

ISSD Africa



ISSD Briefing Note – September 2012 Ethiopia Seed Sector Assessment

The seed sector at a glance

The seed sector in Ethiopia, compared with other countries in Sub-Saharan Africa, is characterized by the active participation of several public entities in the seed sector that play an important role in its coordination. One advantage of this is that it results in major public investments being made in research, seed production and dissemination. However, the situation also has its limitations; it is unable to guarantee farmers' access to seed of improved varieties, in the right quantity, of the right quality, and in a timely manner, mainly because of the highly centralized seed distribution system and virtual absence of seed marketing conducted by the seed producing enterprises and companies. With the gradual move towards a market economy, the private sector is getting more and more involved. The private sector includes national and international seed companies that target mainly hybrid maize, potato and some vegetable crops; and private seed producers that begin their commercial activities in seed production on a contract basis with government agencies or public seed enterprises. At the local level, seed producers' cooperatives are emerging as seed entrepreneurs. Consequently, a diversity of seed systems is emerging, instilling dynamism and creating variation in players and structures of seed value chains. It is critical that at the level of providing services and regulation, the public sector establishes policy and regulatory frameworks follows their implementation, and even fosters these kinds of developments in the seed sector. So far, several policies and acts have addressed the seed sector, but their implementation and operationalization have been limited. Current processes to amend the Seed Proclamation, Plant Breeders' Rights and other vital policies (e.g. the preparation of the Ethiopian Seed Road Map by the Agricultural Transformation Agency, a national level policy think-tank and institutional change facilitator) provide a momentum for creating an enabling policy and regulatory framework that match the changing landscape of the seed sector. Gradually, commercial players varying from seed producer cooperatives to local producers, and national and international seed companies are becoming operational

in the seed sector and complement the important role played by the public sector. Specific to Ethiopia are the public seed enterprises, and federal and regional agricultural research institutes, that are engaged in variety evaluation and crop improvement, and responsible for early generation seed production. A balance in public and private stakeholders provides a basis through which integrated seed sector development can facilitate quick wins towards achieving a pluralistic and vibrant seed sector that serves the needs of the country in terms of food security and economic development.

Seed systems assessment

The seed sector in Ethiopia can be divided into five seed systems, which do not yet include specific seed systems that cover perennial export crops such as coffee. Informal seed systems include farmer-saved and exchanged seed of important food crops, comprising both local and improved varieties that have been accessed through the formal distribution system. Local seed business constitutes a seed system in an intermediary position, between formal and informal systems. Since seed in this system is not necessarily certified, varieties being both local and improved, dissemination varies from bartering to commercial sale. Key players in this seed system are seed producer cooperatives that are associated, to varying degrees, with more formal seed systems. The formal system is divided into public and private producers, cooperative unions (e.g. Meki Batu) and private seed companies. The producers and companies are legally licensed to produce seed of food and cash crops. There are also some licensed seed traders that import and market vegetable seed of exotic varieties of cabbage, carrot, lettuce, celery and radish. The public seed enterprises, private seed producer systems, and the nationally operating seed companies in particular, are involved in the production of certified seed using known sources of basic seed of improved and released varieties.

In Ethiopia, the major stakeholders in the seed sector are the research system, the Ethiopian Seed Enterprise, three regional seed enterprises, regional Bureaus of Agriculture, some private seed companies, cooperative unions and seed importers. The private seed companies primarily deal with hybrid maize seed (covering about 30-40% of the market share). More recently, some companies have started to sell seed of exotic vegetables and seed potatoes. The public seed enterprise produce and market seed of hybrid maize varieties and wheat, and, to some extent, the seed of major self- and open-pollinated crops. Seed producer cooperatives that are either motivated to engage in genetic resource conservation by certain NGOs, or that are organized into

farmers' research and extension groups by research centres, strive towards the production and marketing of certified seed of superior (improved and well-adapted local) varieties. They have special niches for crops and varieties for which there are immediate demands in certain localities. Because of their local orientation and relatively small organization, and their access to seed markets, these cooperatives are logical partners for the research system, and they can disseminate a wide portfolio of varieties for major crops that are left orphaned by public seed enterprises and seed producers, having switched their major orientation to maize and wheat, and economies of scales.

Table 1. Characterization of seed systems in Ethiopia

characteristic	farmer-saved	local seed business	public seed enterprises	private seed producers	private seed companies
general description	traditional for food and subsistence crops (informal)	emerging with short seed value chains increasing linked to local markets (intermediary)	formal system targeting at major food security crops, primarily linked to governmental seed distribution (formal)	emerging system which still operates as outgrowers, with a potential towards seed entrepreneurs (formal)	few (national and foreign) companies that operate in maize market, with new companies emerging for vegetables and potatoes
type of crops	local food crops	food and cash crops	major food and cash crops	major food and cash crops	high value crops
major crops	sorghum, teff, barley, ensete, legumes etc	maize (OPV and hybrid), wheat, barley, beans and other legumes, potato, onion and other vegetables	primarily maize (hybrid) and wheat	maize (hybrid), wheat and some others	maize (hybrid) and exotic vegetables
type of varieties	local varieties	local and improved varieties	improved varieties	improved varieties	improved varieties (hybrids for maize and vegetables)
type of seed quality	farmer-saved, informal	certified, 'quality-declared' and informal	certified	certified	certified
type of distribution and marketing	own seed, bartering and exchange, local markets	variation through contractual, marketing, NGO distribution and bartering	dissemination	contractual arrangements towards dissemination and marketing	marketing

Seed-related programmes

Activities in the public sector include research, variety development and evaluation, variety release and verification, early generation seed multiplication, certified seed production and processing, regulation, marketing, dissemination and also demand assessments for formal dissemination. The Federal Ministry of Agriculture and Regional Bureaus of Agriculture coordinate the public seed sector with an impact on both the research institutions and public seed enterprises, for which both federal and regional entities exist. In this

institutional landscape, a complex of organizations and institutions operate, each responsible for parts of the above-mentioned components of the public seed value chain.

Private seed companies (both domestic and international) are primarily concerned with the production, processing and marketing of hybrid maize seed. An increasing number of international seed companies are now entering the Ethiopian seed sector, introducing commercial varieties of potato, vegetables

and hybrid maize. Most domestic companies are small or medium in size, and are locally oriented, but the production and marketing programmes of international companies target the areas of high productivity, such as Amhara, Oromia and the Southern Nations, Nationalities and People's Region (SNNPR).

Partnerships with public organizations, such as research institutes, Bureaus of Agriculture and some cooperatives, plays a significant role in variety demonstration, scaling-out farmer-based quality seed production and out-grower schemes. The scale of use of quality seed of improved varieties has increased over the last ten years.

NGOs programmes mainly focus on intermediary systems with a community-based and local seed business approach. These NGOs support the establishment of primary cooperatives and unions for achieving local seed security, and consequently attaining food security. Other NGOs offer support for establishing community seed banks, and provide emergency or relief seed. NGOs have been responsible for organizing farmers' groups and seed producer cooperatives by liaising with the cooperative promotion offices of the government. Other NGOs and international development programmes aim to improve the capacities of farmers' groups for producing and marketing seed, by organizing training and donating post-harvest technologies, such as seed cleaning machines. In some instances, NGOs have indefinitely secured the market for cooperatives and community-based producers, purchasing seed in bulk at fixed prices and then disseminating seed from its area of production to where it is needed by individual farmers for planting. The link to micro-financing institutes and/or commercial credit providers has not yet been well established, and access to finance remains a gap in the production of quality seed, and availability of quality seed for purchase by farmers.

A number of seed sector development programmes are being funded by international donors, such as the Integrated Seed Sector Development (ISSD) programme in Ethiopia, funded by the Dutch; the Quality Seed Promotion Project (QSPP), funded by the Japanese; and the Eastern Africa Agricultural Productivity Project (EAAPP) and the Agricultural Growth Programme (AGP), both funded by the World Bank. QSPP, EAAPP and AGP have prioritized product value chains (such as teff, bread wheat, rice and cassava), in the manner in which they approach quality seed production in potential areas of the country. ISSD Ethiopia has an open policy concerning the inclusion of all crops and varieties associated with the different seed systems. Collectively, with the inclusion of NGO-led initiatives, these programmes have a diverse portfolio of crops and varieties, and an almost complete geographic representation in Ethiopia. In addition to providing support to all public stakeholders involved in the formal

systems, ISSD Ethiopia also collaborates with universities; NGOs, such as the Relief Society of Tigray (REST), the Organization for Rehabilitation and Development in Amhara Region (ORDA) and Self Help Africa (SHA); Bureaus of Agriculture; public research institutions; Seed Producer Cooperatives; and the private sector, including the Ethiopian Seed Growers and Processors Association (ESGPA).

At the policy level, the Agricultural Transformation Agency (ATA) has been established by the Federal Government, with the support of the Bill and Melinda Gates Foundation. ATA has assumed the role of think-tank and facilitator for promoting the transformation of the agricultural sector, and it has identified seed as one of its priority areas. ATA acts as a catalyst within existing public programmes, providing policy guidance, at the federal level, to several seed programmes operating in the country. To this effect, it recently developed a seed road map, which will guide seed sector development in the country.

Seed-related policies

The Ethiopian seed policy was first formulated in 1992, and serves as the basis for different laws and regulations. This seed policy focused on plant genetic resource conservation, crop variety development, testing and release, seed production and supply, seed import and export, and reserve seed stocking. Various activities have been undertaken to enforce the implementation of the policy.

The seed policy was followed by Proclamation No. 56/1993 for the establishment of the National Seed Industry Agency and then by Seed Regulation No. 16/1997, which was later replaced by Seed Proclamation No. 206/2000 (currently under revision). The seed proclamation of 2000 covers genetic resource conservation and development; variety development, testing and release; seed production, distribution and marketing; participation of farmers, public and private seed enterprises in the seed industry; agricultural extension and input; seed import and export; the organization of the Seed Industry Agency; seed legislation; and quarantine and seed databases. Recently, the Plant Breeders' Rights proclamation and the Access and Benefit-sharing Law were issued, however these policies still need to be put into practice, through the establishment of regulatory frameworks.

Despite the existence of a seed policy, seed law and seed standards, their implementation is still mostly at the infant stage. Although some of the proclamations are being revised ahead of their implementation, stakeholder awareness about these laws and regulations is still very limited. Seed certification and quality control has been decentralized to the Regional Bureaus of Agriculture that make use of pre-existing seed laboratories. However, these laboratories and services

are limited in terms of technical, human, financial and operational capacity. Consequently, they are unable to provide the required services to certify seed in different parts of the country. Furthermore, since seed quality control has been embedded within the Bureaus of Agriculture, they are also responsible for organizing production and dissemination. In one of Ethiopia's regions, Oromiya, an autonomous body has taken over quality control in order to ensure full accountability and transparency in the seed sector. The limited capacities within regulatory bodies, as well as among stakeholders in the seed sector, lead to seed production and distribution of a substandard quality. Moreover, the flow of newly released improved varieties of many crops to farmers, including major crops, such as maize and wheat, is constrained.

Seed that is produced through the formal system is reported to the Federal Ministry of Agriculture and Regional Bureaus of Agriculture, after which is distributed through cooperative unions to farmers. Simply put, producers in the formal seed system are paid for their seed by Regional Bureaus of Agriculture who, through the cooperative unions, sell the seed to farmers, adding a margin to cover transportation, processing and storage costs. Although seed prices are generally kept low by the government in Ethiopia, no formal seed subsidy or credit system as such exists. Because seed production and dissemination is still managed by the government, and does not yet follow market principles, seed carry-over occurs, despite seed shortage in many regions of the country.

The link between practices, programmes and policies: challenges and opportunities

Whilst access to, and the availability of, quality seed has the potential to greatly improve smallholder productivity, a substantial gap exists between the production and availability of commercial seed and farmers' demand. In addition, a lack of awareness among farmers of the importance of quality seed and improved variety usage limits their adoption. A series of constraints span both the hybrid maize and open- and self-pollinating seed systems.

Except for the last two years because of record seed production, the shortage of hybrid maize seed in Ethiopia remains a national concern. Farmers are unable to access seed in the quantities they demand, and are often limited in terms of the varieties that are available, and even the time it takes to access seed of certain and desired varieties. Supply shortages are a result of constraints faced by both public sector operations, which account for more than 60 % of hybrid maize seed supply in Ethiopia. The public sector faces inconsistent and inaccurate demand assessments, in addition to productivity shortfalls and financial constraints in contract-grower schemes. These constraints result in an irregular and lesser quality oriented distribution system

that affects the seed market and thereby agricultural production. In addition, opportunities for seed production and marketing are limited in areas that have a high potential for seed production; the formal dissemination model is inflexible in terms of providing farmers with choices and information.

Public intervention in the commercial aspects of the seed delivery chain prevents private companies from charging competitive prices or distributing seed through channels other than those regulated by the government. The business and regulatory environment does not prioritize seed businesses in terms of resource allocation (e.g. access to foreign exchange to procure equipment), and lacks an enabling environment for the start-up of new private producers and seed companies. Furthermore, the private sector faces serious limitations in accessing basic seed for multiplication, or even new varieties for adding and diversifying their varietal portfolio.

Seed for self-pollinated crops faces constraints both on the demand side and the supply side. On the demand side, there is an insignificant, perceived advantage over the production of seed through farmer-saved and exchange options, which generates little incentive to purchase quality seed. Only in the case where new varieties are made available, will farmers perhaps be interested in purchasing quality seed. There are also insufficient extension services dedicated to increasing farmers' knowledge of improved varieties that deliver major improvements (e.g. yield increase and disease resistance). On the supply side, the production of seed of self-pollinated varieties faces similar productivity gaps as hybrid maize, in particular with regard to demand assessments, and is currently a loss-making enterprise for public seed enterprises. This prevents the parastatal Ethiopian Seed Enterprise and regional seed enterprises in Amhara, Oromiya and Southern Nations, Nationalities and People's regional states from significantly expanding supply, and the private sector companies from seeing the potential for greater profit in marketing such crops varieties. It is within this niche that research institutions are beginning to team up with seed producer cooperatives, operating within the local seed business system, since they may be better able to supply seed of newly released improved varieties to farmers.

The dissemination programme of the Ministry of Agriculture needs to significantly evaluate the sustainability of the current model. One key area of concern is the potential role of entrepreneurs in both the formal and informal seed systems, for contributing to a more sustainable, market-oriented and inclusive seed sector in Ethiopia.

African Seed and Biotechnology Programme

The African Seed and Biotechnology Programme (ASBP), which was adopted during the Eighth Ordinary Session of the Assembly of Heads of States and Governments of the African Union, in January 2007, aims to provide a strategic approach to the comprehensive development of the seed sector and related biotechnology in Africa, taking into account the different needs of the countries and regions. The programme pursues an integrated approach towards enhancing capacities for seed policy development and implementation; strengthening linkages between informal and formal seed sectors; ensuring further adherence to international norms and standards; stimulating the transfer of appropriate technologies and products; and encouraging public-private partnerships to promote the development of local seed enterprises. The Integrated Seed Sector Development (ISSD) in Africa programme is meant both to strengthen these processes and to contribute to the implementation of the programme at the level of national policies, supporting regional economic communities in their contribution to ASBP objectives. This makes the ISSD Africa programme timely and well placed to a continental and regional context.

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