Regional landscaping report for Eastern and Southern Africa

Access to Seeds Index

February 2021

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Acronyms

AFSTA: Africa Seed Trade Association

AGRA: Alliance for Green Revolution in Africa

ARIPO: African Regional Intellectual Property Organization

CGIAR: Consultative Group for International Agricultural Research

COMESA: Common Market for Eastern and Southern Africa

CONASEM: Conseil National des Semence

CTAC: Comité Technique d’Admission des Variétés au Catalogue

DAR: Department of Agricultural Research

DARS: Department of Agricultural Research Services

EAC: East African Community

EAFF: East African Farmers Federation

ESA: Eastern and Southern Africa

GAIN: Global Alliance for Improved Nutrition

GHI: Global Hunger Index

HESSREP: Harmonized East African Seeds Standards and Regulation

ISABU: Burundi Institute of Agronomic Sciences

ISPAAD: Integrated Support Program for Arable Agricultural Development

NSC: National Seed Committee

SACAU: Southern African Confederation of Agricultural Unions

SADC: Southern African Development Community

SANSOR: The South African National Seed Organisation

SDGs: Sustainable Development Goals

SMP: Seed Multiplication Project

SSC: SADC Seed Centre

SSEA: South and South-east Asia

WBA: World Benchmarking Alliance

WCA: Western and Central Africa

Introduction

The Regional Access to Seeds Index for Eastern and Southern Africa (ESA) was first published in 2016. The Index provides a unique insight into how the seed industry is making quality seeds of improved varieties available to smallholder farmers. It was the first index to assess 17 global companies next to regional seed companies, showing that both play a distinctive and vital role in reaching smallholder farmers in the region. The 2019 Regional Index for Eastern and Southern Africa, which evaluated 22 leading seed companies in the region, showed that companies are present across the region, invest in seed business activities in multiple countries, offer a variety of seed types and packages tailored to smallholder needs, and take steps to curb counterfeit seed. It showed that the region's main challenge is diversification of breeding activities, being focused on maize mainly.

The seed companies in scope for the Eastern and Southern Africa Index can be divided into national, regional, and global companies. Nationally operating companies in scope are considered as leading in their home market. Regional seed companies also operate outside their home country, often through agents, although some have also set up additional offices and seed production activities in the region. Global seed companies active in Eastern and Southern Africa have their headquarters outside the region. Several have developed a physical presence in the region through breeding stations, seed production, and/or marketing activities.

The regional company East African Seed, originating from Kenya, led the 2019 Eastern and Southern Africa Index with its access to seed strategies for reaching smallholder farmers. Most notable are the company's smallholders targeted research program, portfolio, marketing, and adoption activities. Some companies ranked at the bottom due to a lack of disclosure, while other companies had vigorous breeding activities but were not fully leveraging these for smallholder markets. Overall, the Index showed that the youngest varieties for most crops on offer are over three years old which raises concerns of whether the industry's response to rapidly changing climatic conditions is sufficient.

The 2021 Regional Index for Eastern and Southern Africa

The 2021 Access to Seeds Index will evaluate a total of 72 seed companies in 3 regions: Eastern and Southern Africa, Western and Central Africa (WCA) and South and South-east Asia (SSEA). The 2021 ESA Access to Seeds Index will evaluate 32 leading seed companies in the region. This includes 13 globally active companies that will be assessed in all three regional indexes. The 2021 Access to Seeds Index is being developed as a 'spotlight benchmark' under the World Benchmarking Alliance's (WBA's) food and agriculture transformation.

The selection criteria of the 72 seed companies for the 2021 Access to Seeds Index include having a regional presence or at least a regional influence, a physical presence and business activities in the region, an integrated seed business model, and/or peer recognition as a leading company. The index will evaluate the 32 selected companies in 19 countries: Angola, Botswana, Burundi, Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Rwanda, Somalia, South Africa, South Sudan, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

This landscaping report provides an overview of the seed sector in the region and recent development in the seed policies and harmonization that reflect the industry's environment. Also, it presents the leading seed industry players identified for benchmarking in the 2021 Regional Index for Eastern and Southern Africa, a summary of the region's main crops, the enabling environment, observations on the results of the 2019 Regional Index for Eastern and Southern Africa, and recent events affecting seed sector development in the region, notably the COVID-19 pandemic.

Table 1 – 32 companies selected for the 2021 regional Access to Seeds Index for Eastern and Southern Africa

Company	**Country**
Advanta	United Arab Emirates
BASF *	Germany
Bayer *	Germany
Bejo *	The Netherlands
Capstone Seeds	South Africa
Corteva Agriscience *	United States of America
Darusalam Seed Company	Somalia
Demeter Seed	Malawi
EABC	Ethiopia
Agriscope Africa Ltd. (East African Seed)	Kenya
East-West Seed *	Thailand
Enza Zaden *	The Netherlands
Equator Seeds	Uganda
FICA Seeds	Uganda
Hygrotech	South Africa
Kenya Highland Seed	Kenya
Kenya Seed Company	Kenya
Klein Karoo Africa	South Africa
KWS *	Germany

Limagrain *	France
Mukushi Seeds #	Zimbabwe
NASECO	Uganda
Novalliance Group	France
Rijk Zwaan *	The Netherlands
Sakata *	Japan
Seed Co	South Africa
Starke Ayres	South Africa
Stewards Globe	Zambia
Syngenta Group *	Switzerland
Takii *	Japan
Victoria Seeds	Uganda
Zamseed	Zambia

* Globally active companies assessed for their investments in all 3 regions

New regionally headquartered company added to scope

Integration with the World Benchmarking Alliance for greater impact

The Access to Seeds Index has been developed by the Access to Seeds Foundation since 2012. By the publication of the 2019 edition, it was clear that the index had significantly improved the transparency of the seed industry, encouraged a range of improvements and provided a welcome evidence base for dialogue. However, linking these achievements to the global Sustainable Development Goals (SDGs) required partnering with other benchmarks. As a result, the Access to Seeds Foundation decided to align and integrate its model with the World Benchmarking Alliance (WBA)'s food and agriculture transformation, assessing the role business against key global agendas, including the 2030 Agenda and the Paris Agreement. Within this transformation, the 2021 Access to Seeds Index is a 'spotlight benchmark', providing deeper insights into the contribution of the seed industry to the SDGs, in particular SDG 2 (zero hunger).

WBA's food and agriculture transformation encompasses two spotlight benchmarks: the Access to Seeds Index and the Seafood Stewardship Index. The Food and Agriculture Benchmark will broadly assess the performance of the 350 largest and most influential companies within the food value chain, including seed and input companies, on their contribution to global food systems transformation. Where keystone companies shape markets, smaller companies play a central role in the last mile delivery of products in specific markets. In the case of the Access to Seeds Index, they are crucial for reaching smallholders and building their capacity.

The Access to Seeds Index will focus on and deepen insights into the contribution of the seed industry. This will include small- and medium-sized seed enterprises in South and South-east Asia and sub-Saharan Africa, both of which face high levels of hunger and rural poverty. The seed industry, with its key position at the start of the global food chain, is vital for realising multiple development goals. Chief among them is the goal of doubling smallholder productivity and incomes as part of efforts to achieve food security and end hunger (SDG 2), which the seed industry is well positioned to support.

Theory of change

A sustainable future for all, as outlined in the SDGs, can only be achieved through transformational change. Business can play a key role in leading this transformation by introducing sustainable, inclusive and innovative solutions.

Benchmarks provide an essential tool for measuring and comparing corporate performance on the SDGs. They equip financial institutions, companies, governments, civil society and individuals with the information they need to exert their full influence and encourage others to do the same. By supporting the private sector in its role to deliver on the SDGs, WBA can help companies move from aspiration to action to achievement.

By focusing its core benchmarks on keystone companies (companies with a disproportionate influence on a specific market or value chain) WBA aims to bring the transformations that are fundamental to achieving the SDGs beyond the tipping point: the point at which a series of small changes becomes significant enough to cause a larger, transformational change.

Through spotlight benchmarks, WBA aims to accelerate change around a specific critical challenge in each of the seven identified transformations. Ensuring that smallholder farmers in South and South-east Asia and sub-Saharan Africa have access to quality seeds for food crops is one such critical challenge. Addressing the challenge can unlock the potential for resilient farming systems and ending global hunger. So far, not enough progress has been made. A multi-stakeholder approach involving both the public and private sector is needed, with an important role for seed companies to address the multiple burdens of food insecurity and malnutrition.

The Access to Seeds Index contributes to accelerating change in three ways: (1) by illuminating the private seed sector - this can inform policy decisions but also help civil society actors and public sector bodies build partnerships with private seed companies; (2) by ranking and comparing companies to channel the competitive spirit that drives performance in every industry; and (3) by inspiring the keystone companies included in the Food and Agriculture Benchmark. By demonstrating that agribusiness models which include smallholders are possible and profitable, seed companies can set an example for other companies in the global food chain, including beyond the seed industry.

Background of the landscaping report

This landscaping report covers 19 countries in Eastern and Southern Africa namely, Angola, Botswana, Burundi, Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Rwanda, Somalia, South Africa, South Sudan, Uganda, United Republic of Tanzania, Zambia and Zimbabwe. In addition, background and updates are provided on developments in seed harmonization and seed policies on a regional and country level to reflect the environment in which the seed industry operates in the region.

Collaboration with key actors

The socialisation process for the Access to Seeds Index methodology is done through roundtables and dialogues that bring together stakeholders and experts from the regional seed industry. This process enables the exchange of knowledge within and between organisations, encourages learning, and contributes to enhancing awareness and understanding about seed companies' roles and performance. It also promotes the use of the index results by different stakeholder groups.

The Access to Seeds Index aims to strengthen collaborations with regional partners to ensure that the methodology review is informed by their data needs. Engagement will focus on the use of existing channels such as events and conferences to disseminate the index publications. Partners in Eastern and Southern Africa range from the seed sector development actors, including the pan-African Africa Seed Trade Association (AFSTA), and several national seed agencies, to the trade organizations active in Africa such as COMESA.
To meet the needs of those most impacted by the seed industry, the Access to Seeds Index aims to inform decision makers by including and amplifying the voices of farmers through dialogues with regional farmer organisations in Southern Africa and Eastern Africa. These organisations are identified and recommended by the index’s Regional Expert Review Committee, regional partners and a growing number of WBA Allies. WBA Allies represent a broad cross-section of sectors and industries committed to using benchmarks to incentivise, measure and monitor corporate performance on the SDGs. To ensure that the seed industry is represented, the Access to Seeds Index welcomes interested actors to join the movement.

Unique resource for stakeholders

The Access to Seeds Index is a unique resource in the public domain for anyone interested in seed industry activity in the Global South. Research organisations like CGIAR use information provided by the index to identify private sector partners that can help bring new varieties to market. The index’s findings are also

used by the Global Alliance for Improved Nutrition (GAIN), which is interested in the availability of crop varieties with high nutritional value.
Among farmer organisations, support for the index is strong. This is because the index's data is helping them to engage in informed dialogue with seed companies on how these companies can better serve smallholder needs. In addition, the effects of climate change have brought home the fact that collaborating with seed companies could be a way for farmer organisations to strengthen smallholder resilience.

The African Union has backed the index from the start. At a seed sector event in Abidjan, Côte d'Ivoire, in October 2016, Janet Edem, Director of Rural Economy and Agriculture at the African Union, said: "for achieving food and nutrition security, there is a continued need to measure the performance of the seed sector and keep our heads of state as well as all partners informed of the latest developments. We are fortunate that professional initiatives like the Access to Seeds Index are already contributing to that path." In recent years, the index has informed various regional seed sector development initiatives, such as AfricaSeeds and supported COMESA's efforts to harmonize seed laws and policies.

The 2019 WCA Access to Seeds Index results were widely reported by mainstream and specialised media such as seed magazines, agriculture news outlets and business and financial publications including Kenya's KBC One. Furthermore, seed companies, particularly those that ranked high, included items on the index in their company communications.

The seed sector in Eastern and Southern Africa

The seed sector of the 19 countries included in this landscaping report is presented below.

Generally, most of the countries in the Eastern and Southern Africa region have some form of policies governing the seed industry. The seed sector in the region has high potential for growth given the favourable environmental conditions for most crops, and the increasing demand for quality seed of improved varieties rising from climate change and population growth.

The major global and regional seed companies have a solid base in countries with a relatively strong regulated seed industry, such as Kenya, Zambia, Zimbabwe, Tanzania, Malawi, and South Africa. These countries are members of international organizations that support the establishment of a regulatory and enabling environment for the seed industry such as the International Seed Testing Association (ISTA), the Union for Protection of Varieties (UPOV) and/or the Organization for Economic Cooperation and Development (OECD).

The variation in policy and regulatory regimes is pivotal to the existing differences in seed sector development among the countries in the region. The goal of the development of a common seed market in the COMESA region is to integrate smaller and more isolated national seed markets into one larger market for seed. Adoption of a harmonized system has high potential to enhance the flow of improved seed among countries, thus increasing farmer access to higher yielding varieties.

Three regional organizations are working on seed regulation harmonization. The regional East African Community (EAC) is in the process of adopting a harmonized framework for seed legislation and an EAC seed bill for its six member countries. The Common Market for Eastern and Southern Africa (COMESA) is a free trade area with twenty-one member states. Southern African Development Community (SADC) is an inter-governmental organization of 16 member states and has developed three tools to optimize harmonization among its member states, namely, the SADC Variety Release System, the SADC Seed Certification and Quality Assurance System, and the SADC Quarantine and Phytosanitary Measures for Seed. SADC member states have also agreed to cooperate in the implementation of the Harmonized Seed Regulations in the region through a memorandum of understanding (MOU) to create an integrated seed market that will facilitate the availability of quality seed to farmers.

Angola

Farmers rely almost entirely on farm-saved seed or imported seed from the government and private companies. The use of old varieties and of low-quality seed, together with traditional low input crop management practices, results in low crop production. Angola's government stimulates the development of a commercial seed sector and encourages foreign seed companies to increase activities.
Fourteen companies included in the 2019 index had a presence in Angola.

Botswana

Botswana has become the latest country in Southern Africa to sign the Charter on establishing the SADC Seed Centre as an effort to improve food security. The government is working toward enacting the Seed Variety Bill and Plant Protection Bill which would improve farmers' access to high quality seed.

Ten companies included in the 2019 index had a presence in Botswana.

Burundi

The commercial seed sector in Burundi remains limited. Following national legislation, the active National Seed Quality Control and Certification (ONCCS) allows private seed producers to operate as associations or individuals. COPROSEBU, equivalent to the Burundi Seed Trade Association, is recognized as a partner of the government and contributes to seed sector development by increasing the transparency in seed production and seed quality.

Eight companies included in the 2019 index had a presence in Burundi.

Eswatini

After privatizing the seed sector, global and regional companies that mostly specialise in field crop seed production began to operate in Eswatini. Most of these seed companies produce and pack their seed in other countries and import them to Eswatini.

Eight companies included in the 2019 index had a presence in Eswatini.

Ethiopia

The public sector does most of the formal seed production and distribution in Ethiopia. Different private enterprises and companies are involved in seed production and distribution of seeds.

Seventeen seed companies included in the 2019 index had a presence in Ethiopia.

Kenya

The Kenyan seed sector has a multitude of public, parastatal, non-governmental, and private players. The National Seed Policy and associated laws guide the seed industry in Kenya. Companies are active in field and vegetable crops as well as local crops. They invest in research or partner with local and international research institutes for varietal development. There is a seed traders' association with membership from both the private and the public sector.

Twenty-six companies in the 2019 index had a presence in Kenya.

Lesotho

Private sector participation in seed value chain is low and mainly focuses on multiplication, marketing, and seeds distribution to farmers. With bulk use of farm-saved seeds, a community-based seed system involves associations of individuals organised as a group or cooperative and NGOs assist with seed multiplication and establishing community seed banks. This system supports recovery from drought, pests, or diseases, and strengthening farmer-based systems with improved varieties or seed quality enhancing techniques.

Six companies included in the 2019 index had a presence in Lesotho.

Madagascar

Due to diverse climates, altitudes, and soils, a wide range of food and cash crops are grown in Madagascar. However, the production of certified seeds is still insufficient to meet local demand. Private sector participation remains low while more than 90% of the seeds used in Madagascar are farm-saved seeds of traditional varieties.

Ten companies in the 2019 index had a presence in Madagascar.

Malawi

The seed sector in Malawi promotes improved seed distribution through agro-dealers to small-scale farmers. Local commercial seed companies and farmers' associations are involved in seed multiplication, contracting farmers for seed production, and distribution. These companies do not engage in varietal development and testing. Multinational seed companies are involved in breeding, seed production, multiplication, processing, and distribution mainly of hybrid maize. Also, multinationals engage in the promotion and demonstration of improved varieties and quality seed.

Eleven companies included in the 2019 index had a presence in Malawi.

Mozambique

There are few companies with breeding, processing, and production activities in the country. Some companies have testing locations and provide extension services for the smallholder farmer.

Seventeen companies in the 2019 index had a presence in Mozambique.

Namibia

Government seed cooperatives dominate the production and distribution of seeds. Seed cooperatives struggle to produce enough seeds. Inadequate funds hinder the production of good quality seeds and the practical application of seed quality control mechanisms, such as field and laboratory seed inspection and testing. The land currently available is inadequate to produce the required quantity of seeds, and climatic conditions remain a challenge to seed production.

Eleven companies in the 2019 index had a presence in Namibia.

Rwanda

The informal seed sector dominates agriculture in Rwanda. The adoption of new crop varieties is relatively low across all crops except for hybrid maize. However, the demand for good quality seeds and varieties adapted to local growing conditions has seen an increase in NGOs and private companies active in plant breeding, seed production, and extension services for smallholder farmers. Notably, the National Seed Association of Rwanda brings together seed traders, seed multipliers, agro-dealers, and institutions that develop plant varieties and avail quality seed to farmers.

Thirteen companies in the 2019 index operate in Rwanda.

Somalia

The prevailing insecurity and socio-economic situation of the country have discouraged private sector investment in the seed industry. Seed systems in the country are predominantly informal, and besides farm-saved seed, Somali farmers source their seeds from traders, relief agencies, and relatives. Few private field crops and vegetable companies fulfil most of the seed of activities in the value chain. Some companies with no breeding programs rely on licensed parent material from other seed companies.

Three companies in the 2019 index operate in Somalia.

South Africa

South Africa's agriculture sector comprises of both commercial farmers and smallholder farmers. The industry has evolved to meet large-scale commercial farming needs, taking priority over smallholder activities. As a sign of industry maturity, there is a significant specialization in seed crops, with international companies interested in major food crops. Access to improved seed is still a challenge in some areas in the country.

Twenty-one companies in the 2019 index had a presence in South Africa.

South Sudan

The political and regulatory instability in South Sudan has rendered most of the existing seed companies ineffective, and the country depends on food imports despite fertile lands and an array of agroecological zones where various crops can be grown.

Nine companies in the 2019 index had a presence in South Sudan.

Uganda

The Ugandan government is responsible for developing research capacity, while the private sector carries out seed production, seed conditioning and marketing. Major seed selling outlets are facilitated by the government, agro-dealer distribution networks and NGOs operating in the region.

Twenty-one companies in the 2019 index had a presence in Uganda.

United Republic of Tanzania

The private and public sector both conduct seed production, processing and marketing. More than 100 private seed companies are operating in Tanzania, with many involved in variety development, seed production, processing, marketing, exporting, and importing seeds. Generally, all seed companies, whether specializing in field and/or vegetable crops, offer some form of extension service and training to farmers. Seeds production by seed companies is through contracted large-scale farmers.

Twenty-three companies in the 2019 index had a presence in Tanzania.

Zambia

The formal seed sector produces and markets most of the seeds traded in Zambia. Farmer-to-farmer and local diffusion mechanisms are, however, the main distribution channels through which farmers get their seeds.

Twenty companies in the 2019 index had a presence in Zambia.

Zimbabwe

Most of the seed companies registered in Zimbabwe have partnership arrangements that provide them with access to screening and registering varieties from public breeding institutions such as CIMMYT.

Nineteen companies in the 2019 index had a presence in Zimbabwe.

Seed sector Covid-19 response

The seed industry in Eastern and Southern Africa responded to the outbreak of the COVID-19 pandemic by successfully lobbying governments to declare seeds an essential product that was not subject to movement restrictions during lockdown, thereby reducing the risk of farmers being unable to buy seed in time for planting. However local travel restrictions on farmers themselves mean some have struggled to access input and output markets or acquire seed through their social networks.

The review and dialogue during the development of the Access to Seeds Index methodology included how the index should address the impacts of COVID-19 pandemic on seed businesses. The 2021 Access to Seeds Index survey will include questions about the implications of the pandemic lockdowns in relation to relevant indicators. However, data collected will not be used for company assessment.

Area harvested for global crops

The Access to Seeds Index focuses on smallholders' access to quality seeds for major field and vegetable crops (so-called global crops). All are food crops. The index uses this data to evaluate whether companies have specific food crops in their portfolios of value to smallholders, and where companies see opportunities to develop suitable varieties tailored to regional conditions and preferences.
The area harvested for these crops in hectares (ha) was collected for all 19 index countries and is based on data published by the FAO in 2018. These are listed below.

Table 2 – The area harvested for crops in hectares (ha) in ESA

Field crops	Area harvested in ha (2018)
Maize	21,584,758
Bean, dry	6,031,796
Sorghum	5,383,601
Groundnut	3,426,911
Rice	2,775,018
Wheat	2,601,468
Sesame	2,250,661
Millet	2,005,284
Sunflower	1,954,116
Soybean	1,398,088
Potato	979,445
Cowpea	956,072
Pigeon pea	727,992
Chickpeas	369,106

Table *2* – Area harvested for global vegetables in ha (2018)

Vegetables	Area harvested in ha (2018)
Onion	225,370
Cabbage	197,787

Pepper (hot)	179,327
Tomato	167,984
Pumpkins Squash Gourds	108,012
Pepper (sweet)	33,936
Pea, green	25,243
Carrot	21,767
Watermelon	17,481
Bean, green	11,653
Eggplant	6,384
Melon	5,050
Okra	3,989
Cucumber	3,718
Lettuce	2,501
Cauliflower	928

Country profiles

Country profiles provide an overview of the national seed sector and list the main seed companies selected for the 2021 Eastern and Southern Africa Access to Seeds Index. Information in this section is based on country profiles as published by the Access to Seeds Index in 2019, additional recent literature, and updated databases such as the 2020 Global Hunger Index (GHI).

Angola

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC
GDP share of agriculture (%)	10
Employment in agriculture (% of total employment)	50
Country position on GHI severity scale (2020 score)	Serious hunger (29.8)
UPOV membership status	Member of SADC.; in contact with the UPOV Office for assistance in the development of laws based on the UPOV Convention.
Participation in OECD seed schemes	No
GM Crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	27/100
Law on plant variety protection	No

Main crops

The main crops in Angola were identified based on the area harvested in 2018. The table below lists the top five index field crops and top two index vegetables.

Maize, bean (dry), groundnut, sorghum and millet constitute the most widely harvested field crops. Among vegetables, cabbage and tomato are the most harvested.

Field crops	Area harvested in ha (2018)

Maize	2,654,698
Bean, dry	795,077
Groundnut	339,414
Sorghum	268,210
Millet	241,059
Vegetables	**Area harvested in ha (2018)**
Cabbage	102,543
Tomato	7,773

Overview of the seed sector in Angola

Angola's economy remains severely affected by 27 years of war and the massive disruption that this created in rural areas. The government plays a large role in providing improved crop varieties and agronomic extension services to farmers and instituted a legal and regulatory structure for the seed industry.

Development of a commercial seed sector is stimulating foreign seed companies to increase activities. Institute for Agricultural Research (IIA) is a public agricultural research institute under the Ministry of Agriculture. It is devoted to research, technological development, and innovation. It has ten research stations across the country. IIA works on variety testing and production of seeds but lacks breeding activities.

Main seed companies selected for the 2021 SSEA Access to Seeds Index with headquarters in Angola

None

Botswana

Region	Eastern and Southern Africa
Development status	Upper Middle Income Country and Territory
Participation in trade blocs	SADC
GDP share of agriculture (%)	2
Employment in agriculture (% of total employment)	20
Country position on GHI severity scale (2020 score)	Serious hunger (23.6)
UPOV membership status	Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	Not included
Law on plant variety protection	Industrial Property Act, 2010 (Act No. 8 of 2010)

Main crops

The main crops in Botswana were identified based on the area harvested in 2018. The table below lists the top four index field crops and three index vegetables.

Important field crops are maize, sorghum, millet and groundnut. Among vegetables, sunflower, watermelon and onion are the most harvested.

Field crops	Area harvested in ha (2018)
Maize	62,211
Sorghum	27,584
Millet	3,273
Groundnut	480
Vegetable	**Area harvested in ha (2018)**
Sunflower	1,171
Watermelon	596
Onion	283

Overview of the seed sector in Botswana

The government certifies and produces seeds through its Department of Agricultural Research (DAR) and distributes new varieties through its Seed Multiplication Unit. The DAR is the only institution involved in plant breeding and technology. It is also responsible for administering seed certifications through the 1976 Seed Certification Act (CAP 35:07), complemented by the country's Seed Bill.

To address challenges in the arable subsector, such as poor technology adoption by farmers and low agricultural productivity, the government supports programs such as the Integrated Support Program for Arable Agricultural Development (ISPAAD). This program is implemented by the extension services department of the Ministry of Agricultural Development and Food Security where farmers receive inputs including seeds.

The Botswana Agricultural Marketing Board (BAMB) also plays a large role in seed supply to farmers. Established by an Act of Parliament in 1974, among others, it was mandated to provide inputs to farmers such as seeds for cereals, pulses/beans and oilseeds.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Botswana

None

Burundi

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	EAC, COMESA
GDP share of agriculture (%)	29
Employment in agriculture (% of total employment)	92
Country position on GHI severity scale (2020 score)	Insufficient data yet significant concerns
UPOV membership status	No
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	36/100
Law on Plant Variety Protection	Law 1/08 2012 for organizing the seed sector; decree 100/55 (2016) for protecting new plant varieties; law 1/07 (2009) for amending certain provisions of decree law 1/032 (1993) for producing and marketing vegetable seeds in Burundi

Main crops

The main crops in Burundi were identified based on the area harvested in 2018. The table below lists the top four index field crops. Numerous other vegetables are grown, but no crop-specific area or production data are available.

Dry bean is the most important field crop followed by maize, rice and sorghum.

Field crops	Area harvested in ha (2018)
Bean, dry	599,139
Maize	190,003
Rice	43,808
Sorghum	42,513

Overview of the seed sector in Burundi

Development of the seed sector in Burundi began in 1985 with the draft of a national seed program that was introduced in 1987, however, the presence of a commercial seed sector is limited. The first decree on seed production and trade, published in 1993, has not entered into force even after the Ministry of Agriculture and Livestock signed a series of ordinances applying measures to the decree in 1999.

Following national legislation, the National Seed Quality Control and Certification is active, and private seed producers can operate as associations or individuals. The Collectif des Compagnies et Coopératives de Production des Semences du Burundi (COPROSEBU) is a group of private growers involved in the production of certified seeds and can be regarded equivalent to a Seed Trade Association. The seed organization contributes to seed sector development by increasing the transparency in seed production and seed quality with objectives updated and detailed in the recent publication Collectif Des Productuers des semences du Burundi Plan Strategique 2021 –2027.

The national research institute ISABU also plays an important role in the Burundi seed sector. It’s main mission to contribute, in collaboration with scientific, technical and financial partners, to develop innovations and agricultural knowledge aimed at improving well-being. Since 2012, the seed law has been drafted but the implementing texts have been slow to follow.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Burundi

None

Eswatini

Region	Eastern and Southern Africa
Development status	Lower Middle Income Country and Territory
Participation in trade blocs	SADC, COMESA
GDP share of agriculture (%)	9
Employment in agriculture (% of total employment)	12
Country position on GHI severity Scale (2020 score)	Serious hunger (20.9)
UPOV membership status	Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	Cotton
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	Not included
Law on plant variety protection	Seeds and Plant Varieties Act, 2000

Main crops

The main crops in Eswatini were identified based on the area harvested in 2018. The table below lists the top five index field crops and the top index vegetable.

Maize is the most harvested field crop followed by groundnut, potato, dry bean and cowpea. The most widely cultivated vegetable is tomato.

Field crops	**Area harvested in ha (2018)**
Maize	78,535
Groundnut	5,676
Potato	4,035
Bean, dry	3,761
Cowpea	2,048
Vegetables	**Area harvested in ha (2018)**
Tomato	459

Overview of the seed sector in Eswatini

Eswatini's land tenure system is divided into land owned by private commercial farmers who export cash crops abroad and land owned by smallholder farmers. Seeds are imported from seed companies in the region.

The government created the Seed Multiplication Project (SMP), a seed processing plant that called on and contracted commercial farmers to produce seed on behalf of the government. In addition, the SMP repackages seeds that come in bulk from other countries. It also delivers farming inputs to retailers in all parts of the country, which makes it easier for smallholder farmers to access farming inputs locally.

To discourage an influx of fake seeds, the government introduced the Seeds and Plant Varieties Act of 2000. If there is a seed company that wishes to produce seeds in the country (of varieties that are on the variety list), it registers with the Registrar of Seeds and is monitored by seed quality control services from pre-planting to packaging.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Eswatini

None

Ethiopia

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	COMESA
GDP share of agriculture (%)	31
Employment in agriculture (% of total employment)	66
Country position on GHI severity scale (2020 score)	Serious hunger (28.9)
UPOV membership status	No
Participation in OECD seed schemes	No
GM crop approval for cultivation	Cotton
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	46/100
Law on plant variety protection	Seed Proclamation No. 782/2013 (2013); Plant Breeders' Right Proclamation 481/2006 (2006)

Main crops

The main crops in Ethiopia were identified based on the area harvested in 2018. The table below lists the top three index field crops and top four index vegetables.

Maize is the most important field crop. Other widely cultivated crops include sorghum and wheat. Pepper (hot), cabbage, onion and sweet pepper are the most widely cultivated vegetables.

Field crops	**Area harvested in ha (2018)**
Maize	2,235,872
Sorghum	1,828,474
Wheat	1,748,972
Vegetables	**Area harvested in ha (2018)**
Pepper (hot)	152,642
Cabbage	45,747
Onion	32,063
Pepper (sweet)	30,534

Overview of the seed sector in Ethiopia

Smallholder farmers dominate the agricultural sector in Ethiopia, with 90% of farms smaller than two hectares. Farm-saved seed is the prevailing system of seed used for smallholder farmers. In 1992, the Ethiopian government created a National Seed Policy to create a supportive enabling environment that would encourage the private sector to be actively involved in the production and marketing of seeds. The policy further allows private foreign seed companies to undertake crop research activities on non-restricted crops.

Ethiopia's seed laws are aligned with COMESA regulations. As such, a semi-autonomous agency was established that is responsible for handling seed issues in Ethiopia, namely the Ethiopia Seed and Other Agricultural Inputs Authority.

To discourage an influx of fake seeds, the government introduced the Seeds and Plant Varieties Act of 2000. If there is a seed company that wishes to produce seeds in the country (of varieties that are on the variety list), it registers with the Registrar of Seeds and is monitored by the seed quality control services from pre-planting to packaging.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Ethiopia

Company	Crops in portfolio		Business Model		
	Field crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Ethiopian Agricultural Business Corporation (EABC)	✓	✓	✓	✓	✓

Kenya

Region	Eastern and Southern Africa
Development status	Lower Middle Income Country and Territory
Participation in trade blocs	EAC, COMESA
GDP share of agriculture (%)	34
Employment in agriculture (% of total employment)	54
Country position on GHI severity scale (2020 score)	Serious hunger (25.2)
UPOV membership status	UPOV member
Participation in OECD seed schemes	Yes
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	65/100
Law on plant variety protection	Seeds and Plant Varieties Act (Cap 326); 2016

Main crops

The main crops in Kenya were identified based on the area harvested in 2018. The table below lists the top four index field crops and the three most harvested index vegetable.

Maize and dry bean are the most important field crop. Other widely cultivated crops include cowpea and sorghum. Tomato, cabbage and green pea are the most widely cultivated vegetables.

Field crops	Area harvested in ha (2018)
Maize	2,141,743
Bean, dry	1,170,173
Cowpea	260,408
Sorghum	229,883
Vegetables	**Area harvested in ha (2018)**
Tomato	28,263
Cabbage	22,672
Pea, green	15,492

Overview of the seed sector in Kenya

Kenya's seed industry is guided by its National Seed Policy and associated laws. The National Seed Policy aims to develop, promote and regulate a modern and competitive seed industry. The seed industry in Kenya is regulated by the Kenya Plant Health Inspectorate Service, which is the nationally designated authority on seeds. There is a seed traders association, with membership from both private and public sector.

The Seeds and Plant Varieties Act (Cap 326) is the principal seed law which comprehensively addresses all legislative issues relating to seeds and plant varieties, and seeks harmonization with other related acts and international agreements where Kenya is a signatory. Amendments of the act and the implementing regulations have been undertaken to authorize specified seed certification activities on behalf of the regulator. They also provide governance for forestry seeds and other species, including domestication of wild plants, as well as the establishment of a Plant Genetic Resources Centre.

The Kenyan seed sector is characterized by a multitude of public, parastatal, non-governmental and private players.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Kenya

Company	Crops in portfolio		Business Model		
	Field crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Agriscope Africa (East African Seed)	✓	✓	✓	✓	✓
Kenya Highland Seed	X	✓	X	✓	✓
Kenya Seed Company	✓	✓	✓	✓	✓

Lesotho

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC
GDP share of agriculture (%)	6
Employment in agriculture (% of total employment)	9
Country position on GHI severity scale (2020 score)	Serious hunger (23.2)
UPOV membership status	UPOV membership status Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	Not included
Law on plant variety protection	No

Main crops

The main crops in Lesotho were identified based on the area harvested in 2018. The table below lists the top three index field crops. Numerous other vegetables are grown, but no crop-specific area or production data are available.

Maize, sorghum and dry bean are the most important field crops.

Field crops	Area harvested in ha (2018)
Maize	127,700
Sorghum	27,061
Bean, dry	17,777

Overview of the seed sector in Lesotho

Most farmers in Lesotho are smallholders, and their crop productivity is relatively low because of soil erosion, poor agricultural practices, recurring bouts of drought and increased cost of farming inputs. There is a community-based seed system that involves associations of individuals, often organized as a group or cooperative with the support of non-governmental organizations that assist with seed multiplication and establishing community seed banks.

The Department of Agricultural Research secures germplasm for evaluation, variety maintenance and production of basic seed, while the private sector multiplies and distributes seed to farmers.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Lesotho

None

Madagascar

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC, COMESA
GDP share of agriculture (%)	24
Employment in agriculture (% of total employment)	64
Country position on GHI severity scale (2020 score)	Alarming hunger (41.5)
UPOV Membership status	Member of the Southern African Development Community (SADC); held discussions to develop laws based on the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	36/100
Law on plant variety protection	No

Main crops

The main crops in Madagascar were identified based on the area harvested in 2018. The table below lists the top five index field crops and five index vegetables.

Rice is the most important field crop, followed by maize, groundnut, dry bean and potato. The most cultivated vegetables are tomato, carrot, onion, pepper (hot) and green pea.

Field crops	Area harvested in ha (2018)
Rice	928,184
Maize	129,008
Groundnut	82,072
Bean, dry	77,627
Potato	43,435
Vegetables	**Area harvested in ha (2018)**
Tomato	5,039

Carrot	3,001
Onion	2,328
Pepper (hot)	1,660
Green pea	1,407

Overview of the seed sector in Madagascar

The Madagascar seed act was enacted in 1995 but the implementation decree was issued later in 2006. It aimed to stimulate private sector investment in seed research, production and distribution, import and export - leaving control and regulation to the public sector.

The 1995 law created several seed institutions, such as CONASEM (Conseil National des Semences), charged with policy analysis and orientation, seed promotion and diffusion, and the Varietal Admission Committee (CTAC – Comité Technique d'Admission des Variétés au Catalogue), which records cultivated varieties in a national catalogue.

To implement the seed act, the 2008 National Seed Strategy Document further built on the Seed Act, and in 2013 the National Agency for Official Seed and Plants Control (ANCOS) was established as the regulating entity for seeds in Madagascar.

The National Seeds Certifying Authority is mandated to do seed certification. Quality control is in place through ANCOS, which partners with the Malagasy Association for the Promotion of Seeds (AMPROSEM) to promote quality seeds and seed policy orientation. The state-owned National Center for Applied Research on Rural Development has five research centres for rice, maize, cassava, beans and vegetables.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Madagascar

None

Malawi

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC, COMESA
GDP share of agriculture (%)	26
Employment in agriculture (% of total employment)	44
Country position on GHI severity scale (2020 score)	Serious hunger (23)
UPOV membership status	Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	41/100
Law on plant variety protection	Seed Act (2005)

Main Crops

The main crops in Malawi were identified based on the area harvested in 2018. The table below lists the top four index field crops and to five index vegetables.

Maize is the most important field crop. Other widely cultivated crops include dry beans, groundnut and pigeon pea. Tomato, pumpkin, squash and guard are the most cultivated vegetables.

Field Crops	Area harvested in ha (2018)
Maize	1,685,347
Bean, dry	347,622
Groundnut	405,084
Pigeon pea	249,510
Vegetables	**Area harvested in ha (2018)**
Tomato	27,764
Pumpkin	21,715

Squash Gourds	

Overview of the seed sector in Malawi

The sector is predominately comprised of smallholders, mainly at the subsistence level, and is largely focused on maize cultivation, alongside certain cash crops.

The Seed Services Unit in the Department of Agricultural Research Services (DARS) is responsible for seed certification and involved in inspection and testing. It also has a seed testing laboratory, which is accredited by the International Seed Testing Association (ISTA).

The seed sector in Malawi strongly promotes improved seed, which is distributed to small-scale farmers through agro-dealers. The country's Farm Input Subsidy Programme promotes and markets quality seeds of improved varieties.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Malawi

Company	Crops in portfolio		Business Model		
	Field Crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Demeter Seed	✓	✓	X	✓	✓

Mozambique

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC
GDP share of agriculture (%)	25
Employment in agriculture (% of total employment)	70
Country position on GHI severity scale (2020 score)	Serious hunger (28.8)
UPOV membership status	Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	No
Enabling the Business of Agriculture (2019 rank)	51/100
Law on Plant Variety Protection	Decree 12/2013 of Seed Regulations (2013); Decree 26/2014 Protection of New Varieties of Plants (2014)

Main crops

The main crops in Mozambique were identified based on the area harvested in 2018. The table below lists the top four index field crops and top three vegetables.

Rice is the most important field crop followed by maize, groundnut and cowpea. Onion, sunflower and tomato are the most cultivated vegetables.

Field crops	Area harvested in ha (2018)
Rice	227,234
Maize	1,826,664
Groundnuts	417,825
Cowpea	333,638

Vegetables	Area harvested in ha (2018)
Onion	30,109
Sunflower	13,775
Tomato	16,964

Overview of the seed sector in Mozambique

While no seed laws or seed policies are currently implemented in Mozambique, the 12/2013 Seed Regulation decree, which is harmonized with Southern Africa Development Community regulations, is the regulatory body governing seed activity registration and the release of new varieties. It defines rules for seed production, inspection and commercialization, as well as seed quality control. It established the National Seed Committee (NSC), as an advisory committee to the Ministry of Agriculture, and the Subcommittee for Variety Registration and Release, as the technical advisory committee to the NSC for registering new varieties.

The Regulation of Plant Breeder Rights Decree 26/2008 was reviewed to align with UPOV guidelines and then approved as the Protection of New Plant Varieties decree 26/2014, though this regulation has not yet been operational. The main policy instruments guiding the seed sector are the Strategic Plan of Development of the Agricultural Sector, which operates through the Program for Strengthening of the Seed Chain, and the Comprehensive Seed Regulation.

The Instituto de Investigação Agrária de Moçambique is a government institution mandated to coordinate and conduct agricultural research within the country. It conducts local variety breeding, under the Directorate of Agronomy and Natural Resources.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Mozambique

None

Namibia

Region	Eastern and Southern Africa
Development status	Upper Middle Income Country and Territory
Participation in trade blocs	SADC
GDP share of agriculture (%)	7
Employment in agriculture (% of total employment)	22
Country position on GHI severity scale (2020 score)	Serious hunger (24.9)
UPOV Membership status	Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	No
Enabling the Business of Agriculture (2019 rank)	Not included
Law on plant variety protection	No

Main crops

The main crops in Namibia were identified based on the area harvested in 2018. The table below lists the top three index field crops and top two index vegetables.

Maize, millet and sorghum and chickpea constitute the most widely harvested field crops. Among vegetables, onion and cabbage are the most harvested.

Field crops	Area harvested in ha (2018)
Millet	256,187
Maize	25,172
Sorghum	21,782
Vegetables	**Area harvested in ha (2018)**
Onion	1,346
Cabbage	193

Overview of the sector in Namibia

The Subdivision of Crop Production and Management through the Section of Crop Quality Control carries out seed quality control and certification of all seeds produced at research stations, green schemes and seed growers' fields.

Government seed cooperatives dominate the production and distribution of seeds, though activities undertaken by the Ministry of Agriculture, Water and Forestry face challenges to meet the demand for seeds. Namibia experienced a seed shortage for the past few years which has affected more than 60% of the population.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Namibia

None

Rwanda

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	EAC
GDP share of agriculture (%)	29
Employment in agriculture (% of total employment)	62
Country position on GHI severity scale (2020 score)	Serious hunger (29.1)
UPOV membership status	Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM Crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	41/100
Law on Plant Variety Protection	Law Governing Seeds and Plant Varieties in Rwanda (2016)

Main crops

The main crops in Rwanda were identified based on the area harvested in 2018. The table below lists the top five index field crops and top four index vegetables.

Maize is the most important field crop, followed by sorghum, dry bean and potato. Pumpkin, quash, gourd and tomato are most cultivated compared to other vegetables.

Field crops	Area harvested in ha (2018)
Maize	295,739
Sorghum	142,397
Bean, dry	547,786
Potato	92,800
Vegetables	**Area harvested in ha (2018)**
Pumpkin	50,711

Squash Gourd	
Tomato	10,212

Overview of the seed sector in Rwanda

The Rwanda Agriculture Board is responsible for producing breeder and pre-basic seeds. For the main economic crops in the country, Crop Intensification Program was introduced in 2007 to mobilize small farmers to use improved inputs (seeds and fertilizers), access to capacity building programs, and credits, while embracing land consolidating schemes for commercial production.

Although Rwanda depends on seed imports, the regulatory principles of the UPOV and Breeders' Rights are new in Rwanda and were only recently introduced under newly introduced seed regulations. Intellectual property protection law governs intellectual property in Rwanda.

The National Seed Association under the Rwanda Ministry of Agriculture and Animal Resources brings together seed traders, seed multipliers, agro-dealers and institutions that develop plant varieties and avail quality seed to farmers.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Rwanda

None

Somalia

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	-
GDP share of agriculture (%)	63
Employment in agriculture (% of total employment)	83
Country position on GHI severity scale (2020 score)	Insufficient data yet significant concerns
UPOV membership status	UPOV Membership status Member of the African Regional Intellectual Property Organization (ARIPO); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	No
Enabling the Business of Agriculture (2019 rank)	Not included
Law on plant variety protection	No

Main crops

The main crops in Somalia were identified based on the area harvested in 2018. The table below lists the top three index field crops and top two index vegetables.

Sorghum is the most important field crop. Other widely cultivated crops include maize and dry bean. Tomato and onion are the most widely cultivated vegetables.

Field crops	Area harvested in ha (2018)
Sorghum	234,403
Maize	92,920
Bean, dry	87,892
Vegetables	**Area harvested in ha (2018)**
Tomato	16,276
Onion	4,024

Overview of the seed sector in Somalia

Somalia has no seed policy, law or regulation in place, nor are seed imports subjected to any inspections for quality and phytosanitary checks. Government-established seed systems have been severely hit by the unrest along with droughts in the larger Horn of Africa region. Relief agencies and development organizations are committing resources to reactivate the agriculture sector, and part of these efforts is directed toward reviving seed systems.

Somali seed systems are predominantly informal. Farmers use farm-saved seeds for most of their field and local crops, mainly maize, sorghum, cowpea and rice. There are different local varieties and landraces of maize, sorghum and cowpea in various parts of the country, and these are uniquely adapted to drought. Rice varieties grown in the river basins of Shabelle and Juba in southern Somalia were obtained from international research organizations during the pre-war period, and farmers have maintained them through on-farm seed regeneration.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in Somalia

Company	Crops in portfolio		Business Model		
	Field crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Darusalam Seed Company	✓	✓	X	✓	✓

South Africa

Region	Eastern and Southern Africa
Development status	Upper Middle Income Country and Territory
Participation in trade blocs	SADC
GDP share of agriculture (%)	2
Employment in agriculture (% of total employment)	5
Country position on GHI Severity scale (2020 score)	Moderate at 14
UPOV membership status	UPOV Member
Participation in OECD seed schemes	Yes
GM crop approval for cultivation	No
ITPGRFA contracting party	No
Enabling the Business of Agriculture (2019 rank)	69/100
Law on plant variety protection	Plant Breeders' Rights Act, 1976 (Act 15 of 1976)

Main crops

The main crops in South Africa were identified based on the area harvested in 2018. The table below lists the top three index field crops as well as four index vegetables.

Maize is the most harvested field crop followed by soybean and wheat. The most widely cultivated vegetables are pumpkin, squash, gourd and onion.

Field crops	Area harvested in ha (2018)
Maize	2,318,850
Soybean	787,200
Wheat	503,350
Vegetables	**Area harvested in ha (2018)**
Pumpkin Squash Gourd	30,758
Onion	29,834

Overview of the seed sector in South Africa

South Africa's seed industry is regulated under the 1976 Plant Improvement Act to ensure orderly trade in seeds. The act provides registration for premises from which the sale, cleaning and packing of seed may be undertaken, and it also prescribes the conditions subject to which seeds can be sold. It has since been updated by the 2015 Plant Improvement Draft Bill.

The South African National Seed Organisation (SANSOR) administers seed certification schemes on behalf of the Ministry of Agriculture, Forestry and Fisheries. The seed industry has evolved over more than a century into a relatively mature sector with 107 seed companies that are members of SANSOR. The industry has evolved to meet the needs of large-scale commercial farming, which has taken precedence over smallholder activities. Access to improved seeds is still a challenge in some areas in the country. As a sign of industry maturity, there is significant specialization by seed crop, with international companies interested in major food crops.

Main seed companies selected for the 2021 ESA Access to Seeds Index with headquarters in South Africa

Company	Crops in portfolio		Business Model		
	Field crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Capstone Seeds	✓	✓	✓	✓	✓
Hygrotech	X	✓	✓	X	✓
Klein Karoo Africa	✓	✓	✓	✓	✓
Starke Ayres	X	✓	✓	X	✓
Seed Co	✓	✓	✓	✓	✓

South Sudan

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	EAC
GDP share of agriculture (%)	N/A
Employment in agriculture, (% of total employment)	N/A
Country position on GHI severity scale (2020 score)	Insufficient data yet significant concerns
UPOV membership status	No
Participation in OECD seed schemes	No
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	Not included
Law on plant variety protection	No

Main crops

The main crops in South Sudan were identified based on the area harvested in 2018. The table below lists the top four index field crops and the top index vegetable.

Sorghum is the most harvested field crop followed by sesame, maize and groundnut. The most cultivated vegetable is sunflower.

Field crops	Area harvested in ha (2018)
Sorghum	786,086
Sesame	617,908
Maize	211,328
Groundnut	116,595
Vegetables	**Area harvested in ha (2018)**
Sunflower	28,735

Overview of the seed sector in South Sudan

The Ministry of Agriculture and Food Security (MAFS) was established in 2010 after South Sudan gained independence. The Seed Trade Association is in its early stages and mentored by the Alliance for Green Revolution in Africa (AGRA). MAFS has seed regulations in place based on the Harmonized East African Seeds Standards and Regulation (HESSREP), which is an active member of Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). It also has a Seeds Act which is still before the parliament and is guided by the COMESA harmonized seeds policy.

The seed sector falls under the Research and Plant Protection Directorates of the Ministry, which suffers from limited funding. NGOs and FAO take lead of the seed sector with an emphasis on community-based production of quality declared seeds as dictated by funding cycles. Seed production, in collaboration with MAFS, is geared towards topping up imported seeds and food items from neighbouring countries for distribution.

Main seed companies selected for the 2021 ESA Access to Seeds Index with HQ in South Sudan

None

Uganda

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	EAC
GDP share of agriculture (%)	24
Employment in agriculture (% of total employment)	72
Country position on GHI severity scale (2020 score)	Serious hunger (30.6)
UPOV membership status	States and intergovernmental organizations which have initiated the procedure for acceding to the UPOV Convention (ARIPO)
Participation in OECD seed schemes	Yes
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	52/100
Law on Plant Variety Protection	Yes, The Plant Variety Protection Act, 2014

Main crops

The main crops in Uganda were identified based on the area harvested in 2018. The table below lists the top three index field crops and top two index vegetables.

Maize, dry bean and groundnut constitute the most widely harvested field crops. Among vegetables, sunflower and onion are the most harvested.

Field crops	Area harvested in ha (2018)
Maize	1,130,966
Bean, dry	627,254
Groundnut	463,968
Vegetables	**Area harvested in ha (2018)**
Sunflower	250,000
Onion	91,195

Overview of the seed sector in Uganda

The National Agricultural System Act (2005), Seeds and Plant Act (2006) and Plant Variety Protection Act (2014) are in place and operational. The Ministry of Agriculture, Animal Industry and Fisheries, through the Directorate of Crop Production, is the official focal point mandated to regulate the seed industry, with the National Seed Certification Services responsible for seed certification.

The Seeds and Plant Act is the principal legislation for the seed industry. The government regulates the official release of new varieties, licensing and oversight of seed merchant activities, especially regulating importing/exporting seeds, quality assurance in seed production, seed conditioning and local seed trade, and overall regulatory framework implementation. The government also heads up the creation of an enabling environment and oversees regulations.

To ensure safe development and application of biotechnology in Uganda, the parliament passed the Genetic Engineering Regulatory Bill 2018.

Main seed companies selected for the 2021 ESA Access to Seeds Index with HQ in Uganda

Company	Crops in portfolio		Business Model		
	Field crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Equator Seeds	✓	✓	X	✓	✓
FICA Seeds	✓	✓	✓	X	✓
NASECO	✓	✓	X	X	✓
Victoria Seeds	✓	✓	X	✓	✓

United Republic of Tanzania

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC, EAC
GDP share of agriculture (%)	29
Employment in agriculture (% of total employment)	65
Country position on GHI severity scale (2020 score)	Serious hunger (28.6)
UPOV membership status	OPOV Member
Participation in OECD seed schemes	Yes
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	57/100
Law on plant variety protection	Yes, The Protection of New Plant Varieties (Plant Breeders' Rights) Act, 2012

Main crops

The main crops in Tanzania were identified based on the area harvested in 2018. The table below lists the top five index field crops and top three index vegetables.

Important field crops are maize, rice, dry bean followed by groundnut and sesame. Among vegetables, sunflower, tomato and onion are most harvested.

Field crops	Area harvested in ha (2018)
Maize	4,100,571
Rice	1,199,875
Bean, dry	1,177,400
Groundnut	955,687
Sesame	800,000
Vegetables	**Area harvested in ha (2018)**
Sunflower	900,000
Tomato	25,985

Onion	11,388

Overview of the seed sector in United Republic of Tanzania

The Tanzania Official Seed Certification Institute (TOSCI) is a semi-autonomous government agency, under the Ministry of Agriculture, Livestock and Fisheries, established in 2003 by the Seed Act No. 18. TOSCI is responsible for the certification and promotion of quality agricultural seeds produced or imported into the country for sale.

After the liberalization of trade in the late 1980s, the Seed Act of 1973 was replaced by Seeds Act No. 18 of 2003. The country joined both the International Seed Testing Association for seed testing procedures and the Organization for Economic Cooperation and Development Seed Scheme for facilitating international seed trade.

Tanzania created its Plant Protection Act in 1997 and the Protection of New Plant Varieties (Plant Breeders' Rights) Act in 2002 and later added its 2008 regulations. In 2012, Tanzania enacted its new Plant Breeders' Rights Act in line with the UPOV Convention of 1991.

Main seed companies selected for the 2021 ESA Access to Seeds Index with HQ in United Republic of Tanzania

None

Zambia

Region	Eastern and Southern Africa
Development status	Least Developed Country
Participation in trade blocs	SADC
GDP share of agriculture (%)	3
Employment in agriculture (% of total employment)	49
Country position on GHI severity scale (2020 score)	Alarming hunger (38.1)
UPOV membership status	Member of the African Regional Intellectual Property Organization (ARIPO) and the Southern Africa Development Community (SADC); initiated the procedure for acceding to the UPOV Convention
Participation in OECD seed schemes	Yes
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	64/100
Law on plant variety protection	The Plant Breeder's Rights Act, 2007

Main crops

The main crops in Zambia were identified based on the area harvested in 2018. The table below lists the top three index field crops and top two index vegetables.

Maize is the widely grown field crop followed by soybean and groundnut. Among vegetables, sunflower and tomato are the most harvested.

Field crops	Area harvested in ha (2018)
Maize	1,086,006
Soybean	191,930
Groundnut	259,479
Vegetables	**Area harvested in ha (2018)**
Sunflower	91,219
Tomato	2,626

Overview of the seed sector in Zambia

The legal regime governing seeds in Zambia includes the Plant Varieties and Seeds Act (Cap 236) of the Laws of Zambia, the Plant Pests and Diseases Act (Cap 231) and the Plant Breeders' Rights Act (No. 18 of 2007). The Soils and Crops Research Branch under the Department of Research and Specialist Services is responsible for genetic resource management and crop varietal research.

The Seed Control and Certification Institute under the Ministry of Agriculture is Zambia's seed certification authority and provides the country with additional seed-related services. Another key player in the seed sector is the Zambia Seed Trade Association, which is a national seed association with membership from individuals, seed associations, firms and companies. In 2019, Zambia exported its first hybrid maize seed to the Democratic Republic of Congo (DRC). It was the first-of-its kind initiative to be commissioned under the SADC Harmonised Seed Regulatory System (HSRS) and Seed Certification and Quality Assurance guidelines. The export process offers a path forward for SADC countries to move high-quality seed varieties listed in the SADC Regional Variety Catalogue across borders and ensure consistency to those improved seeds.

Main seed companies selected for the 2021 ESA Access to Seeds Index with in Zambia

Company	Crops in portfolio		Business Model		
	Field crops	Vegetables	Breeding	Seed Production	Marketing and Sales
Zamseed	✓	✓	X	✓	✓

Zimbabwe

Region	Eastern and Southern Africa
Development status	Low Income Country
Participation in trade blocs	SADC
GDP share of agriculture (%)	12
Employment in agriculture (% of total employment)	67
Country position on GHI severity scale (2020 score)	Alarming hunger (34.4)
UPOV membership status	Initiated the procedure for acceding to the UPOV Convention The country is also a member of African Regional Intellectual Property Organization (ARIPO) and Southern African Development Community (SADC).
Participation in OECD seed schemes	Yes
GM crop approval for cultivation	No
ITPGRFA contracting party	Yes
Enabling the Business of Agriculture (2019 rank)	48/100
Law on plant variety protection	Yes, Plant Breeders' Rights Act (Chapter 18:16) 1979, revised 2001' Rights Act (Chapter 18:16) 1979, revised 2001

Main crops

The main crops in Zimbabwe were identified based on the area harvested in 2018. The table below lists the top four index field crops and the top index vegetable.

Maize is the most important field crop, followed by millet and groundnut. Tomato is widely cultivated compared to other vegetables.

Field crops	Area harvested in ha (2018)
Maize	1,191,425
Millet	222,032
Groundnut	157,000

Vegetables	Area harvested in ha (2018)
Tomato	3,619

Overview of the seed sector in Zimbabwe

The Seed Services Institute (SSI), under the Ministry of Agriculture, regulates variety registration, seed production and marketing activities. Complementing the SSI is an association of the Zimbabwe Seed Trade Association (ZSTA), which also coordinates seed industry activities, sales and marketing. ZSTA also plays an advocacy role and represents members at various forums.

Although most of the seed companies have their own inhouse seed inspectors, the government has seed inspectors to oversee the certification process of all seeds under compulsory certification. The process is carried out based on Chapter 19:13 of the Seeds Act of 1971, as well as Zimbabwe's Notice 2000.

Laboratory seed testing is done by the SSI, which also issues local seed certificates as well as the Orange International Certificate (OIC) for seed intended for export. Some of the companies have their own laboratories and produce internal seed certificates for domestic sales only. Such laboratories are monitored and audited by SSI to ensure that standards are met through their participation in three proficiency test programs annually and a physical laboratory audit done annually for accreditation purpose. Through SSI and ZSTA, the Zimbabwe seed industry participates in various regional and international associations and technical bodies such as the African Seed Trade Association (AFSTA), ISTA, COMESA, UPOV, ARIPO and OECD.

Main seed companies selected for the 2021 SSEA Access to Seeds Index with headquarters in Zimbabwe

None

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