



**TASAI**  
THE AFRICAN SEED ACCESS INDEX



## **Democratic Republic of the Congo Brief 2017 - The African Seed Access Index**

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# The Democratic Republic of the Congo (DRC) Brief 2017 – The African Seed Access Index

## INTRODUCTION

A competitive seed sector is key to ensuring timely availability of high quality seeds of improved, appropriate varieties at affordable prices for smallholder farmers in the Democratic Republic of the Congo (DRC). This country brief summarizes the key findings of The African Seed Access Index (TASAI) study conducted in 2017 to appraise the structure and economic performance of DRC's seed sector. With a focus on four grain crops important to food security in the DRC — maize, rice, beans, and soya bean — the study evaluates the enabling environment for a vibrant formal seed sector. The area covered by these crops is about 87% of the total area harvested for all cereals and pulses in DRC (FAOSTAT, 2017). The study focuses on 12 of 26 provinces where notable developments have taken place in the seed sector. For ease of description the provinces are clustered into four regions: Eastern Region (North Kivu and South Kivu provinces), Southern Region (Haut-Katanga and Lualaba provinces), Western Region (Kinshasa, Kongo Central, Kwilu and Kwango provinces) and Northern Region (Mongala, Nord Ubangi, Sud Ubangi and Equateur provinces).

The study covers 20 indicators divided into five categories: Research and Development, Industry Competitiveness, Seed Policy and Regulations, Institutional Support, and Service to Smallholder Farmers. [Appendix 1](#) summarizes the indicators and compares the DRC to other countries where TASAI studies were conducted. TASAI seeks to encourage public policymakers and development agencies to create and maintain enabling environments that will accelerate the development of competitive formal seed systems serving smallholder farmers.

## Overview

Like most other African countries, the seed industry in DRC consists of two systems: the informal sector and the formal sector. This policy brief focuses almost exclusively on the formal seed sector.

**The informal sector** broadly refers to the system where farmers produce, obtain, maintain, and distribute seed resources, from one growing season to the next (FAO, 1998). Due to factors such as limited knowledge, a lack of a wide variety of seeds, limited resources to purchase seed, and poor access to agro-dealers, most smallholder farmers in DRC still rely on the informal seed sector. Standards in the informal seed sector are not monitored or controlled by government policies and regulations; rather, they are guided by indigenous knowledge and standards, and by social structures. The colloquial nature of transactions means that there is scant performance data on the informal sector.

**The formal sector** focuses on breeding and evaluating improved varieties, and producing and selling certified seed. In the DRC, seed is certified by the National Seed Services (SENASEM), under the Department of Production and Plant Protection (DPPV) in the Ministry of Agriculture, Livestock and Fisheries. Notably, the structure of the formal seed sector in the DRC is different from that in other Eastern and Southern Africa countries. The main difference lies in seed production: while in other countries, seed is produced and marketed by seed companies, in the DRC, seed is produced mainly by a combination of individual seed producers and seed associations, and by a few seed companies. The concept of seed companies is relatively new to the country, and the utilization rate of certified seed is low.

Table 1: Role of key players in the DRC's formal seed sector

ROLE	KEY PLAYERS
Research and breeding	INERA, CGIAR (IITA, Harvest Plus, CIMMYT), UNILU, MNCS
Variety release and regulation	SENASEM, CTAC
Seed production and processing	Seed producers (individual seed producers, seed associations, seed companies)
Education, training, and extension	Farmer organizations, NGOs, seed companies
Distribution and sales	Seed producers, agro-dealers, farmer organizations, UN agencies (FAO, WFP), intl NGOs (ICRC, NRC, Caritas)

**Key acronyms:** APDIAC - Association de Producteur de Distributeurs d' Intrants Agricoles du Congo; APSKA - Association de Producteurs Semenciers du Katanga; COMESA – Common Market for Eastern and Southern Africa; CTAC - Technical Commission for Admission to the Catalogue; DRC - Democratic Republic of Congo; DPPV - Department of Production and Plant Protection; FAO - Food and Agriculture Organization of the United Nations; IITA – International Institute for Tropical Agriculture; INERA - National Institute of Study and Agricultural Research; SENASEM – National Seed Service; SQAV - Animal and Plant Quarantine Services; UNAGRICO - National Union of Agricultural Producers of Congo; UNAPSCO - Union Nationale de Producteurs de Semences du Congo; UNILU – University of Lubumbashi



As shown in Table 1, the DRC's formal seed sector comprises various entities from the government and the private sector, the latter including seed producers, commercial farmers and agro-dealers. Seed producers are represented by a national seed producer association and several provincial seed associations; however, most of them are not very active. Like other industries in the DRC, performance of the formal seed sector varies by province and is impacted by infrastructure challenges and years of political instability.

## RESEARCH AND DEVELOPMENT

### Number of active breeders

The DRC has 18 active breeders for the four priority seed crops (maize, rice, beans, and soya bean). Of these 14 are based at public research institutions – namely, the National Institute of Study and Agricultural Research (INERA) and the University of Lubumbashi (UNILU) – and four are employed by the private sector. Notably, the private breeders are all employed by foreign-owned seed companies; none of the locally-owned private seed companies has a breeder. The number of breeders for each crop are as follows: nine for maize, three for rice, four for bean, and two for soya bean.

On average, seed producers' rate their satisfaction with the adequacy of breeders as "good" for all crops: 77% for bean, 70% for maize, 70% for soya bean (70%), and 60% for rice.<sup>1</sup> However, the producers also noted that some of the breeders were not very active due to a lack of adequate breeding facilities and financial resources.

### Varieties released in the last three years

Between 2014 and 2016, a total of 20 varieties of the four focus crops were released. Of these, six were maize varieties, four rice varieties, and ten bean varieties. No soya bean varieties released during the period. A total of 63 varieties were registered between 2000 and 2012,<sup>2</sup> when the catalogue was last updated. The breakdown by crop was 10 for maize, 18 for rice, 32 for beans, and 3 for soya bean. Most these varieties (43) were registered in 2008.

Figure 1 shows the 3-year moving average of variety releases since 2002.<sup>3</sup> According to SENASEM, the main reason for the low number of varieties released is a lack of

financial resources, as both public breeding programs and the government seed regulator, are under-funded.

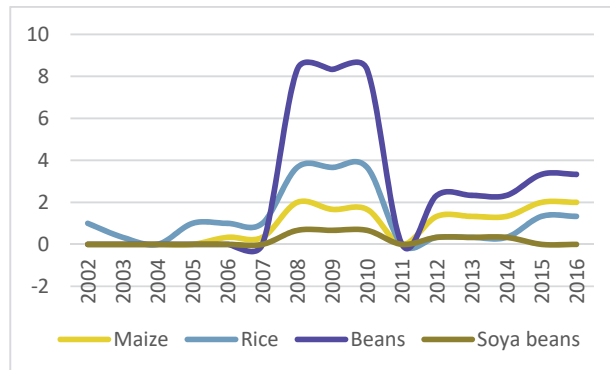


Figure 1: Number of varieties released in the DRC (three-year moving average)

### Varieties sold to farmers in the last three years

A total of 89 varieties were sold to farmers in the four regions between 2014 and 2016. Of these, there were 41 maize, 20 rice, 16 bean, and 12 soya bean varieties. This is similar to corresponding figures in other countries, such as Malawi (91 varieties sold in 2016) and Zimbabwe (95 varieties sold in 2016). However, the DRC is a much larger country both by geographic area and population.

The national averages also mask significant regional disparities, as the number of varieties sold varies greatly by province. For example, 56 varieties were sold to farmers in the Eastern Region compared to only five to those in the Northern Region. This is a significant problem, as farmers in the underserved areas cannot access improved (hybrid) varieties available in other parts of the country

### Availability of foundation seed

Most of the seed producers – 96% of soya bean producers, 93% bean producers, 86% of rice producers, and 78% of maize – source foundation seed from within the DRC. The main sources of foundation seed in the country are INERA and the University of Lubumbashi (UNILU) that work closely with other agricultural institutions and projects such as the CGIAR institutions (IITA and Harvest Plus) and the Alliance for a Green Revolution in Africa (AGRA), under the PASA project. One-fifth of maize producers source their foundation seed from agricultural research institutions in the neighbouring countries such as ISABU in Burundi, the Kenya Agricultural and Livestock Research

<sup>1</sup> All scores reported in this brief are based on industry self-reporting of satisfaction ranging from 0% for completely dissatisfied to 100% for completely satisfied

<sup>2</sup> Information on varieties released after 2012 was obtained from breeders, SENASEM and seed producers.

<sup>3</sup> Due to the lack of information on the specific year of release for varieties released between 2014 and 2016, these varieties were assumed to have been released in 2015.



Organization (KALRO), the Rwanda Agricultural Board (RAB), and National Agricultural Research Organization (NARO) in Uganda. Several foreign companies from Uganda and Kenya also provide foundation seed.

On average, seed producers rate their satisfaction with the availability of foundation seed as good for all crops: 65% for maize, 61% for rice; 63% for beans, and 62% for soya beans. Most of the local seed producers indicated that they can easily access foundation seed from INERA and UNILU (the two main sources in the DRC).

### Average age of varieties sold

The average age of varieties sold per crop was calculated by cross-referencing the varieties sold in 2017 against the Variety Catalogue. The catalogue shows the year when the variety was introduced and the year when it was included in the catalogue. The average ages presented in this section are for the year of introduction. The average ages of varieties are 17.6 years for maize, 16.5 years for rice, 22 years for beans and 18 years for soya beans. For the four crops – maize, rice, beans and soya beans, the varieties in the DRC are older than the varieties in the other countries in the region.

The youngest maize varieties were Mudishu 1 (4 years), Mudishu 3 (4 years) and UNILU (8 years). The oldest varieties were Samaru for maize (28 years), IRAT 112 for rice (26 years), DC Kenya for beans (28 years) and Afya for soya beans (27 years). Most of the old varieties have significantly depreciated and should be retired, and replaced with the newly released varieties. There is currently that no regulations that force the retirement of old varieties in the DRC.

### Varieties with climate-smart features

To be classified as climate-smart, a crop variety must meet at least one of two criteria – early maturity and/or tolerance to extreme weather conditions, such as drought, flooding, or frost. Between 2014 and 2016, three-quarters of maize varieties (75%) and half of bean varieties (50%) released were considered climate-smart. Only one of the four rice varieties released was climate-smart, and no soya bean varieties were released during this period. As for the specific climate-smart features, all the climate-smart maize varieties are drought-tolerant, while 4 out of 5 of the climate-smart bean varieties are early maturing. The climate-smart rice variety is early-maturing.

## INDUSTRY COMPETITIVENESS

### Number of active seed companies

During the 2016 growing season, a total of 63 seed producers focused actively on the four crops. Of these, 11 are seed companies, 25 are seed associations, and 37 are individual seed producers. As highlighted earlier, in the DRC most seed is produced either by seed associations or individual seed producers. This structure, for the most part, has resulted in poor quality seed being produced. It also means that the concept of private seed companies is relatively new in the country: the first local private seed companies were launched in 2014 under the PASA project. As mentioned above, seed companies currently producing the four focus crops number 11, which is much lower than comparable figures in other countries, for example Malawi (23), Tanzania (30), Kenya (23), and Zimbabwe (16).

Of the 63 seed producers, 44 are located in the east, while 13 are based in the west, 10 in the south and only 6 in the north. At present, all of the 11 seed companies are based in the east (7 companies) and south (4 companies).

### Market share of top seed companies

The volume of certified seed produced and sold in the DRC is significantly lower than in other countries. According to seed producers and other key informants, seed sales in 2016 were approximately 1,456 tonnes of maize seed, 430 tonnes of rice seed, 331 tonnes of bean seed, and 244 tonnes of soya bean seed. The figures above show that, in the DRC, just like in many other African countries, maize seed is the most commercially available seed. However, the maize seed sales in the DRC are among the lowest in the region. By comparison, corresponding figures in other African countries are: 14,350 tonnes in Malawi, 39,000 tonnes in Kenya, 9,600 tonnes in Uganda, and 33,000 tonnes in Zambia. This is all the more significant because the DRC is much larger geographically than these other countries.

The volume of seeds sold also varies by region. By far, the eastern region (56%) produces and sells the most seed. In comparison, the other regions sell far less: south (27%), west (14%) and north (3%). These proportions are consistent with the number of seed producers in each region.



Market share is calculated using seed sales reported by seed companies. At the national level, the DRC seed market appears highly competitive, as none of the seed producers is a dominant player in the market. In addition, the market share of the top four seed producers in DRC is 38% for maize, 40% for rice, 50% for beans and 57% for soya beans. However, in the four regions this is not the case due to the low number of seed producers in three of the four regions – west, south and north.

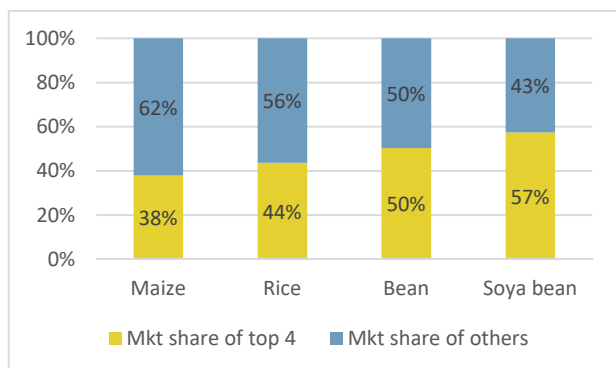


Figure 2: Total market share (%) of top four companies

The Herfindahl-Hirschman Index (HHI) was also used to quantify industry competitiveness. The index, a sum of squared market shares, ranges from near zero for perfect competition, to 10,000 for a pure monopoly. HHI was calculated for all the seed companies, for each crop. The levels of market concentration all four crops are excellent: 828 for maize, 689 for rice, 876 for beans and 968 for soya beans. The market shares of the top four companies and the HHI results both confirm high levels of competition in the seed market for all crops. This is very different from the other countries in Africa, where much of the seed industry has consolidated over time.

### The relief market

In the DRC, the relief market is significant, with the main players being United Nations agencies (e.g. FAO and WFP) and NGOs such as Caritas, the International Committee of the Red Cross, the Norwegian Refugee Council, and Word Vision International. These organizations source seed by issuing bids to private suppliers.

According to the seed producers interviewed, in 2016 seed sales to the relief market accounted for 28% of total maize sales, 40% of total rice sales, 72% of total bean sales, and 41% of total soya bean sales.

Most of the relief agencies are based in the Kivu provinces, as these are the main provinces where humanitarian assistance of most needed (UNICEF, 2017). About 93% of the seed (for the four crops) for the relief market is sourced from seed producers in this region. A key challenge in the relief market is that the seed supplied to donors (and thus to smallholders) tends to be low quality, in part because relief agencies pay relatively low prices for the seed. As a result, few seed companies respond to the bids. Further, the successful bidders usually source grain from the grain market and supply it as seed to the NGOs. Given the fixed low prices, seed producers can only make profits by lowering the cost of production resulting in lower quality seed.

### Market share of government parastatal

There is no government parastatal involved in the production and sale of certified seeds in the DRC.

### Length of import/export process for seed

**Formal imports:** The time it takes to formally import seed is calculated as the number of days from the time an import permit is requested to the time when the seed is cleared at the border. In 2016, about 3,186 tons of seeds were formally imported into DRC: 1,581 tons of maize seed, 181 tons of rice seed, 241 tons of bean seed, and 1,184 tons of soya bean seed.<sup>4</sup> Most of the formal imports are into the southern region (56%) and western region (42%). Only a fraction (4%) of formal imports went to the eastern region, and no formal imports were recorded in the northern region.

The main importers were the national and provincial government institutions (INERA and the National Quarantine Services under the Ministry of Agriculture, Livestock and Fisheries), seed producers and a few agro-dealers. International research institutions like CIAT usually import seed in collaboration with INERA. Most of the formal seed imports from Zambia were through Kasumbalesa, from Uganda and Kenya through Bunagana and Kasindi, from Rwanda through Ruzizi, and from South Africa through the ocean port of Boma.

The total time to formally import seed in DRC varies from 4 to 30 days, with an average of 16 days. This time also

<sup>4</sup> Seed imports exceed seed sales because imports are by seed producers and agro-dealers, while sales are only counted from seed producers.



varies from region to region. Importers noted that, on average, it takes more time to obtain an import permit (9 days) than it does to clear the seed at the border (5 days).

The cost of importing the seeds depends on the amount of seed being imported, and varies between regions. Any volume of seed between 1 and 100 tons is charged USD 61, while any volume of seed above 100 metric tons is charged USD 118.

The average time to import seed into DRC is similar to the average time in other African countries like Malawi (14 days), Tanzania (12 days), and Zambia (11 days). Seed importers expressed frustration with the import process, rating it as extremely (20%). Seed importers in the east are least satisfied (10%).

**Informal Imports:** According to multiple sources, many seed imports into the DRC are not officially documented. An estimated 150.6 metric tons of certified seeds were informally imported into DRC. Most of the informal imports were for maize seed (139 tons), with minimal imports of bean seed (11 tons) and rice seed (less than one ton). However, this amount is likely an underestimate as some informal importers are reluctant to divulge information. Several sources also indicated that some importers bring in grain, which are later sold as seed. Allegedly, this is common practice for the sales made to the relief market, for which the price is very low. The main country sources of informal seed are Zambia (through Kasumbalesa and Sakania), Rwanda (through Bukavu and Ruzizi), and Uganda (through Mahagi, Kasindi and Kabuhanga).

The time taken to informally import certified seed into DRC varies from one to 10 days with an average of six days. This is notably shorter than the 16 days to import formally. The cost incurred in importing informally varies from USD 47 to USD 2,000 with an average of USD 832 per consignment. This translates to about USD 12 per bag, which is significantly lower than the USD 61 per bag paid for formal imports. This cost covers loading and off-loading of seed bags, bribes and any other offering. All the informal imports were in two regions – east and south. There were no informal imports reported in the western and northern regions.

The satisfaction rating of the importers varies from 30% to 90% with an average of 67%. These findings clearly show that seed importers are significantly more satisfied with the informal import process than they are with the

formal import process. This is because the high costs and lengthy process serve as a deterrent to following the formal procedures.

## SEED POLICY AND REGULATIONS

### Length of the variety release process

The length of the variety release process refers to the time from application for release of a variety to the time the variety is released by the relevant authority. In the DRC, crop variety release is the mandate of the Technology Commission for the Admission into the Catalogue (CTAC), which is convened by SENASEM.

The average length of the variety release process in the DRC is 26 months. The differences in the length of time by crop are minimal: 27 months for maize, 24 months for rice, and 26 months for beans and soya beans. These figures are also in line with corresponding numbers from other African countries. For example, the release process in the DRC is shorter than in Kenya (33 months), Malawi (34 months), and Tanzania (31 months), but slightly longer than in Uganda (20 months) and Zambia (24 months).

On average, the cost of variety release in DRC is high, at about USD 4,692 per variety. The cost of variety release in the DRC is significantly higher than in other African countries: five times the cost in Zambia (USD 1,070), ten times the cost in Tanzania (USD 504), and more than 14 times the cost in Zimbabwe (USD 350).

On average, breeders' satisfaction with the variety release process is good (62%). The breakdown by crop is as follows: 61% for maize, 62% for rice, 67% for beans, and somewhat lower ("fair") for soya bean at 57%. The breeders noted that SENASEM is under-funded, which leads to numerous delays in the variety release process. For example, due to a lack of resources, the National Variety Catalogue has not been updated since 2012, which also means that 69 varieties that were on the market in 2016 had not completed the release process by SENASEM. These 69 varieties fall under two categories: (i) some varieties have been accepted for registration and release by SENASEM but have not been registered in the catalogue, and (ii) breeders have applied for variety release, but SENASEM has not met to review the results of the variety performance tests, prior to registration and release. Of the 69,



39 are maize varieties, 7 rice, 15 bean, and 8 are soya bean varieties.

### Status of seed policy framework

The government of the DRC approved the seed sector policy framework in 2006 by ministerial decree No042/CAB/MIN AGR/2006/02/09. The seed policy and seed law have been in draft form since 2007 and are awaiting approval by the parliament and promulgation by the President. In the meantime, the Belgian Development Agency (BTC), in collaboration with the Ministry of Agriculture, has tried to reorganize the seed sector by setting up preliminary national and provincial seed councils in Kinshasa and the provinces, respectively. The seed council, composed of all seed actors, meets two-to-four times a year to discuss and define appropriate actions related to seed production, certification, and distribution at the national and provincial levels.

The DRC is a member of the Common Market for Eastern and Southern Africa (COMESA) and Southern African Development Community (SADC), both of which have harmonized regional seed regulations. The country is in the process of harmonizing its seed regulations to conform to the COMESA seed regulations. The revisions will address issues such as seed certification, inspection, variety release, and seed movement in the region.

### Quality of seed regulations and enforcement

Seed producers rate their satisfaction with the level of enforcement of the regulations as “fair” at 54%. The rating is similar in neighbouring countries, where the seed policy instrument is rated more highly than its implementation. However, one significant difference is that other countries have a more developed private seed sector, whose members play an active role in the design of the seed policies and who contribute to the design and tracking of their implementation. With its fledgling seed industry, this is not (yet) the case in the DRC.

### Adequacy of seed inspectors

SENASEM employs 105 seed inspectors in the four regions. Compared to other countries, the DRC has one of the highest numbers of seed inspectors, at the national level. Out of a sample of 13 other African countries, only South Africa has more seed inspectors - 180. However, it is worth pointing out that the DRC is the second largest country in Africa and has limited road networks. Against

these considerations, the current number of inspectors is on the low side.

Moreover, there is a significant difference between the seed inspection services in most of the African countries. The most significant difference is the role of private sector in seed inspection services. The more advanced seed industries, such as South Africa, Zambia and Zimbabwe, have private seed inspection services. In these three cases, the seed companies have a very high approval rating of the adequacy of seed inspectors.

In addition, in other countries like Kenya, Malawi, Tanzania, Uganda, and Mozambique, the seed regulator has trained and accredited private seed inspectors. In some cases (e.g. in Malawi), private these inspectors assume some, but not all, of the seed inspection functions originally undertaken by the government. Given the limited resources and capacity of government inspectors in the DRC, the addition of private inspectors may be beneficial for the industry as a whole.

According to the seed producers, the seed inspectors are inadequate. The producers rate the adequacy of seed inspectors at the border points as poor (33%) and the adequacy of inspectors at the farm and retail level as fair (59%).

### Efforts to stamp out fake seed

Seed producers in the DRC have reported that fake seed is a major problem affecting the seed industry. In 2016, a total of 185 cases of fake seed were reported. This is significantly higher than the number reported in other African countries: Ethiopia (11 cases), Malawi (20 cases), Tanzania (18 cases), Zambia (22 cases), and Zimbabwe (52 cases). Note, however, that in the DRC, as in other countries, the number of reported cases is likely to be an under-estimate of the actual incidence.

Seed sector stakeholders listed several sources of fake seed in the country. First are the NGOs and other agents who allegedly purchase low-quality seed for the relief market. The relief market is a major incentive for traders to buy grain (from within DRC and from the neighbouring countries) and sell it as seed. Second, many seed producers do not have sufficient technical capacity to produce quality certified seed, and resort to selling grain as seed.

Seed producers in the DRC rate their satisfaction with government efforts to stamp out fake seed as poor (22%).



Although seed companies surveyed in other countries also report relatively low satisfaction ratings with efforts counter fake seeds (e.g., 57% in Ethiopia, Tanzania, and Zimbabwe), the 22% rating reported in the DRC is by far the lowest. According to the seed producers, the government is yet to acknowledge the problem, which is the first step towards finding lasting solutions. The DRC has no known cases of enforcement officers arresting individuals caught with fake seed. Despite fewer reported cases of fake seed, seed companies in most of the other countries are also quite dissatisfied with their respective governments' efforts to address fake seed.

### Use of smart subsidies

The government of DRC does not currently have a seed subsidy program.

## INSTITUTIONAL SUPPORT

### Availability of extension services

In 2016, there were a total of 1,198 agricultural extension workers across the four regions surveyed. Nine hundred ninety-four (83%) work for the National Extension Service (SNV), operated by the government. The remaining 204 are employed in the private sector, by seed producers (in 2016 seven employed extension workers), as well as NGOs and private agribusiness enterprises.

The total number of extension workers in the four regions in DRC translates to one extension worker for every 5,898 farming households. This is a very low ratio, compared to other African countries: Malawi (1:1,388), Mozambique (1:1,045), Tanzania (1:831) and Zambia (1:560).

In addition, most of the extension workers lack the funds and other resources such as vehicles to reach all the farming areas across the country. Moreover, in part due to poor infrastructure, the distribution of the extension officers across the country is uneven. Ninety-two percent (1,099 out of 1,198) are based in the east, while only 7% are in the west, and fewer than 1% are in the south. At present the north has no extension officers.

Seed producer's satisfaction with the availability of extension services is fair (54%), which is similar to the level of satisfaction in other African countries such as Malawi (47%), Tanzania (56%) and Zambia (55%). However, seed producers in the DRC reported being more satisfied with the privately-owned extension services, rating them as more reliable.

### Quality of national seed trade association

There are two levels of seed producer associations in the DRC – a national association called the National Union of Agricultural Producers of Congo (UNAGRICO) and provincial seed associations. The TASAI country study has found that only 10 out of the 63 of seed producers are aware of the existence of the national seed association. Of these, only six seed producers are members. However, most producers (52 out of 63) are aware of the provincial seed associations; 34 report that they are members of their respective provincial associations. The fact that the provincial organizations are better known makes sense given the country's large size.

**National Seed Trade Association:** The members of UNAGRICO gave a very low overall rating of the association. The seed producers' overall satisfaction with the national seed association is poor (32%). This rating is the lowest among other national seed trade associations. The National Seed Trade Association of Ghana (NASTAG) has the second lowest rating of 46% because it is a young association (less than two years old, and is yet to have a fully-functioning secretariat). ZASTA from Zambia (74%), TASTA from Tanzania (71%), STAM from Malawi (73%) and STAK from Kenya (62%) are rated quite highly because they have established an effective working relationship with government through which seed companies have a platform for engagement on seed sector issues. SANSOR (South Africa) is rated the highest (81%) because of its effectiveness in delivering key services to seed companies, such as seed certification, seed inspection, and phytosanitary services.

UNAGRICO is rated as poor in all service areas, include democracy and governance (35%), activity on important seed sector issues (37%), effectiveness in advocacy (32%), managerial ability (32%), providing value to members (30%), and ability to mobilize resources (23%).

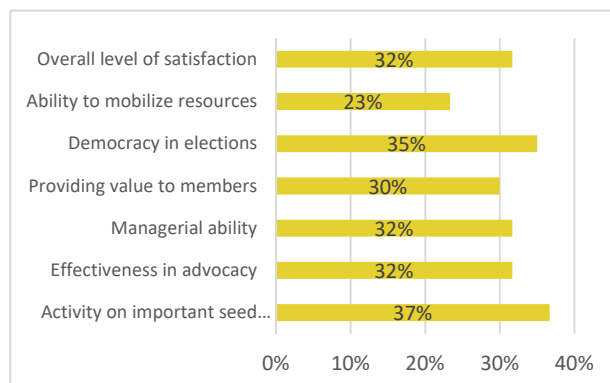


Figure 3: Members' satisfaction with UNAGRICO





**Provincial Seed Associations:** The provincial seed associations are located in the western and eastern regions (called Union Nationale de Producteurs de Semences du Congo (UNAPSCO) from North Kivu and the Association de Producteur de Distributeurs d' Intrans Agricoles du Congo (APDIAC) from South Kivu) and the southern region (called the Association de Producteurs Semenciers du Katanga (APSKA) based in Haut-Katanga). There is no provincial association in the north. The level of satisfaction of the provincial associations varies by region. Over half (23 out of 44) of the seed producers in the east are members of either UNAPSCO and APDIAC. However, their satisfaction with either provincial association is poor (37%). Most of the seed producers (8 out of 10) in the south are members of APSKA. Their satisfaction with the APSKA is extremely poor (7%). Finally, only 3 of the 13 seed producers in the west are members of the provincial seed association.

## SERVICE TO SMALLHOLDER FARMERS

### Concentration of rural agro-dealer network

The agro-dealer is a relatively new concept in DRC. The PASA project has begun to develop an agro-dealer network in the east, and at present, these agro-input merchants sell mostly vegetable seeds and fertilizer. However, most of them do not have sufficient business or marketing knowledge.

In 2016, there were 161 agro-dealers, of which 42 were hub agro-dealers (who serve as wholesalers to supply smaller agro-dealers) and 117 were small rural agro-dealers. This translates to a ratio of one agro-dealer for every 43,882 farming households in the DRC. This is clearly inadequate, and leads to a situation where most farmers have very limited or no access to agro-dealers. All the other countries surveyed by TASA have more agro-dealers and a higher ratio of agro-dealers per household: Kenya (1:1,221), Malawi (1:1,320), Tanzania (1:2,900), and Zambia (1:3,276).

Understandably, seed producers' rate their satisfaction with the concentration of the agro-dealer network in the DRC as poor (30%). Seed companies in the other countries are more satisfied with the agro-dealer network.

### Availability of seed in small packages

About a third (31%) of all seed sold in 2016 was sold in small packages weighing 2 kg or less. The package sizes by

crop vary, as shown in Figure 4. The amount of seed sold in small packages by crop was 28% for maize, 26% for rice, 31% for beans and 55% for soya beans.

Seed in small packages was only sold in two regions – east and south. This is because most of the seed companies are based in these regions. The seed companies in the east have been trained on marketing, packaging and branding of their seeds, under the PASA project. Seed companies in the south are mainly foreign companies who have a lot of experience in seed packaging.

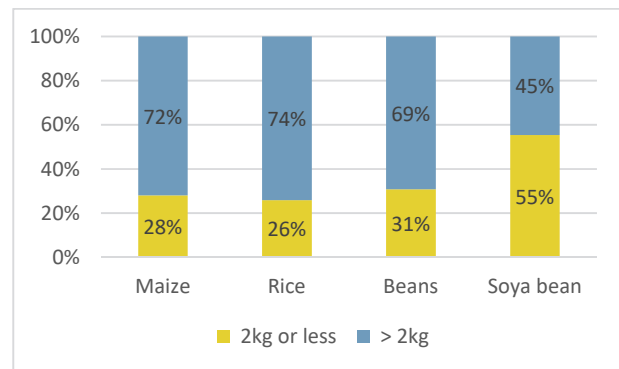


Figure 4. Percentage of seed sold in different package sizes

### Seed-to-grain price ratio

Assuming stable prices at planting time, seed-to-grain price ratios can reflect the attractiveness of a variety or affordability of improved seed relative to farmer recycled grain. The seed-to-grain price ratios for the four crops in DRC are: maize hybrid (5.5:1), maize OPV (5.0:1), rice (1.8:1), beans (1.4:1), and soya beans (1.6:1). These ratios are similar to ratios in other African countries such as Malawi (4.2:1 for hybrid maize) and Uganda (6.2:1 for hybrid maize). However, the premium for hybrid maize seed vis-à-vis OPVs is rather low.

There is one main difference in the ratios between the southern region and the other regions. For the south, both maize price ratios (16.6:1 for hybrid maize and 9.2:1 for OPV maize) are significantly higher than the national average. This is because of the low price of maize grain. Maize grain in Haut-Katanga province costs USD 0.3 per kg, and is lower than the national average of USD 0.6 per kg. The low grain price is likely due to the high supply of maize from commercial farmers, which in turn is fueled by the demand for maize flour from the mining companies, which distribute maize flour to their employees.



## CONCLUSION

The seed industry in the DRC is in the introductory stage. The low adoption rates (less than 50%) of certified seed for key food crops and the very low volumes of seed sales suggest that there is significant space for growth. However, seed sector growth is constrained by several factors across the seed value chain. Further, the opportunities and challenges in the sector notably vary – in some cases – across the four regions.

At the research level, there is need for more breeders at INERA and the University of Lubumbashi. More importantly, the breeders need more resources to carry out their work. This is important as the average age of the varieties surveyed in the DRC is the oldest in East and Southern Africa. Old varieties that no longer display the original variety characteristics need to be replaced with newer varieties.

At the industry level, the local seed companies need support to build capacity in seed production, management, and marketing. This could be done through partnerships with more established seed companies from neighbouring countries. All categories of seed producers, especially the individual seed producers and seed associations, need to be more effectively monitored and regulated to ensure quality output of certified seed.

There is an urgent need for greater quality control in the relief seed market to avoid the distortion of the local seed market. On the one hand, seed producers need to ensure the supply of quality seed, while the relief agencies should offer more competitive prices.

Most of the seed policy instruments in the DRC, including the seed law and regulations, have been in draft form for nearly 10 years. Policy makers should prioritize the updating of these instruments to conform to the COMESA harmonized seed regulations before they are passed by the

relevant authorities. In addition, supporting instruments such as the national Variety Catalogue, need to be updated more regularly. The weak capacity of SENASEM significantly affects various aspects of the seed sector including seed quality control and inspection services at the production, post-production and distribution stages.

Lastly, the various seed support services are either notably weak or non-existent. There are very few agro-dealers and extension officers in the country. In most cases, these supporting agents are insufficiently trained and lack sufficient resources to assist farmers, or they do not even exist, such as in the north. The national and provincial seed associations are generally weak and lack name recognition among seed producers. The associations also need to strengthen their management and service delivery.

Despite the multiple challenges constraining seed sector development in the DRC, the sector has significant potential for growth, justified by the overall agricultural potential of the country. The fact that regional seed companies have entered the market in the DRC or at least are exploring it via exports signals a lucrative seed market. With new investments in agriculture and concerted reform efforts by government and the private sector there is a unique window for catalytic change in the DRC's formal seed sector.

## REFERENCES

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## APPENDIX 1.

For a comparison of TASAI Indicators across 13 countries, please visit: <http://tasai.org/wp-content/uploads/TASAI-Appendix-CURRENT.pdf>





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