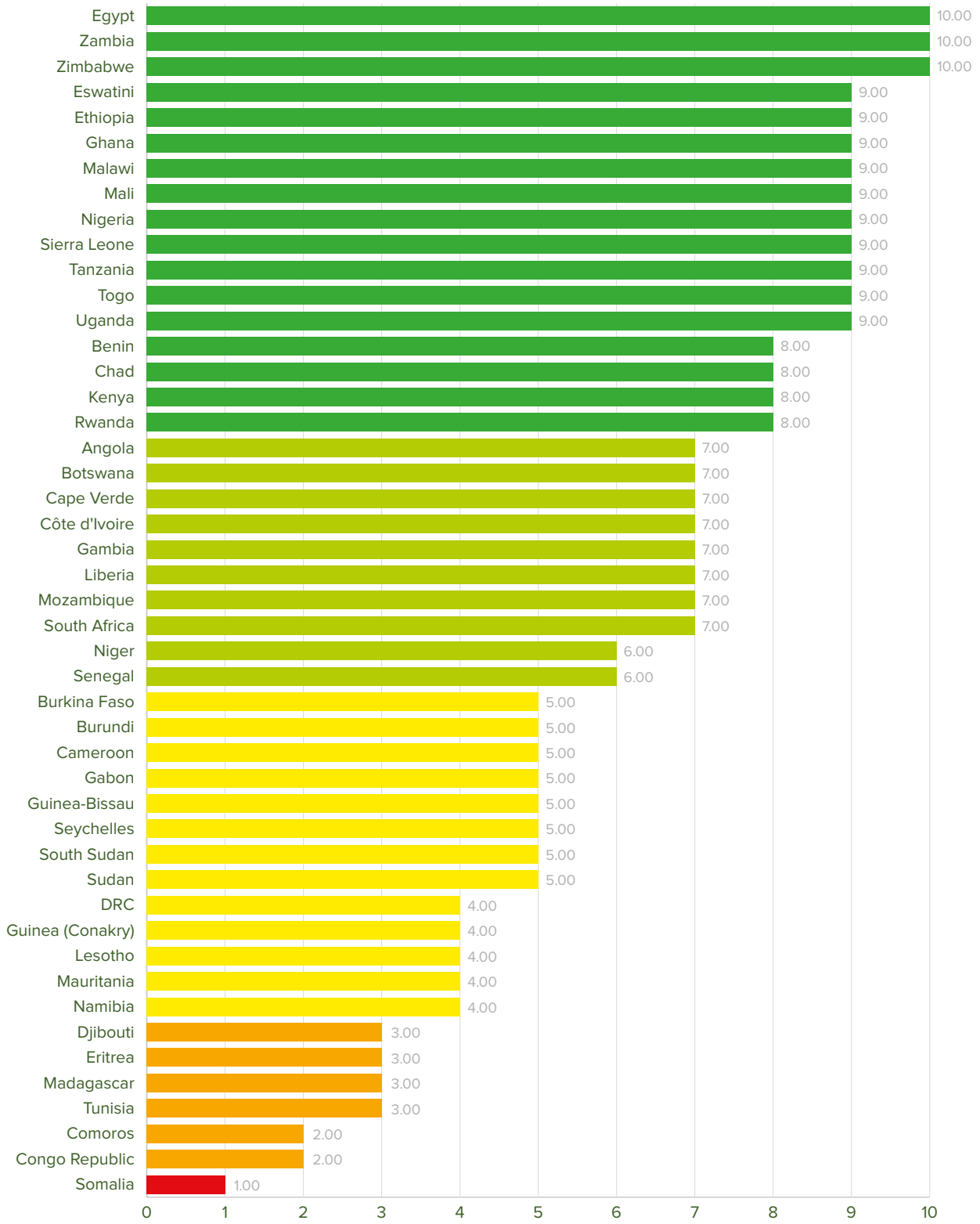
Indicator 12: Alignment of National Seed Policy Instruments with Harmonized Regional Seed Regulations

This indicator measures the extent to which national seed regulations are harmonized with the regulations of the respective Regional Economic Communities (RECs). The main function of the RECs is to minimize trade barriers and facilitate movement of goods — including seed — across borders within the region. The seven RECs covered in this assessment are COMESA, EAC, ECCAS, ECOWAS, IGAD, SADC, and UMA. Figure 15 presents country scores for the status of alignment with harmonized regional seed regulations, ranked from highest to lowest.

Between 2023 and 2025, scores on this indicator were broadly mixed, with declines outnumbering improvements in absolute terms. Of the 47 countries with comparable data, 36% recorded small changes (0.5 points or fewer) and 47% recorded moderate changes. Eight countries (17%) recorded large changes: Ethiopia improved substantially, while seven countries — Madagascar, Tunisia, Congo Republic, Burkina Faso, Burundi, Guinea-Bissau, and Guinea (Conakry) — experienced large declines.

Seventeen countries scored "excellent" (8–10) on the status of harmonization, having fully aligned their national seed laws with regional regulations and implemented them effectively. These are Benin, Chad, Egypt, Eswatini, Ethiopia, Ghana, Kenya, Malawi, Mali, Nigeria, Rwanda, Sierra Leone, Tanzania, Togo, Uganda, Zambia, and Zimbabwe. These countries have completed the legal harmonization process and operationalized harmonized procedures — for example, accepting variety registration from neighboring REC member countries and streamlining seed movement across borders. Ethiopia recorded a large improvement (+3.0 points, from 6.0 to 9.0). Malawi also improved moderately, rising from 7.0 to 9.0 (+2.0 points).

FIGURE 15: STATUS OF ALIGNMENT OF NATIONAL SEED POLICY INSTRUMENTS WITH HARMONIZED REGIONAL REGULATIONS, 2025 (SCORE OUT OF 10)



Note: The Central African Republic, Equatorial Guinea, and Libya scored zero and are excluded from the chart.

Ten countries scored "good" (6 to <8): Angola (7), Botswana (7), Cape Verde (7), Côte d'Ivoire (7), The Gambia (7), Liberia (7), Mozambique (7), Niger (6), Senegal (6), and South Africa (7). While these countries have harmonized national laws with regional regulations, the process remains incomplete in some areas. For example, in Côte d'Ivoire, the ECOWAS harmonized seed regulations were published in the Official Gazette in 2013, but certain aspects — such as the establishment of a seed sector support fund — have yet to be implemented. Scores in this group were broadly stable since 2023, with no large changes recorded.

Thirteen countries scored "fair" (4 to <6): Burkina Faso (5), Burundi (5), Cameroon (5), the Democratic Republic of the Congo (4), Gabon (5), Guinea (Conakry) (4), Guinea-Bissau (5), Lesotho (4), Mauritania (4), Namibia (4), Seychelles (5), South Sudan (5), and Sudan (5). In these countries the harmonization process is incomplete. For example, in South Sudan, the draft Seeds and Plant Varieties Provisional Order awaits approval. Guinea (Conakry) and Burundi have already harmonized national policy and law with ECOWAS requirements, but the seed regulations implementing the harmonization process are still being finalized. Four large declines occurred in this group: Burkina Faso fell from 8.0 to 5.0 (-3.0 points), Burundi from 8.0 to 5.0 (-3.0 points), Guinea-Bissau from 8.0 to 5.0 (-3.0 points), and Guinea (Conakry) from 7.0 to 4.0 (-3.0 points).

Six countries scored "poor" (2 to <4), Comoros (2), Congo Republic (2), Djibouti (3), Eritrea (3), Madagascar (3), and Tunisia (3). Three of these recorded large declines: Congo Republic fell from 6.0 to 2.0 (-4.0 points), Madagascar from 9.0 to 3.0 (-6.0 points), and Tunisia from 8.0 to 3.0 (-5.0 points). Comoros is drafting seed policy instruments, while Djibouti is exploring alignment with the COMESA Harmonized Seed Trade Regulations through IGAD.

Somalia scored 1.0 ("extremely poor"). Somalia became a member of COMESA in 2018, but the Somali Parliament has not yet ratified the membership; ratification would enable the country to enact laws aligned with the COMESA Seed Trade Harmonization Regulations. Three countries have not harmonized their national seed laws and scored 0: the Central African Republic, Equatorial Guinea, and Libya.

Indicator 13: Status of Adoption of National Biosafety Frameworks to Guide Plant Breeding and Seed Production

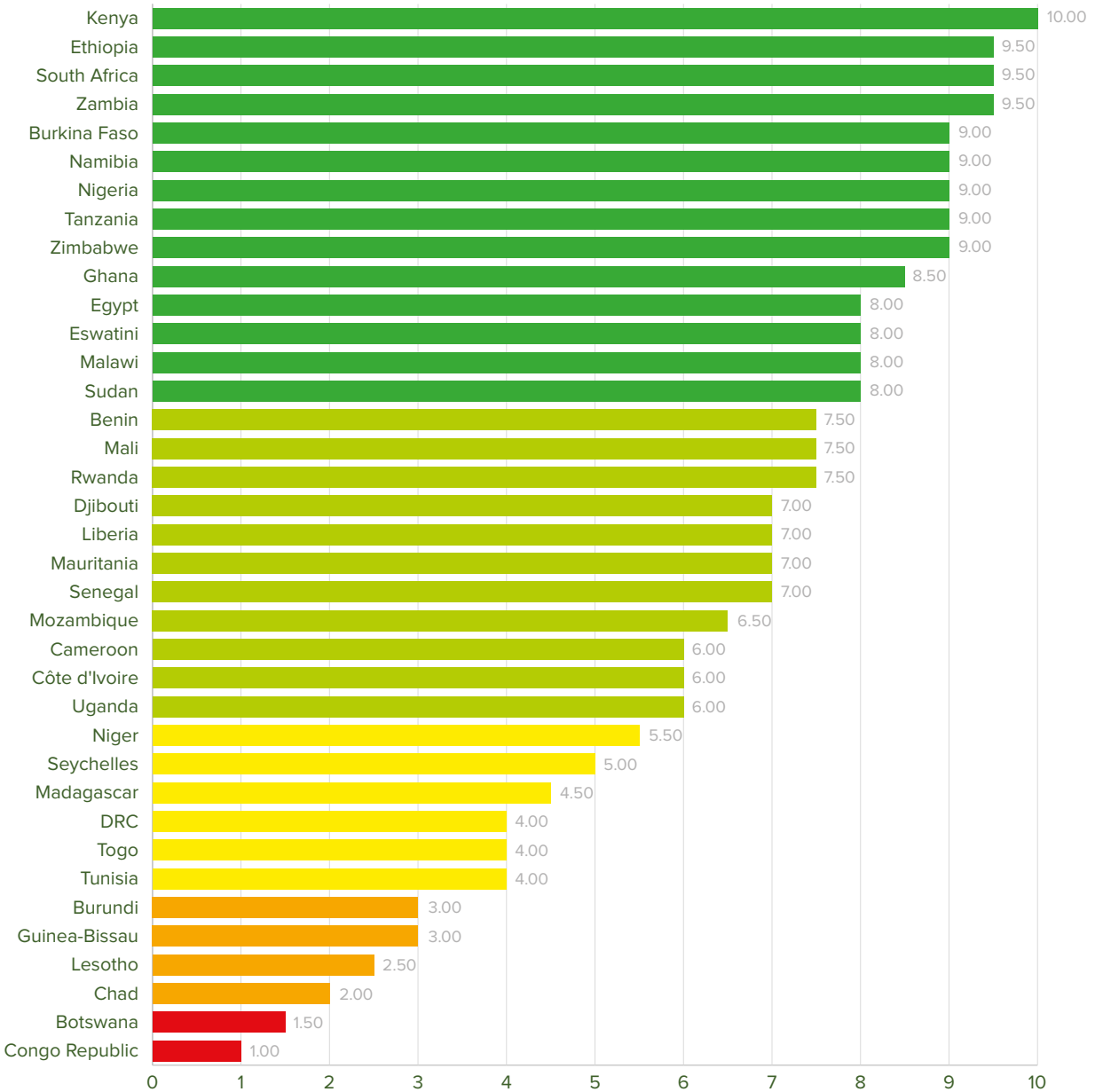
The regulation of biosafety has gained importance in many countries because it is closely linked to plant breeding, particularly for genetically modified (GM) seed. This indicator measures whether a country has a national biosafety framework and, if so, whether it includes a functional regulatory authority to oversee GMO approvals. According to the International Service for the Acquisition of Agri-biotech Applications (ISAAA) (AfriCenter and COMESA 2024) and the African Agricultural Technology Foundation (AATF), twelve African countries had ongoing research initiatives, variety evaluation through national performance trials, or approvals for the commercialization of varieties in 2024 (Table 15). A total of eight crops were included in these GMO trials: banana, banana plantain, cassava, cotton, cowpea, maize, soya bean, and potato. The crop traits under research included insect resistance, disease resistance, nitrogen use efficiency, biofortification, and delayed post-harvest starch deterioration.

Figure 16 presents country scores for the status of adoption of national biosafety frameworks, ranked from highest to lowest. In 2025, seventy-four percent of the countries surveyed (37 out of 50) have national biosafety frameworks. Between 2023 and 2025, this indicator recorded the third-highest rate of large changes of any indicator in the ASSPI. Of the 47 countries with comparable data, 38% recorded small changes (0.5 points or fewer) and 34% recorded moderate changes. Thirteen countries (28%) recorded large changes. Seven countries established or substantially strengthened their biosafety frameworks — Djibouti, Mauritania, Rwanda, Liberia, Ghana, Seychelles, and Egypt — while six countries experienced large declines, including Botswana, Chad, the Central African Republic, Comoros, Burundi, and the Democratic Republic of the Congo.

TABLE 15: STATUS OF AFRICAN BIOTECHNOLOGY, GM RESEARCH AND COMMERCIALIZATION BY 2025

Country	Crops under confined field trials	National performance trials (variety evaluation trials)	Commercial approval
Burkina Faso	-	-	cotton, cowpea
Eswatini	-	-	cotton
Ethiopia	-	-	cotton, maize
Ghana	-	-	cowpea
Kenya	-	cassava, potato	cotton, maize
Malawi	banana plantain, banana, maize	-	cotton
Mozambique	-	-	cotton, maize
Nigeria	potato	-	cotton, cowpea, maize

FIGURE 16: STATUS OF ADOPTION OF NATIONAL BIOSAFETY FRAMEWORKS, 2025 (SCORE OUT OF 10)



Note: The following countries scored zero and are excluded from the chart: Angola, Cape Verde, the Central African Republic, Comoros, Equatorial Guinea, Eritrea, Gabon, The Gambia, Guinea (Conakry), Libya, Sierra Leone, Somalia, and South Sudan.

Country	Crops under confined field trials	National performance trials (variety evaluation trials)	Commercial approval
Rwanda	-	cassava potato, maize	-
South Africa	-	-	cotton, maize, soya bean
Sudan	-	-	cotton
Uganda	banana, cassava, potato, soya bean	-	

Source: ISAAA, AATF, and AUDA NEPAD

Fourteen countries scored "excellent" (8-10), indicating that national biosafety frameworks have been adopted and are overseen by functional national authorities: Burkina Faso (9.0), Egypt (8.0), Ethiopia (9.5), Eswatini (8.0), Ghana (8.5), Kenya (10.0), Malawi (8.0), Namibia (9.0), Nigeria (9.0), South Africa (9.5), Sudan (8.0), Tanzania (9.0), Zambia (9.5), and Zimbabwe (9.0). These countries can evaluate and approve GM varieties when they become available regionally. Three large improvements brought countries into or further up within this category: Ghana rose from 4.0 to 8.5 (+4.5 points) and Egypt from 5.0 to 8.0 (+3.0 points).

Ten countries scored "good" (6 to <8): Benin (7.5), Cameroon (6.0), Côte d'Ivoire (6.0), Djibouti (7.0), Liberia (7.0), Mali (7.5), Mauritania (7.0), Mozambique (6.5), Rwanda (7.5), Senegal (7.0), and Uganda (6.0). Four of these recorded large improvements, establishing biosafety frameworks where none previously existed: Djibouti rose from 0 to 7.0 (+7.0 points), Mauritania from 0 to 7.0 (+7.0 points), Rwanda from 1.0 to 7.5 (+6.5 points), and Liberia from 2.0 to 7.0 (+5.0 points).

Seven countries scored "fair" (4 to <6): The Democratic Republic of the Congo (4.0), Madagascar (4.5), Niger (5.5), Seychelles (5.0), Togo (4.0), and Tunisia (4.0). These countries have biosafety frameworks, but they remain incomplete or have limited regulatory capacity. The Democratic Republic of the Congo recorded a large decline, falling from 7.0 to 4.0 (-3.0 points.

Four countries scored "poor" (2 to <4): Burundi (3.0), Chad (2.0), Guinea-Bissau (3.0), and Lesotho (2.5). These countries have biosafety frameworks but face significant implementation challenges. Chad recorded a large decline, falling from 7.0 to 2.0 (-5.0 points).

Two countries scored "extremely poor" (0 to <2): Botswana (1.5) and Congo Republic (1.0). Botswana recorded a large decline, falling from 7.0 to 1.5 (-5.5 points), reflecting a significant weakening of its previously functional framework.

Thirteen countries have no biosafety frameworks and scored 0: Angola, Cape Verde, the Central African Republic, Comoros, Equatorial Guinea, Eritrea, Gabon, The Gambia, Guinea (Conakry), Libya, Sierra Leone, Somalia, and South Sudan. Two of these represent large declines from previously functional frameworks: the Central African Republic fell from 4.0 to 0 (-4.0 points) and Comoros from 4.0 to 0 (-4.0 points).

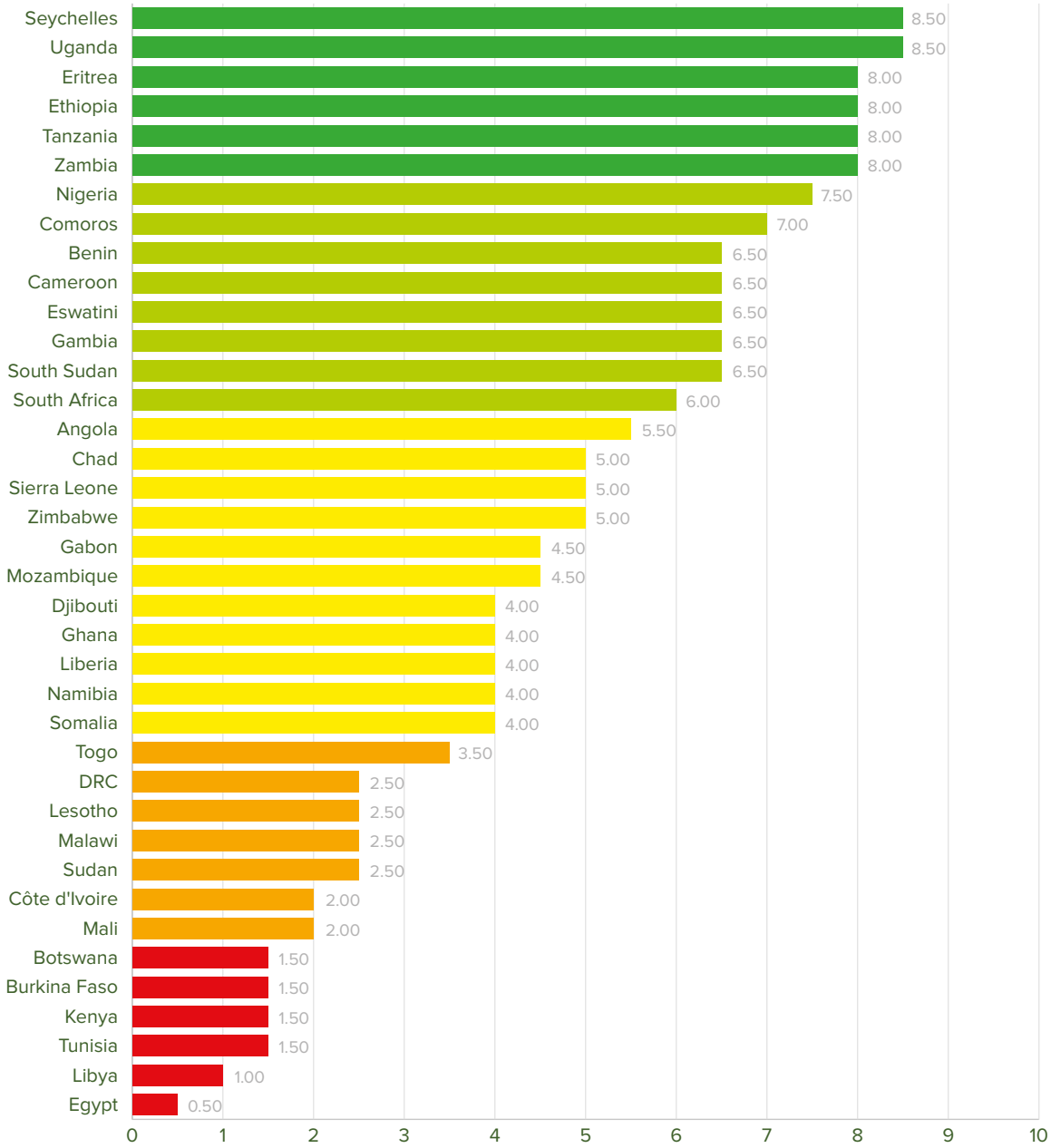
Indicator 14: Inclusion of Farmer-Managed Seed Systems (FMSS) in National Seed Policy Instruments and Institutional Arrangements

This indicator tracks the status of farmer-managed seed systems (FMSS) in national seed policy instruments — including seed policies, laws, regulations, and decrees — and in institutional arrangements that promote an enabling environment for the seed sector, recognizing both commercial and farmer-managed systems. An increasing number of African countries are recognizing the role of FMSS in complementing commercial seed systems to meet farmers' needs. Figure 17 presents country scores for the inclusion of FMSS in national seed policy instruments and institutional arrangements, ranked from highest to lowest.

Between 2023 and 2025, this indicator showed a high rate of large changes, with 26% of comparable countries (12 of 47) recording changes of more than 2.5 points. The pattern is strongly divided: seven countries improved substantially, with several establishing FMSS recognition in policy for the first time, while five countries recorded large declines — most strikingly Guinea (Conakry), which fell from 9.0 to 0 (-9.0 points), representing a complete reversal of its previously strong policy support for farmer seed systems.

Six countries scored "excellent" (8–10): Eritrea (8.0), Ethiopia (8.0), Seychelles (8.5), Tanzania (8.0), Uganda (8.5), and Zambia (8.0). The highest-scoring countries not only recognize FMSS in their national seed policies but also have substantive programs supporting farmer seed producers through training, quality assurance systems, market linkages, and sometimes subsidies. For example, in Uganda, FMSS are recognized through the Seeds and Plant (Quality Declared Seed) Regulation of 2019. In Zambia, small-scale farmers may be trained as seed growers, and seed regulations provide for QDS schemes to help smallholders meet standards. Eritrea recorded a large improvement, rising from 5.0 to 8.0 (+3.0 points).

FIGURE 17: STATUS OF FARMER-MANAGED SEED SYSTEMS (FMSS) IN NATIONAL SEED POLICY INSTRUMENTS, 2025 (SCORE OUT OF 10)



Note: The following countries scored zero and are excluded from the chart: Burundi, Cape Verde, the Central African Republic, Congo Republic, Equatorial Guinea, Guinea (Conakry), Guinea-Bissau, Madagascar, Mauritania, Niger, Rwanda, and Senegal.

Eight countries scored "good" (6 to <8): Benin (6.5), Cameroon (6.5), Comoros (7.0), Eswatini (6.5), The Gambia (6.5), Nigeria (7.5), South Africa (6.0), and South Sudan (6.5). In these countries, FMSS are recognized in seed policy instruments, and there are training programs for small-scale farmers as seed growers. For example, in South Africa, the Plant Improvement Regulations allow vulnerable households and subsistence and smallholder farmers to save, reuse, or exchange seed of certain crops, provided the volume produced is below prescribed limits. Three large improvements occurred in this group: Comoros rose from 0 to 7.0 (+7.0 points), moving from no recognition of FMSS to explicit policy support and initial programming; South Sudan improved from 2.0 to 6.5 (+4.5 points); and Benin rose from 3.0 to 6.5 (+3.5 points).

Eleven countries scored "fair" (4 to <6): Angola (5.5), Chad (5.0), Djibouti (4.0), Gabon (4.5), Ghana (4.0), Liberia (4.0), Mozambique (4.5), Namibia (4.0), Sierra Leone (5.0), Somalia (4.0), and Zimbabwe (5.0). In these countries, FMSS are recognized in policy instruments, but the relevant provisions are yet to be fully implemented or are currently under review. In Chad, the Seeds and Seedlings of Plant Origin Law recognizes the existence of local or traditional seed varieties, and plans are underway to register them. Three large improvements occurred in this group: Djibouti rose from 0 to 4.0 (+4.0 points), Namibia from 0 to 4.0 (+4.0 points), and Somalia from 1.0 to 4.0 (+3.0 points).

Seven countries scored "poor" (2 to <4): Côte d'Ivoire (2.0), the Democratic Republic of the Congo (2.5), Lesotho (2.5), Malawi (2.5), Mali (2.0), Sudan (2.5), and Togo (3.5). In these countries, FMSS are not formally recognized in policy instruments, though some are slated for inclusion in ongoing policy reviews. In Malawi, while the National Seed Policy mentions FMSS in the introduction, the remainder of the policy focuses on the formal sector and makes no further reference to FMSS. Two large declines occurred in this group: Sudan fell from 6.0 to 2.5 (-3.5 points) and Lesotho dropped from 8.0 to 2.5 (-5.5 points).

Six countries scored "extremely poor" (0 to <2): Botswana (1.5), Burkina Faso (1.5), Egypt (0.5), Kenya (1.5), Libya (1.0), and Tunisia (1.5). In these countries, seed policies focus primarily on commercial seed systems, with little or no recognition of FMSS. In Kenya, the informal seed system is included in the draft seed policy but has not yet been formally adopted. Egypt recorded a large decline, falling from 5.0 to 0.5 (-4.5 points).

Twelve countries have no recognition of FMSS in their seed policies and scored 0: Burundi, Cape Verde, the Central African Republic, Congo Republic, Equatorial Guinea, Guinea (Conakry), Guinea-Bissau, Madagascar, Mauritania, Niger, Rwanda, and Senegal. Two large declines to zero occurred: Guinea (Conakry) fell from 9.0 to 0 (-9.0 points), representing a complete reversal of its previously strong policy support for farmer seed systems, and the Central African Republic dropped from 4.0 to 0 (-4.0 points).

Indicator 15: Adequacy of Seed Inspection Services

Seed inspection services ensure that certified commercial seed meets official quality standards. This indicator assesses three aspects of service adequacy: the number of seed inspectors, the availability of means of transport for field inspections, and the use of digital tools for record-keeping and communication. In most countries, the main challenge facing public seed inspection services is inadequate funding and logistics for field inspections. Inspectors often lack reliable transport to remote locations, and seed inspection units frequently have insufficient laboratory equipment. A lack of resources is a common constraint even in countries with sufficient numbers of inspectors; such countries typically score in the 5–6 range as a result. This applies to the Democratic Republic of the Congo (235 inspectors), Côte d'Ivoire (226 inspectors), Benin (187 inspectors), Senegal (150 inspectors), and Madagascar (140 inspectors). Figure 18 presents country scores for the adequacy of seed inspection services, ranked from highest to lowest.

Although most countries rely on public inspection services, some have also instituted private inspection services; these are included in the total count. The countries with more than 100 public seed inspectors are Egypt (809), the Democratic Republic of the Congo (235), Côte d'Ivoire (226), Benin (187), Mali (148), Madagascar (140), and Senegal (134). Twelve countries have adopted systems for private seed inspection: Burundi, Djibouti, Kenya, Malawi, Mauritania, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Zambia,

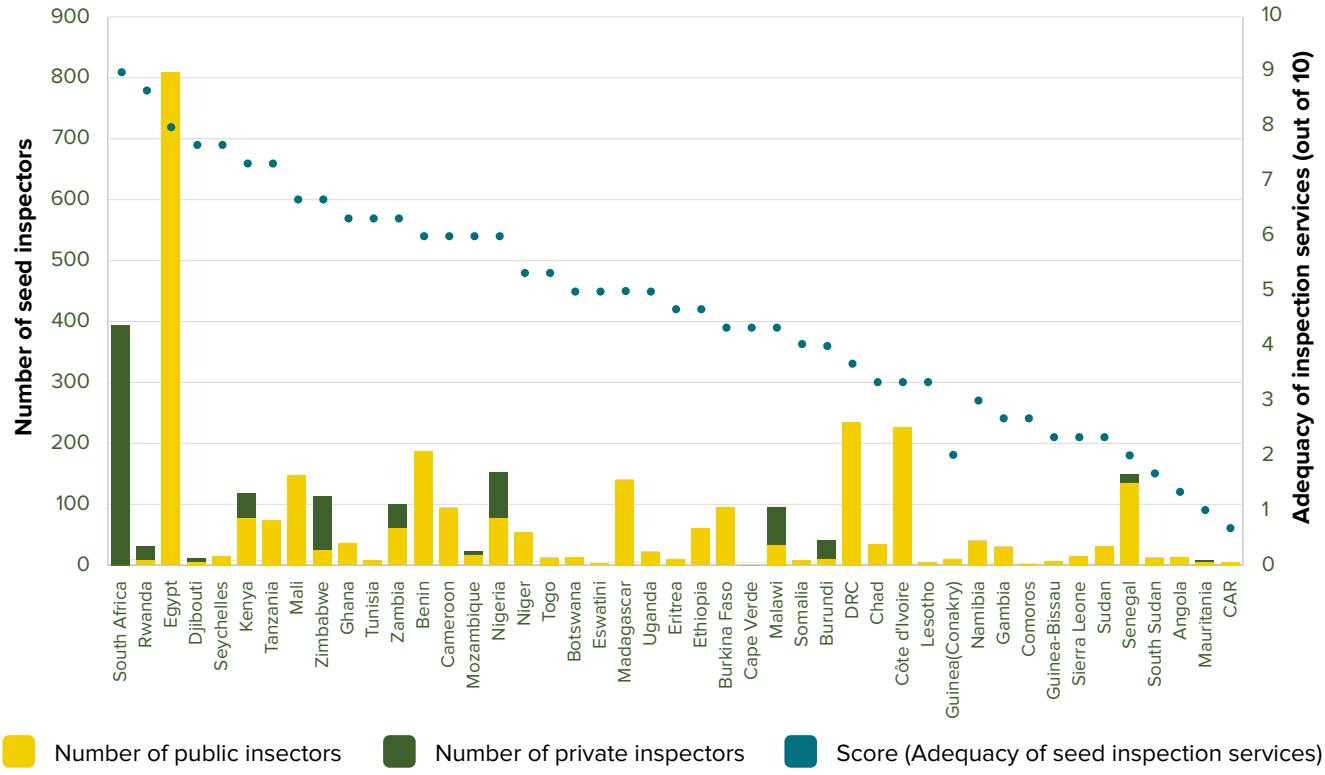
and Zimbabwe. Notably, South Africa uses only private seed inspectors, whose work is coordinated by the South African National Seed Organization (SANSOR). The countries with more than 50 private seed inspectors are South Africa (320), Zimbabwe (88), Nigeria (75), and Malawi (62). Djibouti and Mauritania did not have any private seed inspectors in 2023.

Between 2023 and 2025, scores on this indicator declined for a large majority of countries, making it one of the most broadly negative indicators in the ASSPI. Of the 46 countries with comparable data, only 17% recorded small changes (0.5 points or fewer), while 57% recorded moderate changes and 26% (12 countries) recorded large changes. All twelve large changes were declines, with the sole exception of Djibouti and Comoros (+2.67 points), which recorded sizeable improvements. Large declines were recorded by The Gambia (-4.33 points), Mauritania (-4.00 points), Senegal (-4.00 points), Guinea-Bissau (-3.67 points), Eritrea (-3.33 points), Botswana (-3.00 points), Burkina Faso (-2.67 points), Malawi (-2.67 points), Chad (-2.67 points), Lesotho (-2.67 points).

Three countries scored "excellent" (8–10): South Africa (9.0), Rwanda (8.67), and Egypt (8.0). These countries have adequate numbers of inspectors, reliable transport for field visits, and make increasing use of digital tools for record-keeping and communication with seed companies. Scores in this group changed by small or moderate amounts since 2023.

Thirteen countries scored "good" (6 to <8), Benin (6.0), Cameroon (6.0), Djibouti (7.67), Ghana (6.33), Kenya (7.33), Mali (6.67), Mozambique (6.0), Nigeria (6.0), Seychelles (7.67), Tanzania (7.33), Tunisia (6.33), Zambia (6.33), and Zimbabwe (6.67). While inspection services in these countries function reasonably well, constraints include ageing transport fleets and incomplete digitalization. Djibouti recorded a large improvement, rising from 1.0 to 7.67 (+6.67 points), reflecting investment in inspector training, equipment, and digitalization.

FIGURE 18: ADEQUACY OF SEED INSPECTION SERVICES, 2025 (SCORE OUT OF 10)



Note: The following countries scored zero and are excluded from the chart: Congo Republic, Equatorial Guinea, Gabon, Liberia, and Libya.

Thirteen countries scored "fair" (4 to <6): Botswana (5.0), Burkina Faso (4.33), Burundi (4.0), Cape Verde (4.33), Eritrea (4.67), Eswatini (5.0), Ethiopia (4.67), Madagascar (5.0), Malawi (4.33), Niger (5.33), Somalia (4.03), Togo (5.33), and Uganda (5.0). These countries have seed inspection units but are constrained by limited facilities and means of transport. Four large declines occurred in this group: Eritrea fell from 8.0 to 4.67 (-3.33 points), Botswana from 8.0 to 5.0 (-3.00 points), Burkina Faso from 7.0 to 4.33 (-2.67 points), and Malawi from 7.0 to 4.33 (-2.67 points).

Twelve countries scored "poor" (2 to <4): Chad (3.33), Comoros (2.67), Côte d'Ivoire (3.33), the Democratic Republic of the Congo (3.67), The Gambia (2.67), Guinea (Conakry) (2.0), Guinea-Bissau (2.33), Lesotho (3.33), Namibia (3.0), Senegal (2.0), Sierra Leone (2.33), and Sudan (2.33). These countries have few inspectors and are further constrained by limited resources — particularly transport — needed to carry out inspection duties. Five large declines occurred in this group: The Gambia fell from 7.0 to 2.67 (-4.33 points), Senegal from 6.0 to 2.0 (-4.00 points), Guinea-Bissau from 6.0 to 2.33 (-3.67 points), Chad from 6.0 to 3.33 (-2.67 points), and Lesotho from 6.0 to 3.33 (-2.67 points).

Four countries scored "extremely poor" (0 to <2): Angola (1.33), the Central African Republic (0.67), Mauritania (1.0), and South Sudan (1.67). Mauritania recorded a large decline, falling from 5.0 to 1.0 (-4.00 points).

Five countries have no seed inspectors and scored 0: Congo Republic, Equatorial Guinea, Gabon, Liberia, and Libya.

Indicator 16: Adequacy of Government Efforts to Combat Counterfeit Seed

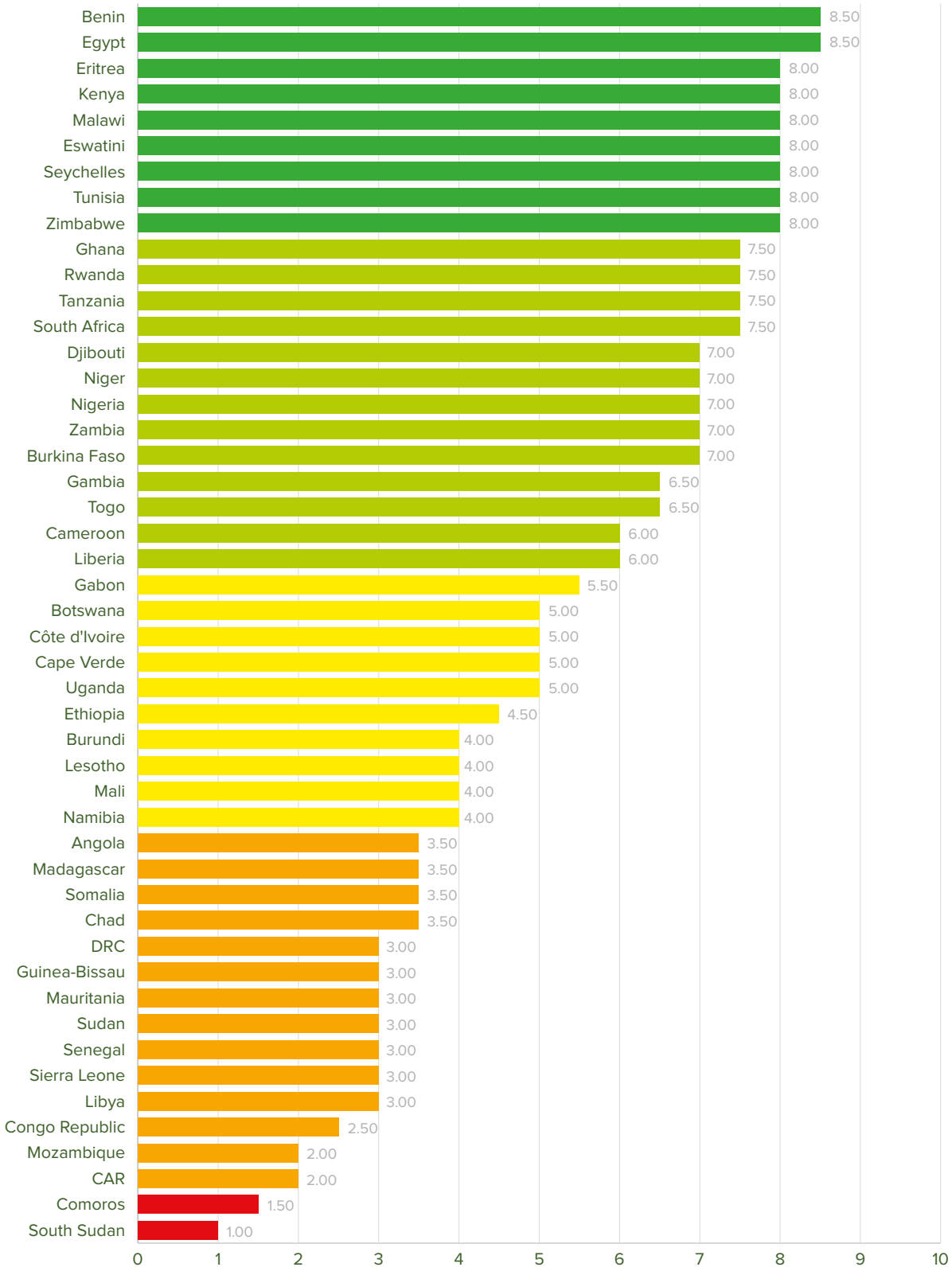
Counterfeit seed threatens the seed sector because, when farmers discover they have unknowingly planted grain labeled as certified seed, their confidence in certified seed may be permanently undermined. This indicator tracks both the adequacy of government measures to combat counterfeit seed and the adequacy of their implementation. Figure 19 presents country scores for the adequacy of government efforts to combat counterfeit seed, ranked from highest to lowest.

Between 2023 and 2025, scores on this indicator were largely stable, with 47% of comparable countries recording small changes (0.5 points or fewer) and 45% recording moderate changes. Four countries (9%) recorded large changes: Liberia improved substantially, Niger also improved, while Guinea (Conakry) experienced a large decline, and Burundi also declined sharply.

Nine countries scored "excellent" (8–10): Benin (8.5), Egypt (8.0), Eritrea (8.0), Eswatini (8.0), Kenya (8.0), Malawi (8.0), Seychelles (8.0), Tunisia (8.0), and Zimbabwe (8.0). In these countries, government efforts to combat counterfeit seed are strong, with clear legal frameworks, active enforcement, market surveillance programs, and penalties that are consistently applied. Seed inspections in the field and at warehouses, seed sampling, and seed testing are strictly implemented, limiting opportunities for counterfeit seed to enter the value chain. Seed that does not meet standards is rejected and often destroyed, and seed producers or agro-dealers found dealing in counterfeit seed are blacklisted. Other measures include surveillance, seed package labels linked to an SMS-based verification system, and farmer awareness campaigns on detecting counterfeit seed. Scores in this group were broadly stable since 2023, with no large changes recorded.

Thirteen countries scored "good" (6 to <8): Burkina Faso (7.0), Cameroon (6.0), Djibouti (7.0), The Gambia (6.5), Ghana (7.5), Liberia (6.0), Niger (7.0), Nigeria (7.0), Rwanda (7.5), South Africa (7.5), Tanzania (7.5), Togo (6.5), and Zambia (7.0). In these countries, the legal framework for combating counterfeit seed is relatively clear and enforcement is generally adequate, though counterfeit seed continues to pose a challenge. In countries such as Zambia, the main difficulty lies in enforcement efforts not reaching all parts of the country. Two large changes occurred in this group: Liberia rose from 1.0 to 6.0 (+5.0 points), reflecting new anti-counterfeit legislation and initial enforcement operations, and Niger improved from 4.0 to 7.0 (+3.0 points).

FIGURE 19: ADEQUACY OF GOVERNMENT EFFORTS TO COMBAT COUNTERFEIT SEED, 2025 (SCORE OUT OF 10)



Note: Equatorial Guinea and Guinea (Conakry) scored zero and are excluded from the chart.

Ten countries scored "fair" (4 to <6): Botswana (5.0), Burundi (4.0), Cape Verde (5.0), Côte d'Ivoire (5.0), Ethiopia (4.5), Gabon (5.5), Lesotho (4.0), Mali (4.0), Namibia (4.0), and Uganda (5.0). In these countries, legal frameworks for addressing counterfeit seed exist but are insufficient or poorly enforced. In Burundi, penalties are established but rarely applied due to weak enforcement capacity. Burundi recorded a large decline, falling from 7.0 to 4.0 (-3.0 points).

Fourteen countries scored "poor" (2 to <4), including Angola, Central African Republic, Chad (down 2.50 points from 6.0), Republic of the Congo (up 2.50 points from 0), Democratic Republic of the Congo, Guinea-Bissau, Libya, Madagascar, Mauritania, Mozambique, Senegal, Sierra Leone, Somalia, and Sudan. The legal frameworks are not clear enough and counterfeit is rarely penalized. Congo Republic improved from 0 to 2.50, establishing initial legal provisions.

Two countries scored "extremely poor" (0 to <2): Comoros and South Sudan. In Comoros, the seed law has already been established, but the regulatory texts accompanying this law are being developed by the FAO. Therefore, legal measures punishing the sale and distribution of counterfeit seeds are not yet in force. In South Sudan, there are no punitive measures yet due to the lack of laws and regulations since the national seed policy and seed bill are still drafts.

Two countries have no measures to combat counterfeit seed and scored 0: Equatorial Guinea and Guinea (Conakry) (down 4.0 points from 4.0). Guinea's collapse reflects a complete breakdown of seed quality control systems.

Indicator 17: Adequacy of the National Seed Trade Association

This indicator measures the performance of the national seed trade association in a country. Well-functioning national seed trade associations represent the interests of the industry and play a key role in advocating for policy improvements, coordinating among seed companies, and providing industry services such as training and information sharing. The scoring is based on six performance measures: 1. Activity on important seed sector issues, 2. Effectiveness in advocacy, 3. Managerial ability, 4. Providing value to members, 5. Democracy in elections and decision making, and 6. Ability to mobilise resources. Figure 20 presents average scores for national seed trade associations, by country.

Of the 50 countries surveyed, 34 have national seed associations. Seed trade associations generally serve as the voice of the private sector, but in many countries, members include a range of seed industry stakeholders — public research institutes, seed companies (both local and multinational), agro-dealers, and sometimes government officials. Considering the six performance measures across all national seed trade associations with available data, the highest-scoring measure was sub-indicator 5 (democracy in elections and decision-making) with an average of 6.76, and the lowest-scoring was sub-indicator 6 (ability to mobilise resources) with an average of 5.83.

Between 2023 and 2025, scores on this indicator were broadly stable, with 57% of comparable countries recording small changes (0.5 points or fewer) and 36% recording moderate changes. Three countries (6%) recorded large changes: Chad and Côte d'Ivoire improved substantially, while Botswana experienced a large decline.

Seven countries scored "excellent" (8-10): Egypt (9.33), Tunisia (9.17), South Africa (9.0), Zimbabwe (9.0), Ghana (8.17), Kenya (8.33), and Malawi (8.33) (Table 16). The Egyptian Seed Industry Association (ESIA) had the highest score, excelling across all measured dimensions. These associations are all actively involved in seed sector matters, regularly engage with their respective national governments, and, through these and other services, provide value to their members.

TABLE 16: RATINGS OF NATIONAL SEED ASSOCIATIONS THAT SCORED "EXCELLENT" (OUT OF 10)

Country	Rating of six service areas for national seed associations (out of 10)						Avg score
	Activity on important seed sector issues	Effectiveness in advocacy	Managerial ability	Providing value to members	Democracy in elections and decision making	Ability to mobilize resources	
Egypt	8.00	10.00	9.00	9.00	10.00	10.00	9.33
Tunisia	9.00	9.00	10.00	9.00	10.00	8.00	9.17
Zimbabwe	9.00	8.00	10.00	9.00	10.00	8.00	9.00
South Africa	9.00	9.00	9.00	8.00	10.00	9.00	9.00
Malawi	9.00	8.00	8.00	8.00	10.00	7.00	8.33
Kenya	10.00	9.00	7.00	8.00	8.00	8.00	8.33
Ghana	9.00	8.00	8.00	8.00	10.00	6.00	8.17

Fourteen countries scored "good" (6 to <8), Benin (6.92), Burkina Faso (7.83), Burundi (7.0), Côte d'Ivoire (7.08), Ethiopia (6.83), Mali (6.33), Mauritania (7.5), Niger (6.38), Senegal (7.67), Sudan (7.17), Tanzania (7.67), Togo (6.17), Uganda (7.17), and Zambia (7.17). These associations function reasonably well with some room for improvement, particularly in member service provision and policy advocacy capacity. Côte d'Ivoire recorded a large improvement, rising from 2.5 to 7.08 (+4.58 points), reflecting the establishment and growth of a new association.

Eight countries scored "fair" (4 to <6): Chad (4.67), Eswatini (4.83), Guinea-Bissau (5.0), Madagascar (5.0), Mozambique (4.83), Nigeria (5.0), Rwanda (5.33), and South Sudan (5.33). Chad recorded a large improvement, rising from 0 to 4.67 (+4.67 points), reflecting the establishment of a new national seed association, though it remains in early stages of development.

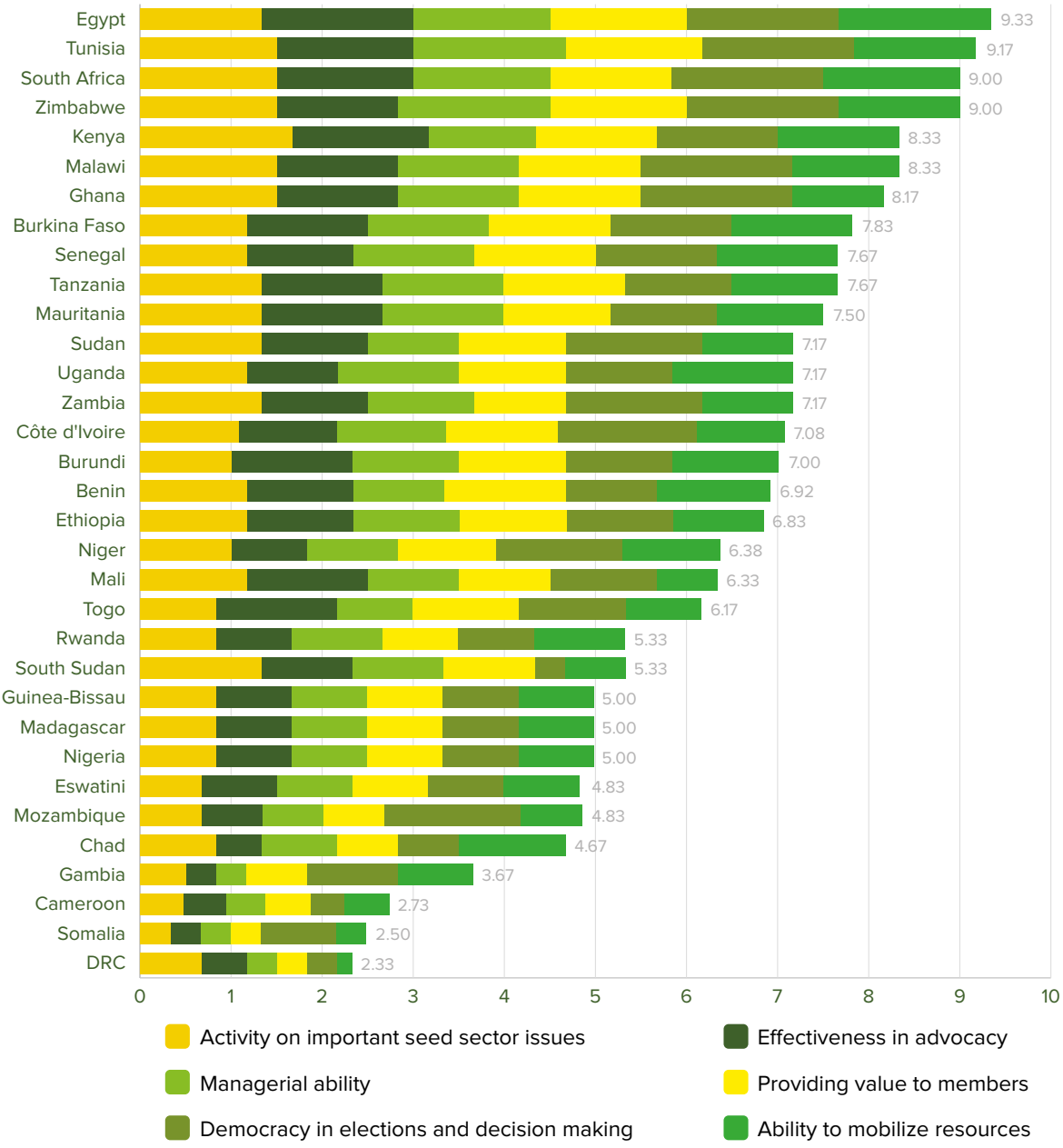
Four countries have weak associations scoring "poor" (2 to <4): Cameroon (2.73), the Democratic Republic of the Congo (2.33), The Gambia (3.67), and Somalia (2.50). The DRC and The Gambia experienced moderate declines as their previously functional associations became largely inactive due to leadership changes and reduced member engagement.

Seventeen countries have no national seed trade associations or non-functional association and scored 0: Angola, Botswana, Cape Verde, the Central African Republic, Comoros, Congo Republic, Djibouti, Equatorial Guinea, Eritrea, Gabon, Guinea (Conakry), Lesotho, Liberia, Libya, Namibia, Seychelles, and Sierra Leone. Of these, sixteen have no national seed trade association. Guinea (Conakry) has an association, but it scored 0, indicating it is currently non-functional. Botswana recorded a large decline, with its previously functional association falling from 6.5 to 0 (-6.5 points).

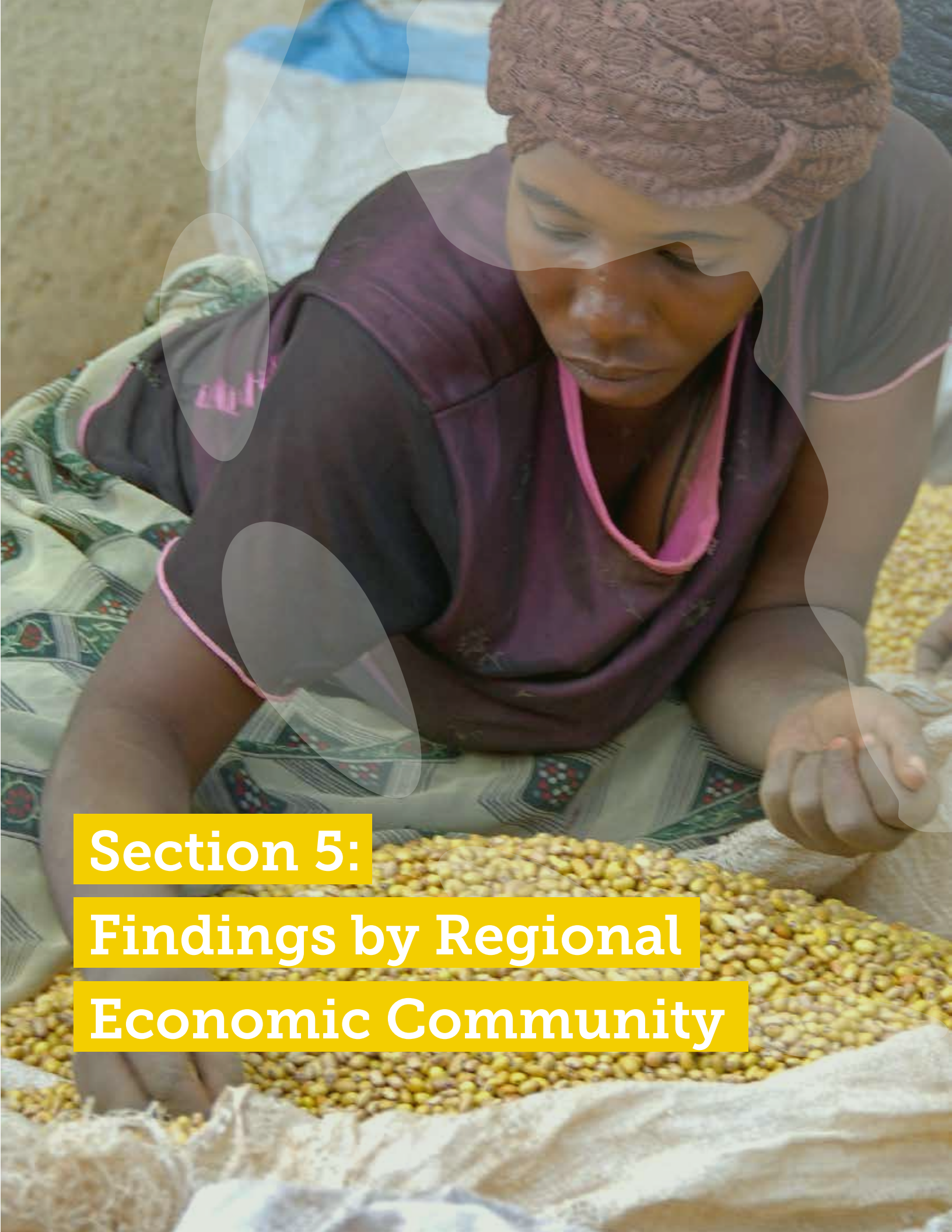
Twenty-one of the 34 national seed associations (62%) are members of the African Seed Trade Association (AFSTA).

Changes by sub-indicator from 2023 to 2025: Across the 31 countries with a seed trade association in both 2023 and 2025, Indicator 17 shows a modest but consistent improvement, with the overall mean score rising from 6.20 to 6.58 (+0.38 points). Progress was positive across all six sub-indicators, though unevenly distributed. The strongest gains were recorded in Sub-indicator 5 (Democracy in elections and decision-making, +0.73) and Sub-indicator 1 (Activity on important seed sector issues, +0.62), suggesting associations have become somewhat more participatory and engaged. Sub-indicator 4 (Providing value to members) also improved notably (+0.45), while Sub-indicators 2 (Effectiveness in advocacy), 3 (Managerial ability), and 6 (Ability to mobilize resources) showed smaller gains of +0.20, +0.15, and +0.11, respectively — with resource mobilization remaining the weakest dimension overall. At the country level, two countries recorded large changes (greater than 2.5 points): Chad (+4.67) and Côte d'Ivoire (+4.58), while Somalia recorded a change of +2.5 points. Somalia didn't have a seed association n 2023. Botswana recorded the only large decline (−6.50), although the change is due to a change in focus by the association as opposed to a decline in performance: since the 2023 ASSPI study, the Botswana Agro Suppliers Association (BASA) has shifted its focus from seeds to agro-chemicals, and, as such, it does not fit the definition of a seed trade association used in ASSPI.

FIGURE 20: AVERAGE RATING OF NATIONAL SEED TRADE ASSOCIATIONS, 2025 (SCORE OUT OF 10)



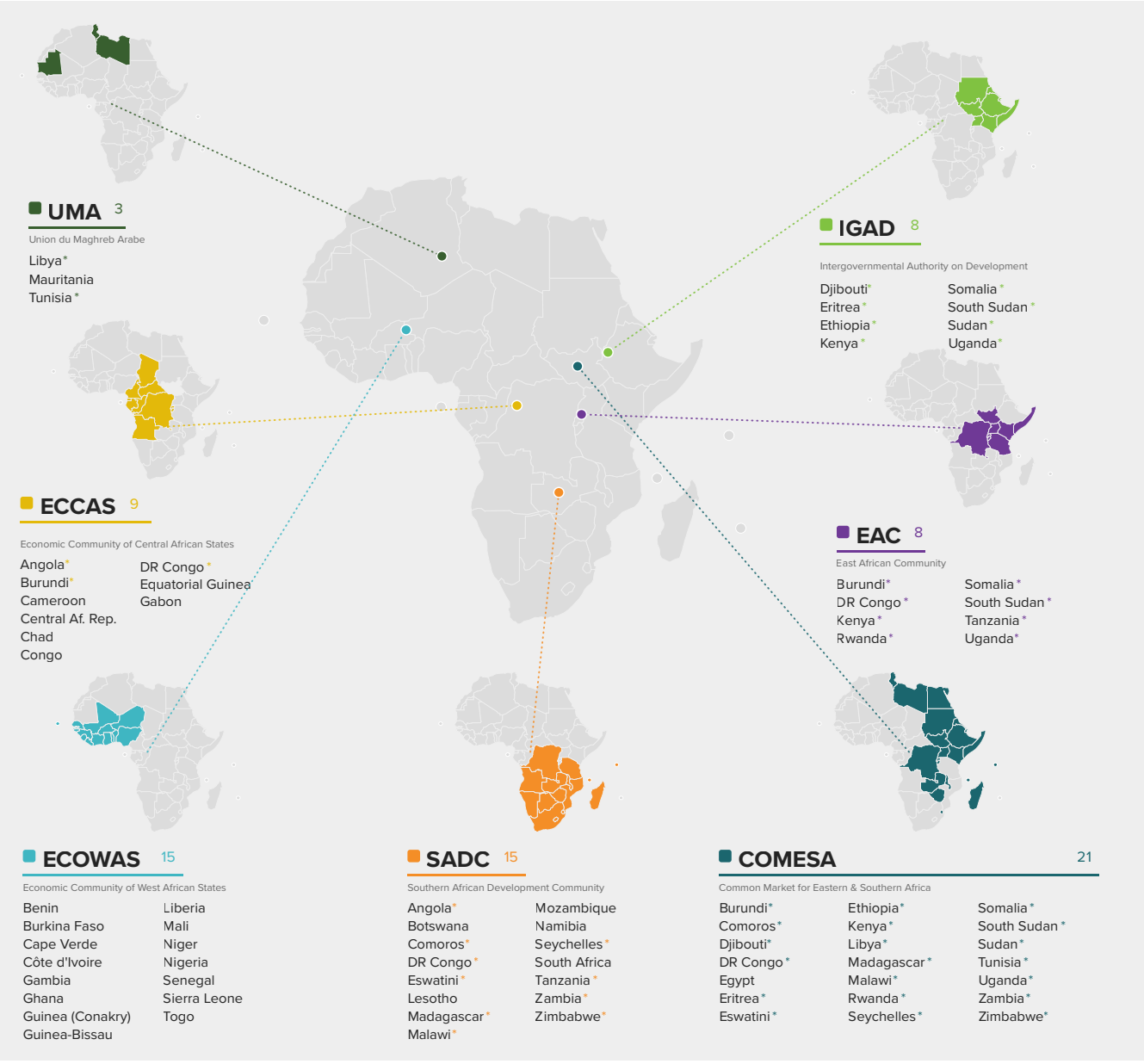
Note: The following countries scored zero on this indicator and are excluded from the chart: Angola, Botswana, Cape Verde, the Central African Republic, Comoros, Congo Republic, Djibouti, Equatorial Guinea, Eritrea, Gabon, Guinea (Conakry), Lesotho, Liberia, Libya, Namibia, Seychelles, and Sierra Leone.



Section 5: Findings by Regional Economic Community

The ASSPI 2025 covers 50 countries across seven of the eight Regional Economic Communities (RECs): [36] the Common Market for Eastern and Southern Africa (COMESA, 21 countries, 21 participated in ASSPI), the East African Community (EAC, 8 countries, all participated), the Southern African Development Community (SADC, 16 countries, 15 participated), the Intergovernmental Authority on Development (IGAD, 8 countries, all participated), the Economic Community of West African States (ECOWAS, 15 countries, all participated), the Arab Maghreb Union (UMA, 5 countries, 3 participated), and the Economic Community of Central African States (ECCAS, 10 countries, 9 participated). The seven RECs were assessed in the ASSPI 2025 report. Figure 21 provides a breakdown of countries by REC membership. Countries with multiple REC memberships (marked in the Figure with *) are discussed in all the RECs to which they belong, ensuring that each community's analysis reflects its complete membership. This chapter examines seed system performance through four analytical lenses: overall REC performance in 2025; patterns at the indicator level; trends since the 2023 assessment; and the specific indicators driving those changes.

FIGURE 21: MEMBERSHIP OF THE SEVEN AFRICAN RECS COVERED IN THE ASSPI 2025 ASSESSMENT.



36 The eighth REC, the Community of Sahel-Saharan States (CEN-SAD) has made limited progress in regional economic integration and trade, functioning instead as a diplomatic and administrative body, issuing periodic statements on security. https://au.int/en/recs/censad Accessed 17 August 2026.

Overall REC Performance in 2025

Figure 22 presents the mean ASSPI overall scores for each REC in both 2025 and 2023. Scores range from 0 to 10, with higher values indicating stronger seed system performance. Table 17 presents the underlying scores and change since 2023 for each REC.

FIGURE 22: AVERAGE ASSPI OVERALL SCORES BY REC, 2023 AND 2025.

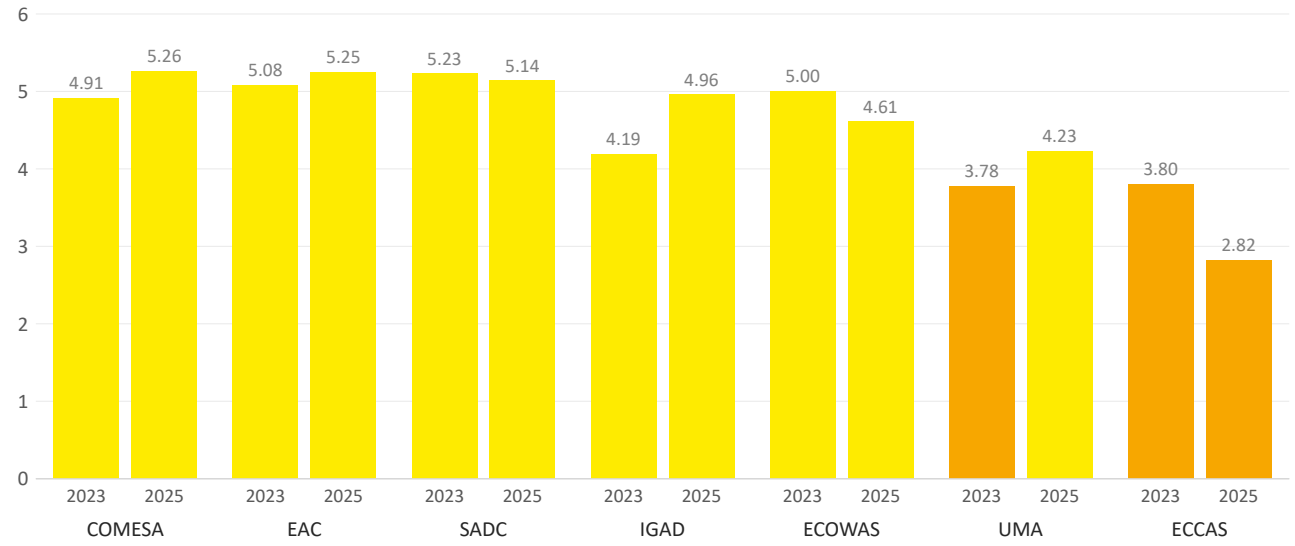


TABLE 17. REC AVERAGE ASSPI SCORES AND CHANGE, 2023–2025

REC	Members (total)	Scored (2025)	2025 Score	2023 Score	Change 2023–2025*
COMESA	21	21	5.26	4.91	+0.35 ▲
EAC	8	8	5.25	5.08	+0.17 ▲
SADC	16	15	5.14	5.23	−0.10 ▼
IGAD	8	8	4.96	4.19	+0.78 ▲
ECOWAS	15	15	4.61	5.00	−0.39 ▼
UMA	5	3	4.23	3.78	+0.45 ▲
ECCAS	10	9	2.82	3.80	−0.97 ▼

** ECOWAS 2023 mean based on 14 comparable countries (Cape Verde not assessed in 2023). ECCAS 2023 mean based on 7 comparable countries (Equatorial Guinea and Gabon not assessed in 2023). Rwanda announced its withdrawal from ECCAS on June 7, 2025 and is excluded from ECCAS figures in both years, although it was a member in 2023. Including Rwanda, the ECCAS mean would be 4.08 in 2023 and 3.21 in 2025 (−0.86)*

COMESA (mean = 5.26)

COMESA ranks first among the seven RECs with a mean score of 5.26, narrowly ahead of the East African Community (5.25). Its membership spans some of the continent's best-performing seed systems alongside several of its most challenged. The COMESA Seed Trade Harmonization Regulations (2014) have provided a meaningful regional framework, and its effects are visible in the performance of several member states. Egypt leads the REC — and ranks second on the continent overall — with a score of 8.13, reflecting an advanced seed system with strong variety development, robust import and export regulation, and well-functioning seed market infrastructure. Zambia (7.83), Kenya (7.64), and Zimbabwe (7.62) follow closely, each demonstrating strong variety release processes, well-developed early-generation seed (EGS) supply

chains, and effective national seed trade associations. Ethiopia (7.26) has recorded one of the most notable trajectories in the 2025 assessment, rising from 6.08 in 2023 — a gain of over a full point — driven by improvements across adoption of seed policy instruments, variety release, EGS availability, and agro-dealer network coverage. Tunisia (6.92), Rwanda (6.72), Malawi (6.43), Eswatini (6.38), and Uganda (6.12) further illustrate the depth of capacity in the region's stronger systems. Tunisia also holds UMA membership, and Libya is likewise a dual COMESA–UMA member.

However, COMESA's high mean score masks considerable internal heterogeneity. South Sudan (3.00), Libya (2.54), Comoros (2.40), and Seychelles (3.61) anchor the lower end of the REC distribution. Somalia (3.01) has shown notable improvement since 2023 (+1.46 points) but remains in the Poor range. The Democratic Republic of the Congo (3.27), a member of COMESA, SADC, ECCAS, and EAC — the broadest multi-REC footprint of any country in this assessment — also faces structural constraints across variety release and seed policy. A recurring constraint across lower-performing COMESA members is the limited availability of seed in small package sizes, which undermines smallholder access despite relatively advanced regulatory environments elsewhere in the bloc. The collapse or near-absence of biosafety frameworks in several member states also represents a systemic gap that could hinder the region’s readiness to evaluate and adopt biotech crop varieties.

EAC (mean=5.25)

EAC ranks second among the seven RECs with a mean score of 5.25 across its eight member states, all of which participated in the ASSPI 2025 assessment. Kenya (7.64) leads the bloc and ranks among the strongest performers on the continent, with particular strength in national biosafety frameworks, variety release quality, and seed import regulations. Tanzania (7.35) follows closely, with standout performance in the availability of seed in small packages and in seed policy alignment with regional frameworks. Rwanda (6.72) benefits from strong agro-dealer networks and small-package seed availability, while Uganda (6.12) performs strongest on regional policy alignment and farmer-managed seed systems recognition.

At the lower end of the distribution, Burundi (4.87) has declined since 2023 (−0.91), the steepest decline of any EAC member. The Democratic Republic of the Congo (3.27) also faces persistent structural constraints across variety release and seed policy, as in its other REC memberships. Somalia (3.01) and South Sudan (3.00) anchor the bottom of the bloc, though Somalia recorded one of the largest gains of any country since 2023 (+1.46), as discussed in the COMESA section above. Across the bloc, variety release quality (I1 = 6.59), seed in small packages (I10 = 5.98), and seed trade associations (I17 = 5.71) are each the highest average score of any REC. Seed utilization (I7 = 3.45) is EAC's weakest indicator on average, consistent with the pattern seen across the other RECs.

SADC (mean = 5.14)

SADC ranks third with a mean score of 5.14 across its 15 member countries participating in ASSPI. The region’s aggregate performance is significantly shaped by two standout performers: South Africa, which leads the entire continent with an overall score of 8.64, and Tanzania (7.35), which demonstrates particular strength in variety release quality and crop varietal choice for farmers. South Africa excels across almost every ASSPI dimension, recording the highest possible score on varieties released (I2 = 10.0) and near-maximum scores on variety release quality (I1 = 9.75) and agro-dealer networks. Several high-performing dual COMESA–SADC members also contribute strongly to the regional average: Zambia (7.83), Zimbabwe (7.62), Malawi (6.43), and Eswatini (6.38) all score in the Good range. The SADC Harmonized Seed Regulatory System (SADC HSRS), in effect since 2013, provides a durable regional framework within which many of these dual-member countries operate.

Among the mid-to-lower-performing SADC members, Mozambique (4.80) has made meaningful progress, improving by nearly a full point since 2023, with gains particularly in plant genetic resources, EGS availability, and harmonization alignment. Namibia (4.24) and Seychelles (3.61) perform at moderate levels, while Angola (3.73), a dual SADC–ECCAS member, remains constrained by weak variety release processes and absent biosafety frameworks. The Democratic Republic of the Congo (3.27), a member of COMESA, SADC, and ECCAS, faces persistent structural constraints across variety release and seed policy. Botswana (4.02) experienced the most dramatic decline in the SADC bloc — falling from 5.57 in 2023 — with sharp drops across NARIs adequacy, plant genetic resources, and biosafety frameworks. Madagascar (3.98) and Comoros (2.40), both dual COMESA–SADC members, round out the lower end of the distribution alongside Lesotho (2.75), which has no functional variety release process, no national seed trade association, and weak biosafety and counterfeit seed control frameworks. Despite these gaps, SADC as a whole records the second-highest average score on plant genetic resources of any REC, behind only UMA (I4 = 5.80) and a strong average on seed import regulations (I8 = 7.27).

IGAD (mean = 4.96)

IGAD ranks fourth among the seven RECs with a mean score of 4.96 across its eight member states, all of which participated in the ASSPI 2025 assessment. IGAD recorded the largest improvement of any REC since 2023 (+0.78 points). Kenya (7.64) and Ethiopia (7.26) are the bloc's strongest performers: Kenya's performance is strongest on national biosafety frameworks, variety release quality, and seed import regulations, while Ethiopia's is strongest on the availability of seed in small packages, national biosafety frameworks, and seed policy frameworks. Uganda (6.12) completes the upper tier, performing strongest on regional policy alignment and farmer-managed seed systems recognition.

Djibouti (4.53) recorded the largest gain of any country in the 2025 assessment, rising from 1.35 in 2023 (+3.18 points). This was driven mainly by changes in priority crops between 2023 and 2025. In 2023, the focus crops were tomato, onion, citrus, and melon; by 2025, citrus and melon had been replaced by chili pepper and okra, leading to a substantial increase in the score for seed availability in small packages. In addition, while the 2023 assessment assumed that the country lacked a national biosafety framework, the 2025 assessment confirmed that one existed, resulting in a significant score improvement. The score for seed inspection services also rose from 1.00 in 2023 to 7.00, as the number of seed inspectors more than doubled during the period and reached a level considered sufficient for the country.

Sudan (4.08) declined modestly since 2023 (−0.58), the steepest decline of any IGAD member, while Eritrea (4.05) improved slightly (+0.41). Somalia (3.01) and South Sudan (3.00) anchor the bottom of the bloc. Across the bloc, farmer-managed seed systems (I14 = 5.38) and NARIs adequacy (I3 = 4.74) are each the highest average score of any REC. Varieties released (I2 = 2.95), rather than seed utilization (I7 = 4.28), is IGAD's weakest indicator on average — the one REC where the usual “seed utilization is the weakest indicator” pattern does not hold, a nuance addressed further in the Cross-REC Patterns section below.

ECOWAS (mean = 4.61)

ECOWAS ranks fifth with a mean score of 4.61 across its 15 member countries, sitting just below the 5-point midpoint of the scale. Three countries — Burkina Faso, Mali, and Niger — formally withdrew from ECOWAS in January 2025 for political reasons. However, they are retained in the ASSPI ECOWAS grouping for analytical continuity, as the data reflect the period prior to their withdrawal. The region has one of the longest-standing seed harmonization frameworks on the continent — the ECOWAS Seed Regulation (2008), supported by comprehensive executive regulations and implementation manuals coordinated through

CORAF — and this institutional investment is reflected in the region's notably high average score on seed policy frameworks (I11 = 8.05, the highest of any REC) and its solid alignment with regional regulations (I12=7.13). Ghana (6.58) and Nigeria (6.15) are the bloc's strongest performers. Ghana improved significantly from 5.93 in 2023, driven by gains in variety release quality and seed trade association performance. Nigeria maintains a robust variety development system and operates a biosafety framework that has permitted the commercialization of both cotton and cowpea. Mali (5.85), Benin (5.98), and Burkina Faso (5.73) also perform at a fair to good level across most indicators, while Senegal (5.10), Togo (4.90), and Niger (4.86) maintain functional, if constrained, seed systems. Côte d'Ivoire (4.39), The Gambia (4.18), Liberia (3.94), and Sierra Leone (3.76) represent the mid-lower tier of the region, each showing some seed system infrastructure but significant gaps in variety development and seed inspection services.

Guinea (Conakry) stands out as the region's most significant underperformer, recording an overall score of just 1.88 in 2025 — a decline of 1.60 points since 2023 — driven by significant drops in the scores for crop varietal choice, the management of plant genetic resources, and the recognition of farmer-managed seed systems (FMSS) in policy instruments. Cape Verde (2.71), which was not assessed in 2023 and therefore has no change figure, and Guinea-Bissau (3.09, −1.01 since 2023) also score at the lower end of the distribution. A systemic challenge across ECOWAS is the persistently low utilization of quality commercial seed (I7=2.60), the second-lowest of any REC), reflecting the dominance of farm-saved seed despite relatively advanced policy environments in the stronger member states.

UMA (mean = 4.23)

UMA ranks sixth among the seven RECs, with a mean score of 4.23 across the three of its five member states that participated in the ASSPI 2025 assessment. Algeria and Morocco did not participate, limiting the representativeness of the regional average. The Union du Maghreb Arabe does not yet have an operational regional seed harmonization framework comparable to those of COMESA, SADC, or ECOWAS, and this is reflected in the bloc's notably low average score on REC policy harmonization (I12 = 2.33, the lowest of any REC). Tunisia is by far the strongest performer in the bloc, with an overall score of 6.92 — the highest in the UMA group and placing it firmly in the "good" range. Tunisia recorded one of the most substantial improvements of any country in the 2025 assessment, rising from 5.77 in 2023 (+1.15 points), driven by major gains across variety release quality, plant genetic resources coordination, EGS adequacy, seed import regulation, and seed trade association performance. Tunisia also holds COMESA membership, and its performance reflects the influence of both regional frameworks. Mauritania (3.24) recorded a moderate improvement from 2.82 in 2023 (+0.42), with meaningful gains in plant genetic resources, biosafety frameworks, and agro-dealer network coverage. Libya (2.54) declined slightly from 2.76 in 2023 (−0.22), held back by the near-absence of functioning seed sector institutions: it scores zero on seed policy instruments, biosafety frameworks, agro-dealer networks, seed inspection services, and the seed trade association indicator, reflecting the constraints imposed by ongoing instability. Libya does, however, perform relatively well on variety release quality (I1 = 6.75) and EGS adequacy (I5 = 7.75), suggesting some residual technical capacity in the formal system.

Across the bloc, seed import regulations (I8 = 7.83, the highest average of any indicator in UMA) and EGS adequacy (I5 = 6.44) are the strongest dimensions of performance, driven largely by Tunisia. The weakest dimension is the recognition of farmer-managed seed systems in policy instruments (I14 = 0.83), where all three countries score in the "extremely poor" range — a structural gap that may reflect the historically formal, state-led character of North African seed systems.

ECCAS (mean = 2.82)

ECCAS has the lowest mean score of the seven RECs, at 2.82 across its nine scored members — a significantly weaker average than any other REC, though one that masks wide variation among members. Burundi (4.87), a triple COMESA–EAC–ECCAS member, is the bloc's highest-scoring member, although it declined from 5.78 in 2023. Cameroon's score of 4.86 was driven by improved availability of seed in small package sizes, whose score rose from 2.50 to 6.39, and by a modest increase in the adequacy of agro-dealer networks, from 6.00 to 6.50. Chad's score improved to 3.68, driven by gains in the adequacy of the national seed trade association, whose score rose from 0.00 to 4.67 after the newly formed Alliance of Seed Companies began recruiting members and demonstrated strong resource mobilization. The status of the national PGRFA coordination program also improved, increasing from 0.00 to 4.00.The Democratic Republic of the Congo (3.27), a member of COMESA, SADC, ECCAS, and EAC, faces persistent structural constraints across variety release and seed policy.

At the lower end of the distribution, Gabon (1.96), the Republic of the Congo (1.56), Central African Republic (1.48), and Equatorial Guinea (0.00) reflect largely non-functional seed sectors, with absent variety release processes, no national plant genetic resource programs, no agro-dealer networks, no biosafety frameworks, and no seed trade associations. the Republic of the Congo is a notable exception on one dimension: it scores the maximum (10.0) on Seed Import Regulations (I8), reflecting a functional import control framework despite the absence of broader seed system development. Equatorial Guinea scores zero on the overall ASSPI, with no measurable performance on any indicator. Angola (3.73), a dual SADC–ECCAS member, shows somewhat greater capacity — particularly in seed import regulations — but remains constrained by weak variety release and absent biosafety frameworks. The institutional architecture for seed systems in most ECCAS countries remains nascent compared to other African RECs. Before meaningful regional harmonization can be operationalized, substantial foundational investment is needed — in variety release processes, gene bank rehabilitation, breeder training, and biosafety legislation — in the majority of member states.

Indicator-Level Performance by REC

Beyond overall scores, examining performance on each of the 17 ASSPI indicators reveals which dimensions of seed systems are consistently stronger or weaker across RECs, and which cross-REC patterns emerge. Table 18 provides the underlying values, color-coded by performance level.

TABLE 18: ASSPI INDICATOR SCORES BY REC.

Indicator	COMESA (21)	EAC (8)	SADC (16)	IGAD (8)	ECOWAS (15)	UMA (5)	ECCAS (10)
I1. Variety Release Quality	6.31	6.59	4.79	6.03	5.40	6.42	2.47
I2. Varieties Released	4.47	4.43	3.91	2.95	3.50	2.52	1.81
I3. NARIs Adequacy	4.53	4.39	3.78	4.74	3.64	3.83	1.83
I4. Plant Genetic Resources	5.21	4.58	5.80	4.67	3.69	5.89	2.41
I5. Early-Generation Seed (EGS)	6.44	5.95	5.54	6.04	5.33	6.44	3.44
I6. Crop Varietal Choice	4.36	4.60	4.71	3.86	3.99	2.23	2.20
I7. Seed Utilization	4.10	3.45	3.78	4.28	2.63	2.85	0.89
I8. Seed Import Regulations	6.98	6.56	7.27	6.19	6.93	7.83	5.78
I9. Agro-dealer Networks	5.02	4.75	5.77	3.81	4.47	5.00	2.67
I10. Seed in Small Packages	4.36	5.98	3.67	4.77	1.92	5.00	2.51
I11. Seed Policy Frameworks	6.91	7.16	6.93	6.86	8.05	5.28	6.26
I12. REC Policy Harmonization	5.76	6.12	6.47	5.38	7.13	2.33	4.00

Indicator	COMESA (21)	EAC (8)	SADC (16)	IGAD (8)	ECOWAS (15)	UMA (5)	ECCAS (10)
I13. Biosafety Framework	5.29	4.94	5.73	5.06	4.93	3.67	1.78
I14. Farmer Managed Seed (FMSS)	4.10	3.88	4.80	5.38	2.83	0.83	2.67
I15. Seed Inspection Services	5.03	5.21	5.09	4.67	3.93	2.44	2.11
I16. Combat Counterfeit Seed	5.60	4.94	5.37	5.00	5.27	4.67	3.33
I17. Seed Trade Associations	4.99	5.71	3.88	4.67	4.68	5.56	1.86
OVERALL SCORE	**5.26**	**5.25**	**5.14**	**4.96**	**4.61**	**4.23**	**2.82**

Cross-REC Patterns

Seed Policy Frameworks (I11) is consistently high across most RECs, particularly in ECOWAS (8.05, the highest of any REC), EAC (7.16), SADC (6.93), ECCAS (6.26), IGAD (6.86), and COMESA (6.91). UMA scores lower on this indicator (5.28). National seed laws and policy documents are generally well-developed even where implementation capacity lags considerably behind.

Seed Utilization (I7) is the weakest or near-weakest indicator in nearly every REC (ECCAS = 0.89, ECOWAS = 2.63, UMA = 2.85, EAC = 3.45, SADC = 3.78, COMESA = 4.10). IGAD is a notable exception: at 4.28, I7 is not IGAD's weakest indicator — that distinction belongs to Varieties Released (I2 = 2.95), discussed below. Elsewhere, actual uptake of quality commercial seed by farmers remains far below policy aspirations, underscoring that regulatory progress has yet to translate reliably into farmer-level impact.

Varieties Released (I2) is among the weakest indicators on average across most RECs (ECCAS = 1.81, UMA = 2.52, IGAD = 2.95, ECOWAS = 3.50, SADC = 3.91, EAC = 4.43, COMESA = 4.47), indicating that the pipeline of new varieties reaching the market remains thin across most of the continent. For IGAD specifically, I2 is the weakest-performing indicator overall, rather than Seed Utilization.

Plant Genetic Resources (I4) presents a notable contrast: UMA leads all RECs at 5.89, driven particularly by strong performance in Tunisia, followed by SADC (5.80) and COMESA (5.21). IGAD (4.67) and EAC (4.58) sit in the middle of the distribution. ECCAS records the lowest score at 2.41. ECOWAS has declined sharply on this indicator since 2023 following methodological improvements in accessing adequacy of performance in characterization, human resources and collaboration with community-based organizations.

REC Policy Harmonization (I12) shows one of the widest divergences of any indicator across RECs: ECOWAS leads at 7.13, followed by SADC (6.47), EAC (6.12), COMESA (5.76), IGAD (5.38), ECCAS (4.00), and UMA (2.33). UMA's low score on this indicator reflects the absence of a functioning harmonized seed trade framework among its assessed members. Farmer Managed Seed Systems (I14) shows a nearly comparable spread across the seven RECs — from IGAD's high of 5.38 to UMA's low of 0.83 — making I12 and I14 the two most divergent indicators in the 2025 assessment.

EAC records the highest average score of any REC on three indicators: Variety Release Quality (I1 = 6.59), Seed in Small Packages (I10 = 5.98), and Seed Trade Associations (I17 = 5.71); UMA follows closely on each (6.42, 5.00, and 5.56, respectively). IGAD records the highest average score of any REC on two further indicators: NARIs Adequacy (I3 = 4.74) and Farmer Managed Seed Systems (I14 = 5.38, more than four points above UMA's 0.83).

Change in REC Performance Since 2023

The ASSPI 2025 enables a direct comparison with 2023 scores for countries assessed in both rounds. Of the seven RECs, four improved their mean overall scores between 2023 and 2025: IGAD by +0.78 points — the largest gain of any REC — followed by UMA (+0.45) and COMESA (+0.35); EAC also improved, by +0.17. SADC declined modestly (−0.10), and ECOWAS somewhat more (−0.39, based on 14 countries with

scores in both rounds; Cape Verde was not assessed in 2023). ECCAS declined by −0.97, based on seven countries with scores in both rounds. EAC and IGAD both have full eight-country comparability between rounds, with no countries excluded from either calculation.

COMESA: Broad-Based Improvement

COMESA's gain of +0.35 points is notable both for its magnitude and its breadth: improvements are visible across most indicators rather than being driven by a single outlier. Egypt posted the largest gain among higher-performing members (+1.02), followed closely by Tunisia (+1.15). Somalia recorded the largest improvement among lower-performing members, rising from 1.56 in 2023 to 3.01 in 2025 (+1.46), driven by gains in variety release quality, seed import regulations, seed policy frameworks, and seed utilization — improvements reflecting the passage of key legislation and growing institutional capacity, even as the overall score remains in the Poor range. Ethiopia posted the second-largest gain among mid-tier members (+1.18), with improvements spanning status of seed policy instruments, seed in small packages, REC policy alignment, biosafety, crop varietal choice, and EGS availability. Kenya (+0.52), Rwanda (+0.67), and Zimbabwe (+0.40) also improved meaningfully. Among lower-performing members, Djibouti made commendable gains (+3.18), though from a very low base. Burundi (−0.91) and Seychelles (−0.29) recorded the most notable declines within the bloc. Only three COMESA indicators declined on average, and all three declines were modest.

EAC: Modest Gain Amid Wide Variation

EAC's overall gain of +0.17 points conceals substantial variation among its eight members. Somalia recorded the largest improvement in the bloc, rising from 1.56 in 2023 to 3.01 in 2025 (+1.46), driven by gains in variety release quality, seed import regulations, seed policy frameworks, and seed utilization. Rwanda also improved substantially (+0.67), and Kenya gained (+0.51). Tanzania improved modestly (+0.10), and South Sudan improved modestly (+0.39). Burundi recorded the steepest decline in the bloc, falling from 5.78 to 4.87 (−0.91), and Uganda also declined moderately (−0.35). The Democratic Republic of the Congo declined by −0.54. The wide spread between Somalia's strong gain and Burundi's steep decline illustrates how much individual country trajectories vary within a bloc whose regional average moved only marginally.

SADC: Modest Decline, Significant Heterogeneity

SADC's decline of −0.10 conceals considerable within-region variation. South Africa remained essentially stable (+0.02), confirming the durability of its high-performing system. Mozambique recorded a meaningful gain (+0.87), and Angola improved modestly (+0.42). Tanzania improved modestly (+0.10). Among dual COMESA–SADC members, Zimbabwe improved (+0.41) and Eswatini gained modestly (+0.23), while Zambia (−0.07), Malawi (−0.04), and Seychelles (−0.29) were nearly unchanged. The regional average was dragged down primarily by Botswana, which fell sharply from 5.57 to 4.02 (−1.55), with declines across NARIs adequacy, plant genetic resources, and biosafety — a notable reversal for a country previously considered a moderate performer on an improving trajectory. Madagascar (−0.54), Comoros (+0.26), DRC (−0.54), and Lesotho (−0.77) complete the picture of a region with mixed but mostly negative momentum below the top tier.

IGAD: Strong Improvement Led by Djibouti

IGAD recorded the largest overall improvement of any REC between 2023 and 2025 (+0.78 points), driven primarily by Djibouti's exceptional gain from 1.35 in 2023 to 4.53 in 2025 (+3.18) This was mainly driven by changes in priority crops between 2023 and 2025, as explained on page 232, which substantially increased the score for seed availability in small packages. The 2025 assessment also confirmed the existence of a national biosafety framework, while the number of seed inspectors more than doubled during the period, reaching a level considered sufficient for the country. Ethiopia also improved substantially (+1.18), with gains spanning availability of seed in small packages, alignment with regional seed regulations, national biosafety frameworks, and availability of crop varietal choice to farmers. Somalia improved by +1.46, and Kenya gained +0.51. Eritrea improved modestly (+0.41), and South Sudan improved modestly (+0.39). Sudan recorded the only notable decline in the bloc (−0.58), and Uganda declined moderately (−0.35). At the indicator level, Seed in Small Packages (I10) recorded the largest average gain of any REC (+2.62), and Seed Utilization (I7) also improved substantially (+1.72) — a notable departure from the general stagnation on this indicator seen elsewhere.

ECOWAS: Concentrated Decline

ECOWAS's decline of −0.39 was not evenly distributed. Ghana improved from 5.93 to 6.58 (+0.65), one of the strongest individual gains in the region. Liberia also improved meaningfully (+0.74), and Côte d'Ivoire showed a small improvement (+0.07). Nigeria held roughly steady (−0.14), and Benin improved (+0.61). However, the regional average was pulled down by pronounced deterioration in several member states. Guinea (Conakry) fell by 1.60 points — the steepest national decline in the region — with significant drops in scores for crop varietal choice, PGRFA coordination, and FMSS recognition. Guinea-Bissau also fell sharply (−1.01). The Gambia (−0.69), Togo (−0.67), Niger (−0.70), and Sierra Leone (−0.67) all recorded moderate declines. The declines were concentrated in a small number of high-weight indicators rather than spread evenly across the system.

UMA: Broad Improvement Led by Tunisia

UMA recorded the second-largest overall improvement of any REC between 2023 and 2025 (+0.45 points), behind IGAD (see IGAD discussion above). UMA's gain was driven primarily by Tunisia's substantial gains (+1.15) across plant genetic resources, varieties released, and seed import regulations. Mauritania also improved (+0.42), with gains in plant genetic resources and EGS availability. Libya declined modestly (−0.21). The most striking change at the indicator level is plant genetic resources (I4), which improved by an average of +3.56 points across the three UMA members — the largest single-indicator gain of any REC. Seed inspection services (I15) recorded the sharpest decline (−1.89), and REC policy harmonization (I12) also fell (−1.33), reflecting limited progress on regional regulatory integration.

ECCAS: Systemic Deterioration

ECCAS declined by −0.97 on average, though this figure masks significant deterioration among most members: Burundi fell by −0.91, Cameroon by −0.59, Central African Republic by −0.73, DRC by −0.54, Congo Republic by −0.41, and Chad modestly by −0.36. Angola's modest gain (+0.42) partially offsets these declines at the aggregate level. The depth and breadth of deterioration among ECCAS members — particularly across biosafety (I13), REC policy harmonization (I12), and crop varietal choice (I6) — suggest underlying drivers that go beyond data collection variation, likely reflecting genuine institutional erosion or reduced government engagement with seed sector governance.

Section 6: Conclusions

The 2025 ASSPI study presents the most comprehensive assessment of seed sector performance across Africa to date, covering 50 of the 55 African Union member states through 17 indicators spanning the full seed value chain. Taken together, the findings reveal a continent whose seed systems are unevenly developed, with pockets of genuine excellence, a large middle tier that is making incremental progress, and a significant number of countries where seed sector foundations remain weak or absent. The following conclusions synthesize the key patterns emerging from this assessment and identify priorities for targeted action.

Performance Is Highly Uneven Across Countries and Regions

Africa's seed sectors span a wide performance spectrum. A small number of countries — led by South Africa (8.64), Egypt (8.13), and Zambia (7.83) — have well developed, and functioning seed systems that score "good" or "excellent" across most ASSPI dimensions. These high performers demonstrate that strong variety release processes, robust early-generation seed supply chains, active private sectors, and effective national seed trade associations mutually reinforce one another. Their experience offers replicable lessons for peer countries.

At the other end, a substantial group of countries — concentrated in Central Africa (ECCAS region) and including several fragile and conflict-affected states — record scores so low as to indicate largely non-functional seed systems. For these countries, the challenge is not refinement of existing systems but foundational institution-building: establishing variety release committees, rehabilitating gene banks, training plant breeders, and drafting basic seed legislation. The ECCAS REC as a whole averaged just 2.82 in 2025, well below the continental midpoint.

Between these extremes lies a middle tier of countries that have made tangible progress on policy and regulatory frameworks but have yet to translate these gains into reliable farmer-level access to improved seed. Addressing the persistent gap between policy intent and implementation outcomes is arguably the defining challenge for seed sector development in Africa.

Seed Utilization Remains the Continent's Most Persistent Weakness

Across all seven RECs and nearly every country assessed, actual uptake of quality commercial seed by farmers is the weakest or near-weakest dimension of national seed systems. Average scores by REC range from 4.28 (IGAD) down to just 0.89 (ECCAS), with COMESA at 4.10, SADC at 3.78, EAC at 3.45, UMA at 2.85, and ECOWAS at 2.63. These figures indicate that even in countries with comparatively advanced regulatory environments and growing private sectors, the majority of smallholder farmers continue to rely on farm-saved or informally traded seed.

This gap has multiple causes. In many countries, certified seed is not available in small packages accessible to smallholder farmers. Agro-dealer networks are absent or weak in rural areas. Bridging the gap between seed availability and seed use requires concerted effort across input distribution, farmer education, and last-mile logistics — dimensions that extend well beyond seed regulation alone.

Variety Development Pipelines Are Thin in Most Countries

Varieties Released is the second-weakest indicator continent-wide, with REC averages of 4.47 (COMESA), 4.43 (EAC), 3.91 (SADC), 3.50 (ECOWAS), 2.95 (IGAD), 2.52 (UMA), and 1.81 (ECCAS) — IGAD's weakest indicator overall, as discussed in the REC analysis above. In many countries, the number of new varieties reaching the market each year across the four priority crops remains well below what is needed to provide farmers with meaningful varietal choice, particularly choice that reflects the diversity of agro-ecological zones, climate-change pressures, and evolving market preferences.

Underlying this weakness is the inadequacy of National Agricultural Research Institutes (NARIs) in many countries, including chronic underfunding of breeding programs, insufficient numbers of trained breeders, and poorly maintained research infrastructure. Investment in human capital and research facilities at the NARI level is a precondition for expanding variety pipelines and should be prioritized by governments and development partners alike.

Regulatory Frameworks Are Ahead of Implementation Capacity

The ASSPI 2025 data confirm a well-established structural pattern in African seed systems: national policy and regulatory frameworks are comparatively advanced, while implementation and enforcement capacity lag far behind. Seed Policy Frameworks are the highest-scoring policy-related dimension in every REC — scoring 8.05 in ECOWAS, 7.16 in EAC, 6.93 in SADC, 6.91 in COMESA, 6.86 in IGAD, 6.26 in ECCAS, and 5.28 in UMA — and Seed Import Regulations is consistently the top-scoring indicator overall (ranging from 5.78 in ECCAS to 7.83 in UMA). Yet scores on Seed Inspection Services, efforts to combat counterfeit seed, and actual seed utilization all fall significantly below these regulatory benchmarks.

Closing this implementation gap requires sustained investment in the operational capacity of national seed authorities: qualified inspectors, functional laboratory infrastructure, vehicles and logistics for field inspection, and adequate budgets for enforcement activities. Countries that have made the greatest strides — including Kenya, Zimbabwe, and Ethiopia — have typically paired strong legislative frameworks with steady investment in institutional delivery capacity.

Regional Harmonization Is Progressing but Unevenly

The regional harmonization frameworks established by ECOWAS (2008), SADC (2013), and COMESA (2014) represent important achievements in reducing the regulatory fragmentation that constrains intra-African seed trade. The 2025 data show meaningful alignment with these frameworks in many member states. ECOWAS scores highest on REC Policy Harmonization at 7.13, and its Seed Policy Frameworks score of 8.05 is the highest of any REC, attesting to the depth of the West African regulatory architecture.

However, harmonization at the policy level has not fully translated into harmonized practice. Variety catalog alignment, mutual recognition of seed certification, and cross-border movement of seed remain inconsistent across and within RECs. UMA scores the lowest of any REC on harmonization (I12 = 2.33), reflecting the absence of an operational regional seed framework for the Maghreb region. ECCAS presents the most urgent case among those with existing frameworks: with a mean harmonization score of 4.00 and institutional architecture for seed systems that is largely nascent, meaningful regional harmonization in Central Africa will require prior foundational investment at the country level.

Biosafety Frameworks and Biotech Readiness Require Attention

As the use of biotechnology in crop breeding expands across Africa, the adequacy of national biosafety frameworks is becoming increasingly consequential. The 2025 data show moderate scores in SADC (5.73), COMESA (5.29), and IGAD (5.06), but lower scores in EAC (4.94), ECOWAS (4.93), UMA (3.67), and ECCAS (1.78). A number of countries — including several with commercially released biotech varieties — have functional biosafety systems. However, many others lack the legislative basis, institutional infrastructure, or trained regulatory personnel to evaluate and oversee the deployment of genetically modified or other advanced varieties. Strengthening biosafety governance is essential not only for regulatory compliance but for maintaining public and farmer confidence in seed quality and safety.

Integration of Farmer-Managed Seed Systems Deserves Greater Priority

Across Africa, informal and farmer-managed seed systems (FMSS) continue to supply the majority of seed used by smallholder farmers. The ASSPI's indicator which tracks the recognition of FMSS in national policy instruments scores only 4.10 (COMESA), 3.88 (EAC), 2.83 (ECOWAS), 2.67 (ECCAS), and just 0.83 (UMA) — the lowest of any REC — while IGAD (5.38) and SADC (4.80) are comparatively stronger. This signals that most countries have yet to develop coherent policy approaches that recognize, support, and allow FMSS to be represented in seed sector development initiatives. Integrating FMSS into national seed sector strategies — through policies that support seed saving, community seed banks, and local variety development — is not only equitable but pragmatic, given the scale at which these systems operate.

Mixed Trends Since 2023: Progress Is Fragile and Reversible

The ASSPI 2025 data reveal that progress in seed sector performance is neither universal nor irreversible. Of the seven RECs, four improved their mean scores between 2023 and 2025: IGAD by the largest margin (+0.78), followed by UMA (+0.45), COMESA (+0.35), and EAC (+0.17). SADC declined modestly (−0.10), ECOWAS declined more substantially (−0.39), and ECCAS recorded the steepest deterioration of any REC (−0.97). At the country level, notable gains were recorded by Ethiopia, Somalia, Tunisia, Ghana, Mozambique, and Côte d'Ivoire, demonstrating that meaningful improvement over a two-year period is achievable with the right policies and investments. However, significant reversals — including Botswana (−1.55), Guinea (Conakry) (−1.60), and Cameroon (−0.59) — illustrate how quickly progress can unravel when institutional attention wanes.

These mixed trends underscore the importance of sustained, long-term investment in seed sector governance rather than episodic project-based interventions. The gains achieved by leading countries were not accidental; they reflect deliberate policy choices, institutional investment, and engagement from both public and private actors over many years.

Priorities for Action

Based on the 2025 ASSPI findings, five priority areas stand out for governments, development partners, and regional bodies seeking to strengthen Africa's seed systems:

1. Invest in variety development and NARI capacity. Governments and donors should prioritize sustained funding for national plant breeding programs, breeder training, and research infrastructure. Without stronger variety pipelines, downstream improvements in seed production, certification, and distribution will have limited impact on farmer productivity.

2. Close the last-mile access gap. Expanding agro-dealer networks into underserved rural areas, requiring seed companies to supply certified seed in small, affordable packages, and investing in farmer awareness programs are essential to converting regulatory and production gains into actual seed use by smallholders.

3. Strengthen seed inspection and quality assurance systems. Many countries have seed laws on paper but lack the operational capacity to enforce them. Investment in inspection personnel, laboratory equipment, and enforcement mechanisms — including measures to combat counterfeit seed — is essential to maintaining farmer confidence and market integrity.

4. Build foundational seed sector institutions in the most fragile contexts. For the lowest-performing countries — particularly in ECCAS — regional harmonization and market development are secondary priorities. The immediate need is for basic institution-building: enabling legislation, functional variety release committees, seed inspection units, and rehabilitation of gene banks. Targeted support from regional bodies and development partners is critical for these countries to progress.

5. Accelerate regional harmonization and intra-African seed trade. The existing REC harmonization frameworks — particularly in ECOWAS, SADC, and COMESA — represent underutilized assets. Deepening harmonization of variety catalogs, seed certification mutual recognition, and phytosanitary standards would substantially reduce the cost and complexity of intra-African seed trade, expanding market access for seed companies and variety availability for farmers. The development of an operational harmonization framework for UMA would similarly benefit the Maghreb region.

Looking Ahead

The ASSPI has now been conducted in two rounds — 2023 and 2025 — providing the first systematic, cross-country time-series data on seed sector performance in Africa. As the index matures, the ability to track trends over time will become increasingly valuable for identifying which interventions are working, which are not, and where policy attention and investment should be concentrated. The expansion from 47

to 50 countries in 2025, combined with methodological improvements including the introduction of scoring rubrics, additional sub-indicators, and an interactive data dashboard, has strengthened the reliability and utility of ASSPI data for decision-makers at national, regional, and continental levels.

Africa's seed systems hold enormous potential for contributing to food security, agricultural transformation, and climate resilience. Realizing that potential will require sustained political commitment, adequate public investment, strong private sector engagement, and robust regional cooperation. The ASSPI 2025 provides a clearer picture than ever before of where that work must be done and where promising progress is already underway.

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Appendix 1: Ratings of NARIs and availability of Early Generation Seed by individual components and crops

TABLE 19: ADEQUACY OF NATIONAL AGRICULTURAL RESEARCH INSTITUTES' BREEDING PROGRAMS

Country	Adequacy of numbers of breeders					Adequacy of funding of breeders					Adequacy of basic research infrastructure of breeders					Overall rating (out of 10)
	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg	
Angola	3	1	0	0	**1.00**	1	1	0	0	**0.50**	7	6	0	0	**3.25**	1.58
Benin	8	8	8	8	**8.00**	6	6	6	6	**6.00**	3	3	3	3	**3.00**	5.67
Botswana	1	2	1	1	**1.25**	4	4	6	4	**4.50**	3	3	3	3	**3.00**	2.92
Burkina Faso	7	7	7	7	**7.00**	3	3	3	3	**3.00**	7	7	7	7	**7.00**	5.67
Burundi	3	3	3	3	**3.00**	3	3	7	3	**4.00**	7	7	7	7	**7.00**	4.67
Cameroon	1	0	0	0	**0.25**	2	3	2	1	**2.00**	2	2	2	2	**2.00**	1.42
Cape Verde	0	0	0	0	**0.00**	1	0	0	0	**0.25**	4	3	2	0	**2.25**	0.83
Central African Republic	0	0	0	0	**0.00**	0	0	0	0	**0.00**	3	2	2	1	**2.00**	0.67
Chad	5	3	3	3	**3.50**	4	4	4	4	**4.00**	4	4	4	4	**4.00**	3.83
Comoros	3	3	3	3	**3.00**	3	3	3	3	**3.00**	5	5	5	5	**5.00**	3.67
The Republic of the Congo	0	1	0	0	**0.25**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.08
Côte d'Ivoire	3	3	4	2	**3.00**	4	4	4	2	**3.50**	4	4	5	3	**4.00**	3.50
Democratic Republic of Congo	7	7	4	3	**5.25**	3	3	2	2	**2.50**	2	2	2	2	**2.00**	3.25
Djibouti	4	4	4	4	**4.00**	4	4	4	4	**4.00**	4	4	4	4	**4.00**	4.00
Egypt	8	8	8	8	**8.00**	3	3	2	2	**2.50**	6	6	6	6	**6.00**	5.50
Equatorial Guinea	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.00
Eritrea	3	3	3	0	**2.25**	9	9	9	9	**9.00**	8	8	8	8	**8.00**	6.42
Eswatini	0	0	0	0	**0.00**	3	3	3	3	**3.00**	6	6	6	6	**6.00**	3.00
Ethiopia	5	8	8	8	**7.25**	5	5	5	5	**5.00**	4	4	4	4	**4.00**	5.42
Gabon	0	0	0	0	**0.00**	1	1	1	1	**1.00**	2	2	2	2	**2.00**	1.00
Gambia	0	0	0	0	**0.00**	5	0	2	2	**2.25**	5	0	0	0	**1.25**	1.17
Ghana	5	3	4	2	**3.50**	3	4	3	3	**3.25**	3	3	3	3	**3.00**	3.25
Guinea (Conakry)	2	2	2	2	**2.00**	2	2	2	2	**2.00**	4	4	4	4	**4.00**	2.67

Country	Adequacy of numbers of breeders					Adequacy of funding of breeders					Adequacy of basic research infrastructure of breeders					Overall rating (out of 10)
	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg	
Guinea-Bissau	3	3	0	0	**1.50**	3	3	0	0	**1.50**	3	3	0	0	**1.50**	1.50
Kenya	9	7	5	7	**7.00**	8	7	2	6	**5.75**	9	8	7	8	**8.00**	6.92
Lesotho	0	0	0	0	**0.00**	2	1	1	2	**1.50**	0	6	6	6	**4.50**	2.00
Liberia	8	2	0	0	**2.50**	7	5	5	5	**5.50**	4	4	4	4	**4.00**	4.00
Libya	6	7	5	5	**5.75**	3	3	3	3	**3.00**	4	4	4	4	**4.00**	4.25
Madagascar	5	3	3	3	**3.50**	5	3	3	3	**3.50**	5	5	5	5	**5.00**	4.00
Malawi	4	3	3	3	**3.25**	3	3	3	3	**3.00**	6	6	6	6	**6.00**	4.08
Mali	9	6	6	3	**6.00**	6	5	7	3	**5.25**	7	6	7	5	**6.25**	5.83
Mauritania	1	2	1	1	**1.25**	2	2	2	2	**2.00**	3	3	3	3	**3.00**	2.08
Mozambique	2	4	4	4	**3.50**	2	2	2	2	**2.00**	4	4	4	4	**4.00**	3.17
Namibia	1	0	1	1	**0.75**	3	3	3	3	**3.00**	3	3	3	3	**3.00**	2.25
Niger	4	4	4	4	**4.00**	4	4	4	4	**4.00**	4	4	4	4	**4.00**	4.00
Nigeria	6	6	6	6	**6.00**	5	5	5	5	**5.00**	4	4	4	4	**4.00**	5.00
Rwanda	2	4	3	3	**3.00**	7	7	7	7	**7.00**	8	8	8	8	**8.00**	6.00
Senegal	2	2	2	2	**2.00**	3	3	3	3	**3.00**	4	4	4	4	**4.00**	3.00
Seychelles	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.00
Sierra-Leone	7	3	3	3	**4.00**	5	3	3	3	**3.50**	3	3	3	3	**3.00**	3.50
Somalia	0	0	0	0	**0.00**	2	2	2	2	**2.00**	3	3	2	2	**2.50**	1.50
South Africa	9	9	9	9	**9.00**	9	9	9	9	**9.00**	9	9	9	9	**9.00**	9.00
South Sudan	3	4	0	3	**2.50**	2	4	2	4	**3.00**	2	2	2	2	**2.00**	2.50
Sudan	5	3	8	5	**5.25**	6	2	8	4	**5.00**	5	3	8	3	**4.75**	5.00
Tanzania	4	6	4	2	**4.00**	4	4	4	5	**4.25**	4	4	4	4	**4.00**	4.08
Togo	6	5	5	6	**5.50**	6	6	4	5	**5.25**	5	4	4	4	**4.25**	5.00
Tunisia	6	4	5	3	**4.50**	6	4	4	2	**4.00**	7	7	7	7	**7.00**	5.17
Uganda	6	4	5	6	**5.25**	6	5	5	5	**5.25**	8	8	8	8	**8.00**	6.17
Zambia	6	3	4	6	**4.75**	7	4	8	8	**6.75**	10	9	7	9	**8.75**	6.75
Zimbabwe	9	8	7	9	**8.25**	6	5	5	6	**5.50**	7	7	7	7	**7.00**	6.92

TABLE 20: ADEQUACY OF EARLY GENERATION SEED (EGS)

Country	Quantity of EGS supplied					Quality of EGS					Timeliness of delivery of EGS					Overall adequacy of EGS
	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	
Angola	6	3	0	0	**2.25**	3	3	0	2	**2.00**	5	5	0	4	**3.50**	2.58
Benin	8	8	8	8	**8.00**	9	9	9	7	**8.50**	9	9	9	9	**9.00**	8.50
Botswana	1	1	1	1	**1.00**	1	1	1	1	**1.00**	8	8	8	8	**8.00**	3.33
Burkina Faso	8	8	8	8	**8.00**	5	5	7	4	**5.25**	8	8	8	8	**8.00**	7.08
Burundi	8	8	8	6	**7.50**	7	7	8	3	**6.25**	8	8	8	6	**7.50**	7.08
Cameroon	5	5	5	5	**5.00**	5	5	5	5	**5.00**	5	5	5	5	**5.00**	5.00
Cape Verde	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.00
Central African Republic	5	5	5	5	**5.00**	5	5	5	5	**5.00**	5	5	5	5	**5.00**	5.00
Chad	7	7	7	7	**7.00**	7	7	4	3	**5.25**	6	6	6	6	**6.00**	6.08
Comoros	5	5	4	5	**4.75**	9	7	3	5	**6.00**	9	9	5	7	**7.50**	6.08
The Republic of the Congo	1	3	0	0	**1.00**	3	2	0	0	**1.25**	1	1	0	0	**0.50**	0.92
Côte d'Ivoire	7	8	8	8	**7.75**	3	4	4	4	**3.75**	5	5	7	7	**6.00**	5.83
Democratic Republic of Congo	6	5	5	5	**5.25**	3	2	2	2	**2.25**	3	3	3	3	**3.00**	3.50
Djibouti	6	6	6	6	**6.00**	6	6	6	6	**6.00**	8	8	8	8	**8.00**	6.67
Egypt	9	9	9	9	**9.00**	8	10	10	6	**8.50**	10	10	10	10	**10.00**	9.17
Equatorial Guinea	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.00
Eritrea	6	8	4	6	**6.00**	7	8	3	7	**6.25**	9	9	9	9	**9.00**	7.08
Eswatini	3	6	6	7	**5.50**	3	6	6	7	**5.50**	7	7	7	7	**7.00**	6.00
Ethiopia	8	9	8	8	**8.25**	9	8	9	6	**8.00**	9	8	9	7	**8.25**	8.17
Gabon	5	5	0	0	**2.50**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.83
Gambia	9	0	0	6	**3.75**	9	0	3	8	**5.00**	9	0	0	9	**4.50**	4.42
Ghana	9	9	9	8	**8.75**	8	7	7	7	**7.25**	7	7	7	6	**6.75**	7.58
Guinea (Conakry)	4	4	4	4	**4.00**	4	4	4	4	**4.00**	3	3	3	3	**3.00**	3.67
Guinea-Bissau	9	9	0	0	**4.50**	9	9	0	0	**4.50**	5	5	0	0	**2.50**	3.83
Kenya	8	8	8	8	**8.00**	8	7	4	7	**6.50**	7	7	5	7	**6.50**	7.00
Lesotho	5	0	0	5	**2.50**	5	0	0	4	**2.25**	5	0	0	5	**2.50**	2.42
Liberia	6	6	6	6	**6.00**	6	6	6	6	**6.00**	5	5	5	5	**5.00**	5.67
Libya	7	7	8	8	**7.50**	8	8	9	8	**8.25**	8	8	7	7	**7.50**	7.75

Country	Quantity of EGS supplied					Quality of EGS					Timeliness of delivery of EGS					Overall adequacy of EGS
	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	Crop 1	Crop 2	Crop 3	Crop 4	Avg.	
Madagascar	7	5	5	5	**5.50**	5	3	5	5	**4.50**	7	7	7	7	**7.00**	5.67
Malawi	9	9	9	9	**9.00**	5	3	3	3	**3.50**	6	6	6	6	**6.00**	6.17
Mali	5	6	6	4	**5.25**	5	5	5	2	**4.25**	8	6	8	2	**6.00**	5.17
Mauritania	0	6	0	0	**1.50**	0	6	0	0	**1.50**	0	7	0	0	**1.75**	1.58
Mozambique	9	5	7	8	**7.25**	8	5	6	7	**6.50**	8	4	6	7	**6.25**	6.67
Namibia	7	7	7	7	**7.00**	7	7	7	7	**7.00**	5	5	5	5	**5.00**	6.33
Niger	8	8	8	8	**8.00**	7	6	5	3	**5.25**	5	5	5	5	**5.00**	6.08
Nigeria	6	5	6	5	**5.50**	4	3	4	3	**3.50**	4	4	4	4	**4.00**	4.33
Rwanda	9	7	6	6	**7.00**	8	8	8	8	**8.00**	8	9	8	8	**8.25**	7.75
Senegal	5	5	5	5	**5.00**	4	7	4	7	**5.50**	6	6	5	6	**5.75**	5.42
Seychelles	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0	0	0	0	**0.00**	0.00
Sierra-Leone	7	7	7	7	**7.00**	5	5	5	5	**5.00**	6	5	5	5	**5.25**	5.75
Somalia	6	5	5	0	**4.00**	3	3	2	0	**2.00**	5	3	4	0	**3.00**	3.00
South Africa	9	9	9	9	**9.00**	9	9	9	9	**9.00**	9	9	9	9	**9.00**	9.00
South Sudan	4	4	4	4	**4.00**	2	2	2	2	**2.00**	7	7	7	7	**7.00**	4.33
Sudan	5	5	8	5	**5.75**	5	2	8	2	**4.25**	5	3	8	2	**4.50**	4.83
Tanzania	8	8	8	8	**8.00**	8	8	8	8	**8.00**	7	7	7	7	**7.00**	7.67
Togo	6	6	4	7	**5.75**	6	6	4	7	**5.75**	9	9	6	9	**8.25**	6.58
Tunisia	10	10	10	10	**10.00**	10	10	10	10	**10.00**	10	10	10	10	**10.00**	10.00
Uganda	7	8	7	7	**7.30**	8	8	6	5	**6.90**	7	7	8	8	**7.55**	7.25
Zambia	10	10	9	5	**8.50**	10	10	8	4	**8.00**	10	10	10	6	**9.00**	8.50
Zimbabwe	10	8	9	10	**9.25**	10	8	9	10	**9.25**	9	8	9	10	**9.00**	9.17

Appendix 2: Ratings of seed trade associations

TABLE 21: RATINGS OF SEED TRADE ASSOCIATIONS

Country	Name of Seed Trade Association	Activity on important seed sector issues	Effectiveness in advocacy	Managerial ability	Providing value to members	Democracy in elections and decision making	Ability to mobilize resources	Average performance
Benin	Association Nationale des Semenciers du Bénin (AnaSeB)	7	6	6	8	6	6	6.50
Burkina Faso	Union Nationale des sociétés coopératives de Producteurs de Semences du Burkina (UNIS-BF)	6	8	7	7	7	7	7.00
Burundi	*Collectif des Compagnies et Coopératives de Production des Semences du Burundi* (COPROSEBU)	2.8	2.8	2.6	3	2.2	3	2.73
Cameroun	Association of Seed Traders of Cameroon (ACOSEC)	7	8	8	8	8	8	7.83
Côte d'Ivoire	*Association Nationale des Semenciers de Côte d'Ivoire* (ANASEMCI)	6.5	6.5	7.2	7.3	9.2	5.8	7.08
Democratic Republic of Congo	*Union Nationale des Producteurs Agricoles du Congo* (UNAGRICO)	4	3	2	2	2	1	2.33
Egypt	The Egyptian Association for the Seed Industry	8	10	9	9	10	10	9.33
Eswatini	Eswatini National Seed Trade Association	4	5	5	5	5	5	4.83
Ethiopia	Ethiopian Seed Association (ESA)	7	7	7	7	7	6	6.83
Gambia	National Seed Growers' Association (NSGA)	3	2	2	4	6	5	3.67
Ghana	National Seed Trade Association of Ghana (NASTAG)	9	8	8	8	10	6	8.17
Guinea-Bissau	Anapa Socoven Proagri	5	5	5	5	5	5	5.00
Kenya	Seed Trade Association of Kenya (STAK)	10	9	7	8	8	8	8.33
Madagascar	F3M (Fikambanana Malagasy Misehatra Masomboly : Interprofession de la filière semence)	5	5	5	5	5	5	5.00
Malawi	Seed Trade Association of Malawi (STAM)	9	8	8	8	10	7	8.33
Mali	Association Semencière du Mali (ASSEMA)	7	8	6	6	7	4	6.33
Mauritania	Interprofessional seeds and seedlings of Mauritania (ISPM)	8	8	8	7	7	7	7.50

Country	Name of Seed Trade Association	Activity on important seed sector issues	Effectiveness in advocacy	Managerial ability	Providing value to members	Democracy in elections and decision making	Ability to mobilize resources	Average performance
Mozambique	Mozambique Seed Trade Association (MOSTA) and Association for Promotion of Seed Sector (APROSE)	4	4	4	4	9	4	4.83
Niger	Association des Producteurs Privés de Semences du Niger (APPSN)	6	5	6	6.5	8.3	6.5	6.38
Nigeria	Seed Entrepreneurs Association of Nigeria (SEEDAN)	5	5	5	5	5	5	5.00
Rwanda	National Seed Association of Rwanda (NSAR)	5	5	6	5	5	6	5.33
Senegal	Union National Interprofessionnelle des Semences (UNIS)	7	7	8	8	8	8	7.67
Somalia	Somalia Seed Trade Association (SOSTA)	2	2	2	2	5	2	2.50
South Africa	South African Seed Organization (SANSOR)	9	9	9	8	10	9	9.00
South Sudan	Seed Trade Association of South Sudan (STASS)	8	6	6	6	2	4	5.33
Sudan	Sudan Seed Trade Association (SSTA)	8	7	6	7	9	6	7.17
Tanzania	Tanzania Seed Trade Association (TASTA)	8	8	8	8	7	7	7.67
Togo	Réseau National des Producteurs de semences certifiées	5	8	5	7	7	5	6.17
Tunisia	Chambre Syndicale du commerce des semences et plantes (UTICA)	9	9	10	9	10	8	9.17
Uganda	Uganda Seed Traders Association (USTA)	7	6	8	7	7	8	7.17
Zambia	Zambia Seed Traders Association (ZASTA)	8	7	7	6	9	6	7.17
Zimbabwe	Zimbabwe Seed Association (ZSA)	9	8	10	9	10	8	9.00
		6.46	**6.31**	**6.30**	**6.33**	**6.96**	**6.01**	**6.39**

Revised ASSPI technical guidelines – February 2025 (revised May 2025)

These guidelines give a description of the parameters (indicators) and data sources, computing methods, and rubrics to guide the scoring of the qualitative parameters. Qualitative scores are based on informed expert opinions and, whenever possible, should reflect available quantitative information from relevant sources, such as government reports and statistics. Qualitative scores are also triangulated with opinions of key subject matter experts. The rubric is based on TASAI's scoring satisfaction ratings on a 0-10 scale, with the following brackets: 0-1.9 extremely poor, 2-3.9 poor, 4-5.9 fair, 6-7.9 good, and 8-10 excellent.

TABLE 22: ASSPI PARAMETERS (INDICATORS)

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
1. Quality of the variety release and registration process, *Qvrp=0-10*.	**Description:** This parameter measures the extent to which the variety release and registration process is clearly defined **by the regulatory agencies**, understood by **all breeders**, and followed by both breeders and regulatory agencies. **Data sources include but are not limited to:** • TASAI reports where available • national seed authority **Computation method:** Computed as the **simple average** of **qualitative expert opinion scores** for four sub-parameters.	1. Clarity of the variety release process to breeders and regulatory agencies.	• All aspects of the variety release process are clearly defined (clarity is excellent), score 8-10. • Most aspects of the variety release process are clearly defined, with some room for improvement (clarity is good), score 6-7.9. • The variety release process is moderately clear (clarity is fair), with significant room for improvement, score 4-5.9. • Many aspects of the variety release process are unclear (clarity is poor) and need a lot of improvement, score 2-3.9. • All (or nearly all) aspects of the variety release process are very unclear (clarity is extremely poor), score 0-1.9. Note: If the clarity of the process is exceptional, the score is 10. If the process is not defined at all, the score is 0.	Qualitative (expert opinion)
		2. Adherence by the variety release committee to the schedule of meetings as stipulated in the Seed Regulations/ Ministerial Orders.	• Committee always or almost always meets according to the stipulated schedule (Adherence to meeting schedule is excellent), score 8-10. • Committee usually follows the stipulated schedule, with occasional lapses (Adherence to meeting schedule is good), score 6-7.9. • Committee follows the stipulated schedule about/on average half the time (Adherence to meeting schedule is fair), score 4-5.9. • Committee often does not follow the stipulated schedule (Adherence to meeting schedule is poor), score 2-3.9. • Committee hardly ever follows to the stipulated schedule (Adherence to meeting schedule is extremely poor), score 0-1.9. Note: If adherence to the committee meetings is exceptional (it has not missed a meeting in the last few years), the score is 10. If the committee does not meet at all, the score is 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
		3. Adherence to the frequency of updates of the national variety catalogue as stipulated in the law. A	• Catalogue updated regularly, with minor delays (Adherence to updating of the catalogue is excellent), score 8–10. • Catalogue updated regularly, with notable delays (Adherence to updating of the catalogue is good), score 6–7.9. • Catalogue updated inconsistently and with significant delays (Adherence to updating of the catalogue is fair), score 4–5.9. • Catalogue rarely updated and often delayed (Adherence to updating of the catalogue is poor), score 2–3.9. • Catalogue barely updated (Adherence to updating of the catalogue is extremely poor), score 0–1.9. Note: If adherence to updating the catalogue is exceptional, the score is 10. If a country does not have a catalogue, the score is 0.	
		4. Adherence to the cost structures of the variety release process, as prescribed in the Seed Regulations/ Ministerial Orders.	• The cost structures of the variety release process are applied consistently (almost) always (Adherence is excellent), score 8-10 • The cost structures of the variety release process are applied mostly consistently (Adherence is good), score 6-7.9 • The cost structures of the variety release process are applied reasonably consistently (Adherence is fair), score 4-5.9 • The cost structures of the variety release process are applied mostly inconsistently (Adherence is poor), score 2-3.9 • The cost structures of the variety release process are applied inconsistently (almost) always (Adherence is extremely poor), score 0-1.9 Note: If adherence to the cost structure is exceptional, the score is 10. If there is no cost structure, the score is 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
2. Number of varieties released in the last 3 years, $\sum NVR_i$ = *if* $\sum NVR$ > *101, 10, 51-100, 8-9.9, 1-50, 1-7.9, 0*	**Description:** This parameter tracks the number of varieties of the four priority food security crops[37] released in the last 3 years, serving as a key measure of the effectiveness of the variety development and release system. More varieties released often translates to more varieties commercialized, thereby increasing farmers' choices. **Data sources include but are not limited to:** • national variety catalogues • regional variety catalogues **Computation method:** Computed using a **four-tier scoring system,** assuming a linear relationship between the number of varieties released and the score: • number of varieties released is 101 or more, score is 10 • number of varieties released is 51-100, score is 8-<10 • number of varieties released is 1-50, score is 1-<8 • number of varieties released is 0, score is 0	Not applicable	Not applicable	Quantitative
3. Adequacy[38] of National Agricultural Research Institutes' (NARIs) breeding programs, Anbp=0-10.	**Description:** This parameter assesses the extent to which public research institutions have the requisite ("adequate") resources (in terms of human capacity (breeders), funding, and infrastructure) to carry out variety development and release. **Data sources include but are not limited to:** • NARIs. **Computation method:** Computed as the **simple average** of **qualitative expert opinion scores** for **three sub-parameters** for each of **the four priority crops** (12 sub-scores total).	1. Adequacy of the number of breeders employed by national breeding programs for each of the four priority crops. Note: only breeders qualified at MSc or PhD level should be counted.	• Number of breeders is fully adequate (Adequacy of breeders is excellent), score 8-10. • Number of breeders is mostly adequate (Adequacy of breeders is good), score 6-7.9. • Number of breeders is reasonably adequate (Adequacy of breeders is fair), score 4-5.9. • Number of breeders is largely inadequate (Adequacy of breeders is poor), score 2-3.9. • Number of breeders is completely inadequate (Adequacy of breeders is extremely poor), score 0-1.9. Note: if the adequacy of breeders is exceptional, the score is 10. If there are no breeders, the score is 0.	Qualitative (expert opinion)

37 In most countries priority crops are cereals and pulses, but in some cases may include other crops, such as oil crops, banana, roots and tubers, and others.

38 In these guidelines adequacy means being sufficient for the intended purpose.

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
		2. Adequacy of available funding for breeding and variety development for each of the four priority crops.	• Funding is fully adequate (Adequacy of funding is excellent), score 8–<10. • Funding is mostly adequate (Adequacy of funding is good), score 6–7.9. • Funding is reasonably adequate (Adequacy of funding is fair), score 4–5.9. • Funding is largely inadequate (Adequacy of funding is poor), score 2–3.9. • Funding is completely inadequate (Adequacy of funding is extremely poor), score 0–1.9. Note: If the adequacy of funding is exceptional, the score is 10. If there is no funding, the score is 0.	
		3. Adequacy of existing research facilities for breeding and variety development for each of the four priority crops.	• Facilities are fully adequate (Adequacy of research facilities is excellent), score 8–10. • Facilities are mostly adequate (Adequacy of research facilities is good), score 6–7.9. • Facilities are reasonably adequate (Adequacy of research facilities is fair), score 4–5.9. • Facilities are largely inadequate (Adequacy of research facilities is poor), score 2–3.9. • Facilities are completely inadequate (Adequacy of research facilities is extremely poor), score 0–1.9. Note: If the adequacy of research facilities is exceptional, the score is 10. If there are no breeding and variety development facilities, the score is 0.	
4. Status of the national program coordinating activities on Plant Genetic Resources for Food and Agriculture (PGRFA), SPGRFA=0-10.	**Description:** This parameter assesses the functioning of a national program (e.g., an institute, department, or agency) mandated to coordinate and/or carry out activities related to PGRFA, including management of *in-situ* conservation areas and/or *ex-situ* conservation facilities, such as a national gene bank. **Data sources include but are not limited to:** • national PGRFA entity. **Computation method for sub-parameters 1-4:** Computed as the **simple average** of scores of the four sub-parameters, the first four of which are **qualitative expert opinion scores** for each of **the four priority crops** (16 sub-scores total) and the 5th score is a **quantitative score** based on the percentage of all genetic resources conserved by the national gene bank used in last 3 years (by breeders, seed producers, Community Seed Banks (CSBs), etc.), converted to a 0–10-point scale.	1. Adequacy of performance of the entity in the collection, characteri-zation, and conservation of PGRFA.	• Performance is fully adequate (Performance is excellent), score 8-10. • Performance is mostly adequate (Performance is good), score 6-7.9. • Performance is reasonably adequate (Performance is fair), score 4-5.9. • Performance is largely inadequate (Performance is poor), score 2-3.9. • Performance is completely inadequate (Performance is extremely poor), score 0-1.9. Note: If the performance of the entity is exceptional, the score 10. If it is not active, the score is 0.	Qualitative (expert opinion)

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
		2. Adequacy of the entity's human resources to undertake PGRFA mandate.	• Human resources are fully adequate (Adequacy of human resources is excellent), score 8-10. • Human resources are mostly adequate (Adequacy of human resources is good), score 6-7.9. • Human resources are reasonably adequate (Adequacy of human resources is fair), score 4-5.9. • Human resources are largely inadequate (Adequacy of human resources is poor), score 2-3.9. • Human resources are completely inadequate (Adequacy of human resources is extremely poor), score 0-1.9. Note: If the adequacy of human resources is exceptional, the score is 10. If the entity has no employee, the score is 0.	
		3. Adequacy of collaboration between Community Seed Banks (CSBs) or Community-Based Organizations (CBOs).	• Collaboration is fully adequate (Adequacy of collaboration is excellent), score 8-10 • collaboration is mostly adequate (Adequacy of collaboration is good), score 6-7.9. • Collaboration is reasonably adequate (Adequacy of collaboration is fair), score 4-5.9. • collaboration is largely inadequate (Adequacy of collaboration is poor), score 2-3.9. • Collaboration is completely inadequate (Adequacy of collaboration is extremely poor), score 0-1.9. Note: If the adequacy of collaboration is exceptional, the score is 10. If there is no collaboration, the score is 0.	
		4. Adequacy of the duplication of conserved PGR (i.e., entity safety duplicates PGR as a risk mitigation measure against disaster or effects of climate change).	• Entity has duplicated over 66% of conserved PGR (Adequacy of duplication is excellent) the score is 8-10. • Entity has duplicated between 50-66% of conserved PGR (Adequacy of duplication is good), score 6-7.9. • Entity has duplicated 33% to 49% of conserved PGR (Adequacy of duplication is fair), score 4-5.9. • Entity has duplicated 25% to 32% of conserved PGR (Adequacy of duplication is poor), score 2-3.9. • Entity has duplicated less than 25% of conserved PGR (Adequacy of duplication is extremely poor), score 0-1.9. Note: If the adequacy of duplication efforts is exceptional, the score is 10. If the entity does not duplicate any of the conserved PGR, the score is 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
	Computation method for sub-parameter 5: Computed as % of accessions[39] that have been distributed/accessed/utilized by users (breeders, seed producers, CSBs, etc) in the last 3 years, converted to a 0-10-point scale. $\frac{\text{number of PGR accessions used in last 3 years}}{\text{number of total PGR accessions in national gene bank}} = \text{utilization rate}$	Not applicable	Not applicable	Quantitative
5. Adequacy of Early-Generation Seed (EGS), AEGS=0-10.	**Description:** This parameter assesses the availability of EGS to meet certified seed production needs based on three criteria, quality of EGS supplied, quantity of EGS supplied, timeliness of delivery of EGS. The most common sources of EGS are domestic NARIs; depending on the country, CGIAR centers, seed companies, and universities also produce EGS. **Data sources include but are not limited to:** • TASAI reports where available • NARIs • national seed authority • seed experts **Computation method:** Computed as the **simple average** of **qualitative expert opinion** scores for the **three sub-parameters** for each of **the four crops** (**12 sub-scores total**). NB: Since the goal of this parameter is to track domestic EGS production capacity, the scores may be adjusted to reflect situations where EGS quantities may be adequate, but little or no EGS is produced locally.	1. Adequacy of the quality EGS supplied for each of the four priority crops.	• Quality of EGS supplied is fully adequate (Adequacy of the quality is excellent), score 8-10. • Quality of EGS supplied is mostly adequate (Adequacy of the quality is good), score 6-7.9. • Quality of EGS supplied is reasonably adequate (Adequacy of the quality is fair), score 4-5.9. • Quality of EGS supplied is largely inadequate (Adequacy of the quality is poor), score 2-3.9. • Quality of EGS supplied is completely inadequate (Adequacy of the quality is extremely poor), score 0-1.9. Note: If the adequacy of the quality of supplied EGS is exceptional, the score is 10. If the quality is extremely poor, the score is 0.	Qualitative (expert opinion)

39 A distinct, identifiable seed sample of a cultivar, breeding line, or population, stored for conservation and use.

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
		2. Adequacy of quantities of EGS supplied for each of the four priority crops.	• Quantities of EGS supplied are fully adequate (Adequacy of the quantity supplied is excellent), score 8-10. • Quantities of EGS supplied are mostly adequate of EGS supplied (Adequacy of the quantity supplied is good), score 6-7.9. • Quantities of EGS supplied are reasonably adequate (Adequacy of the quantity supplied is fair), score 4-5.9. • Quantities of EGS supplied are largely inadequate (Adequacy of the quantity supplied is poor), score 2-3.9. • Quantities of EGS supplied are completely inadequate (Adequacy of the quantity supplied is extremely poor), score 0-1.9. Note: If the adequacy of the quantities of EGS supplied is exceptional, score 10. If no EGS is supplied, the score is 0.	
		3. Adequacy of the timeliness of delivery of EGS orders for each of the four priority crops.	• Delivery of EGS is consistently/always on time (Timeliness of deliveries is excellent), score 8-<10 • Delivery of EGS is mostly on time (Timeliness of deliveries is good), score 6-<8 • Delivery of EGS is usually on time (Timeliness of deliveries is fair), score 4-<6 • Delivery of EGS is often delayed (Timeliness of deliveries is poor), score 2-<4 • Delivery of EGS is hardly ever/never on time (Timeliness of deliveries is extremely poor), score 0-<2 Note: If the timeliness of EGS deliveries is exceptional, the score is 10. If EGS are not delivered, the score is 0.	
			Scoring guidelines for special cases: • **Countries with no domestic production of EGS for the four crops:** Since the primary purpose of this parameter is to measure a country's domestic EGS production capacity, countries that rely (extensively) on external sources of EGS may not score higher than 5/10 overall, even if they source sufficient quantities of EGS. This does not apply to NARIs that collaborate with private EGS suppliers. • **Countries that source EGS from NARIs in neighboring countries and/or from CGIAR centers and meet their country's demand** for EGS may not score higher than 1/10. This recognizes that, while local capacity to produce EGS is lacking, the domestic demand for EGS is met. • **Countries where the NARIs do not produce EGS and no other sources of EGS are available** for the four crops, score 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
6. Availability of crop varietal choice to farmers, *ACv_i= if ACv > 201, 10, 101-200, 8-9.9, 1-99, 1-7.9, 0*	**Description:** This parameter tracks the number of varieties of the four priority crops sold to farmers in the most recent year for which data are available. **Data sources include but are not limited to:** • seed experts • national seed authorities • TASAI reports where available **Computation method:** Computed as a four-tier scoring system that assumes a linear relationship between the number of crop varieties available to farmers and the score: • number of available varieties is 201 or more, score is 10 • number of available varieties is 101-200, score is 8-<10 • number of available varieties is 1-100, 1-<8 • number of available varieties is 0, score is 0	Not applicable	Not applicable	Quantitative

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
7. Utilization of quality commercial seed by farmers, *UQcs= vcsp/nsr.*	**Description:** This parameter tracks the extent to which the supply of quality commercial seed meets requirements. **Data sources (using data from 2024) include but are not limited to:** • national seed authority **Computation method:** Computed as the **average utilization rate for the four crops weighted by land under cultivation for each crop**. $\frac{\text{vol.of available commercial seed}}{\text{national seed requirement}} = \text{utilization rate}$ Comprising three measurements, this metric describes the size of the seed market in a country: • **Seed sales**: Total volume of seed sold in the country • **Effective seed demand**: The aggregate volume of seed that buyers (farmers, companies, government, NGOs, etc.) are willing to purchase; usually compiled by government and industry. • **Notional seed requirement**: The volume of seed required based on land under cultivation and seeding rates.	Not applicable	Not applicable	Quantitative
8. Clarity and enforcement of seed import regulations, *CEsier=0-10.*	**Description:** This parameter tracks the clarity of seed import regulations and the consistency of their enforcement. **Data sources include but are not limited to:** • seed expert • national seed authority • ministry of agriculture **Computation method:** Computed as the **simple average** of **qualitative expert opinion** scores for **two sub-parameters.**	1. Clarity of seed import regulations	• Seed import regulations are fully clear (Clarity is excellent), score 8-10. • Seed import regulations are mostly clear (Clarity is good), score 6-7.9. • Seed import regulations are reasonably clear (Clarity is fair), score 4-5.9. • Seed import regulations are largely unclear clear (Clarity is poor), score 2-3.9. • Seed import regulations are completely unclear (Clarity is extremely poor), score 0-1.9 Note: If clarity of the seed import processes is exceptional, the score is 10. If there are no seed import processes, the score is 0.	Qualitative (expert opinion)

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
		2. Consistency of enforcement of seed import regulations.	• Enforcement of seed import regulations is fully consistent (Consistency is excellent), score 8-10. • Enforcement of seed import regulations is mostly consistent (Consistency is good), score 6-7.9. • Enforcement of seed import regulations is reasonably consistent (Consistency is fair), score 4-5.9. • Enforcement of seed import regulations is largely inconsistent (Consistency is poor), score 2-3.9. • Enforcement of seed import regulations is completely inconsistent (Consistency is extremely poor), score 0-1.9. Note: If the consistency of enforcement of seed import processes is exceptional, the score is 10. If there is no enforcement, the score is 0.	
9. Adequacy of agro-dealer networks, *AAdn=0-10.*	**Description:** This parameter tracks the adequacy of the national agro-dealer (or seed seller) network. **Data sources include but are not limited to:** • seed expert • national seed authority • ministry of agriculture **Computation method:** Computed as the **simple average** of **qualitative expert opinion** scores for **two sub-parameters.**	1. Adequacy of the number of agro-dealers	• The number of agro-dealers is fully adequate (Adequacy is excellent), score 8-10. • The number of agro-dealers is mostly adequate (Adequacy is good), score 6-7.9. • The number of agro-dealers is reasonably adequate (Adequacy is fair), score 4-5.9. • The number of agro-dealers is largely inadequate (Adequacy is poor), score 2-3.9. • The number of agro-dealers is completely inadequate (Adequacy is extremely poor), score 0-1.9. Note: If the adequacy of agro-dealers is exceptional, the score is 10. If there are no agro-dealers, the score is 0.	Qualitative (expert opinion)
		2. Adequacy of the distribution of agro-dealers (i.e., extent to which agro-dealers are accessible to all farming areas of the country).	• Distribution of agro-dealers is fully adequate, reaching most/all farming areas (Adequacy is excellent), score 8-10 • Distribution of agro-dealers is mostly adequate, with room for growth in some farming areas (Adequacy is good), score 6-7.9. • Distribution of agro-dealers is reasonably adequate, with room for growth in many farming areas (Adequacy is fair), score 4-5.9. • Distribution of agro-dealers is largely inadequate, reaching few farming areas (Adequacy is poor), score 2-3.9. • Distribution of agro-dealers is completely inadequate, reaching very few farming areas (Adequacy is extremely poor), score 0-1.9. Note: If the distribution of agro-dealers in all farming areas is exceptional, the score is 10. If there are no agro-dealers, the score is 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
10. Availability of seed in small package sizes, *ASsp=0-10*.	**Description:** This parameter tracks the availability of seed sold in packages of 2 kgs or less. Small packages tend to be more suitable and affordable for small-scale farmers and may help increase adoption rates of improved seed among this group. NB: Parameter applies to seed crops only. **Data sources include but are not limited to:** • TASAI reports, where available • seed experts • national seed authority • national seed association **Computation method:** Computed as the **simple average** of the percentage, per crop, of seed sold in packages of 2 kgs or less of the total volume of seed produced (for the four crops), converted to a 0-10-point scale.	Not applicable	Not applicable	Quantitative
11. Status of national seed policy instruments, *SNspi=0-10*.	**Description:** This parameter tracks the status of important national seed policy instruments (seed policies, laws, regulations, decrees, Ministerial Orders, and others as they may apply to a country) that create an enabling environment for a competitive seed sector and encourage private sector participation in seed sector development. **Data sources include but are not limited to:** • national seed authority • ministry of agriculture **Computation method:** Computed as the average of **qualitative expert opinion** scores on the status of important national seed policy instruments.	*No sub-parameters per se, but each policy instrument is scored independently.*	• The seed policy instrument is in place and up to date, (Adequacy is excellent,) score 8-10. • The seed policy instrument is in place but needs to be updated (Adequacy is good), score 6-7.9. • The seed policy instrument is currently passing through the legislative approval process (Adequacy is fair), score 4-5.9. • The seed policy instrument is being drafted, or the draft is being reviewed by committee (Adequacy is poor), score 2-3.9. • The seed policy instrument does not exist or is in very early stage of formulation (Adequacy is extremely poor), score 0-1.9. Note: If enabling seed policy instruments are exceptional, the score 10. If a country has no seed policy instruments, the score is 0.	Qualitative (expert opinion)

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
12. Status of alignment of national seed policy instruments with harmonized regional seed regulations, SAHsr=0-10.	**Description:** This parameter measures the extent to which national seed regulations are aligned with regulations of the Regional Economic Communities (RECs) a country belongs to. RECs being tracked to date are COMESA, EAC, ECCAS, ECOWAS, IGAD, SADC, and UMA. **Data sources include but are not limited to:** • national seed authority • ministry of agriculture **Computation method:** Computed as a **qualitative, expert opinion score** on the status of alignment of national seed policy instruments with regional seed regulations. If a country is a member of more than one REC, the highest score is used.	*No sub-parameters; score is assigned to the main parameter.*	• Harmonization is complete, and the instruments have been signed by the executive body (President or equivalent), score 8-10. • Harmonization is complete, and the instruments have been ratified and are awaiting assent by the executive authority (President or equivalent), score 6-7.9. • Harmonization is ongoing, and the instruments are awaiting approval by the appointed authority (Parliament), score 4-5.9. • Harmonization has started and the instruments have been reviewed by specialized committee(s) and sector stakeholders, score 2-3.9. • Harmonization has just started, and the instruments are being/have been drafted, score 0-1.9. Note: If harmonization is complete and instruments have been published, the score is 10. If a country has not initiated harmonization of its national seed policy instruments, or if the process has stalled for more than five years, the score is 0.	
13. Status of adoption of national biosafety frameworks to guide plant breeding and seed production, *SAnbf=0-10*.	**Description:** This parameter measures the extent to which a country has adopted national biosafety frameworks, including agricultural biotechnology policies, laws, and/or regulations, and whether these frameworks are operational. **Data sources include but are not limited to:** • national biosafety authority • African Agricultural Technology Foundation (AATF) • ministry of agriculture **Computation method:** Computed as the **simple average** of **qualitative expert opinion** scores for **two sub-parameters.**	1. Status of adoption of national biosafety frameworks.	• The national biosafety framework has been signed by the executive body (President or equivalent), score 8-10. • The national biosafety framework, has been ratified and is awaiting assent by the executive authority (President or equivalent), score 6-7.9. • The national biosafety framework is awaiting approval by the appointed authority (Parliament), score 4-5.9. • The draft national biosafety framework has been reviewed by specialized committee(s) and sector stakeholders, score 2-3.9. • The national biosafety framework is being/has been drafted, score 0-1.9. Note: If the national biosafety framework has been published, the score is 10. If a country has no biosafety framework, the score is 0.	Qualitative (expert opinion)

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
		2. Status of operationalization of national biosafety frameworks.	• Operationalization of biosafety frameworks is fully adequate (Operationalization is excellent), score 8-10. • Operationalization of biosafety frameworks is mostly adequate (Operationalization is good), score 6-7.9. • Operationalization of biosafety frameworks is reasonably adequate (Operationalization is fair), score 4-5.9. • Operationalization of biosafety frameworks is largely inadequate (Operationalization is poor), score 2-3.9. • Operationalization of biosafety frameworks is completely inadequate (Operationalization is extremely poor), score 0-1.9. Note: If the operationalization of biosafety frameworks is exceptional, the score is 10. If the biosafety framework is not operationalized, score is 0.	
14. Status of Farmer Managed Seed Systems (FMSS) in national seed policy instruments and institutional arrangements, *SNfmssi=0-10.*	**Description:** This parameter tracks the extent to which national seed policy instruments (seed policies, laws, regulations, and decrees) recognize FMSS and promote institutional arrangements that allow FMSS to be represented in (or to influence) seed sector development. NB: The parameter only tracks the **status** of a policy and promotion of FMSS by the government; it does not track operationalization. **Data sources include but are not limited to:** • national seed authority • ministry of agriculture **Computation method:** Computed as the **simple average** of **qualitative expert opinion** scores for **two sub-parameters.**	1. Extent to which national seed policy instruments (seed policies, laws, regulations, and decrees) recognize FMSS.	• Recognition of FMSS is fully adequate (Adequacy is excellent) score 8-10. • Recognition of FMSS is mostly adequate (Adequacy is good) score 6-7.9. • Recognition of FMSS is reasonably adequate (Adequacy is fair) score 4-5.9. • Recognition of FMSS is largely inadequate (Adequacy is poor) score 2-3.9. • Recognition of FMSS is completely inadequate (Adequacy is extremely poor) score, 0-1.9. Note: If recognition of FMSS in seed policy instruments is exceptional, the score is 10. If seed policy instruments do not recognize FMSS, the score is 0.	Qualitative (expert opinion)
		2. Extent to which the government promotes FMSS to allow it to play a role in seed sector development.	• Government institutions promote FMSS fully consistently (Consistency is excellent) score 8-10. • Government institutions promote FMSS mostly consistently (Consistency is good) score 6-7.9. • Government institutions promote FMSS reasonably consistently (Consistency is fair) score 4-5.9. • Government institutions promote FMSS largely inconsistently (Consistency is poor) score 2-3.9. • Government institutions promote FMSS completely inconsistently (Consistency is extremely poor) score, 0-1.9. Note: If promotion of FMSS by the government is exceptional, the score is 10. If government institutions do not promote FMSS, score is 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
15. Adequacy of seed inspection service, *ASi=0-10*	**Description:** This parameter assesses the adequacy of human resources (i.e., public seed inspectors), available transportation, and the use of digital tools for public seed inspection. **Data sources include but are not limited to:** • national seed authority • ministries of agriculture • TASAI reports, where available **Computation method:** Computed as the **simple average** of **qualitative expert opinion** scores for **three sub-parameters**.	1. Adequacy of the number of seed inspectors to carry out seed inspection.	• Number of seed inspectors is fully adequate (Adequacy is excellent), score 8-10. • Number of seed inspectors is mostly adequate (Adequacy is good), score 6-7.9. • Number of seed inspectors is reasonably adequate (Adequacy is fair), score 4-5.9. • Number of seed inspectors is largely inadequate (Adequacy is poor), score 2-3.9. • Number of seed inspectors is completely inadequate (Adequacy is extremely poor), score 0-1.9. Note: If the adequacy of seed inspectors is exceptional, the score is 10. If there are no seed inspectors, the score is 0.	Qualitative (expert opinion)
		2. Adequacy of means of transport to carry out seed inspection.	• Means of transport are fully adequate (Adequacy is excellent), score 8-10. • Means of transport are mostly adequate (Adequacy is good), score 6-7.9. • Means of transport are reasonably adequate (Adequacy is fair), score 4-5.9. • Means of transport are largely inadequate (Adequacy is poor), score 2-3.9. • Means of transport are completely inadequate (Adequacy is extremely poor), score 0-1.9. Note: If the adequacy of means of transport is exceptional, the score is 10. If there is no means of transport, the score is 0.	
		3. Adequacy of the use of digital tools to carry out seed inspection.	• Use of digital tools is fully adequate (Adequacy is excellent), score 8-10. • Use of digital tools is mostly adequate (Adequacy is good), score 6-7.9. • Use of digital tools is reasonably adequate (Adequacy is fair), score 4-5.9. • Use of digital tools is largely inadequate (Adequacy is poor), score 2-3.9. • Use of digital tools is completely inadequate (Adequacy is extremely poor), score 0-1.9. Note: If the adequacy of use of digital tools is exceptional, the score is 10. If digital tools are not used, the score is 0.	

Parameter	Description, data sources, and computation method	Sub-parameters	Rubrics to be used in data collection tools	Type of data
16. Adequacy of government efforts to combat counterfeit seed, *AGeccs=0-10*	**Description:** This parameter assesses government efforts to eliminate counterfeit seed. **Data sources include but are not limited to:** • national seed authority • ministry of agriculture • TASAI reports (if available) **Computation method:** Computed as a **qualitative, expert opinion score** for the two sub-parameters.	1. Adequacy of government measures to combat counterfeit seed as stipulated in the law.	• Government measures are fully adequate (Adequacy is excellent), score 8-10. • Government measures are mostly adequate (Adequacy is good), score 6-7.9. • Government measures are reasonably adequate (Adequacy is fair), score 4-5.9. • Government measures are largely inadequate (Adequacy is poor), score 2-3.9. • Government measures are completely inadequate (Adequacy is extremely poor), score 0-1.9. Note: If the adequacy of government efforts is exceptional, the score is 10. If there are no government efforts, the score is 0.	Qualitative (expert opinion)
		2. Adequacy of implementation of government measures to combat counterfeit seed.	• Implementation of government measures is fully adequate (Implementation is excellent), score 8-10 • Implementation of government measures is mostly adequate (Implementation is good), score 6-7.9 • Implementation of government measures is reasonably adequate (Implementation is fair), score 4-5.9 • Implementation of government measures is largely inadequate (Implementation is poor), score 2-3.9 • Implementation of government measures is completely inadequate (Implementation is extremely poor), score 0-1.9 Note: If the implementation of government measures is exceptional, the score is 10. If there is no implementation, the score is 0.	
17. Performance of the national seed trade association, *ENsta=0-10.*	**Description:** This parameter measures the performance of the national seed trade associations. Successful associations enhance a country's seed sector by representing the interests of the private seed industry and by acting as an important liaison between the government and the private sector. **Data sources include but are not limited to:** • Members of the national seed trade association • national seed authority • TASAI reports (if available) **Computation method:** Computed as the **simple average** of **qualitative expert opinion scores** for **six sub-parameters.** In countries with more than one association, the highest score will be used. Sub-national associations will not be considered.	1. Performance with respect to activities on important seed sector issues. 2. Performance with respect to democracy and governance. 3. Performance with respect to effectiveness in advocacy. 4. Performance with respect to managerial ability. 5. Performance with respect to provision of value to members. 6. Performance with respect to ability to mobilize resources.	• The following rubrics are used to score all six sub-parameters. • Performance is excellent, score 8–10. • Performance is good, score 6–7.9. • Performance is average/fair, score 4–5.9. • Performance is poor, score 2–3.9. • Performance is extremely poor, score 0–1.9. Note: If the performance is exceptional, the score is 10. If there is no performance, the score is 0.	Qualitative (expert opinion)

African Union
TASAI
The African Seed Access Index
AGRA
Sustainably Growing Africa's Food Systems