Access to Seeds Index

Identifying Leading Seed Companies in Western and Central Africa

Landscaping study for the Regional Access to Seeds Index for Western & Central Africa

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Introduction

The Regional Access to Seeds Index for Western & Central Africa will evaluate the efforts of 22 leading seed companies in the region, aimed at improving access to seeds for smallholder farmers. Improving smallholder farmer productivity is one of the main targets on the United Nations' Sustainable Development Goals agenda. By providing clarity on leadership and good practices in the industry, the Access to Seeds Index aims to contribute to achieving these goals.

The following list of 22 companies is the result of a process of research, consultations and validation, which began with studies of the seed industry in 20 countries in the region: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of Congo, Gabon, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Republic of Congo, Senegal, Sierra Leone, The Gambia, Togo.

This landscaping report provides an overview of the outcomes of these country studies. In addition, background is 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.

Country specific profiles were developed by national focal points, who provided overviews of local seed sectors as well as a list of leading seed companies in their respective countries. Information has been sourced from existing literature and interviews with international, regional and national seed sector players by the national focal points. The work was undertaken under the supervision of Mr. Yacouba Diallo, a regional consultant based in Bamako, Mali.

To gather data for the country profiles, a survey was sent to stakeholders in the 20 countries, including various seed companies, to receive feedback on their activities in the region. Focal points gathered information on the characteristics of the 20 countries' seed sectors in terms of major field, vegetable and local crops, and information about the seed sector regulatory frameworks.

Companies selected for the Regional Access to Seeds Index for Western & Central Africa

	Company	Country	Seed portfolio	Ownership
1	AGRIPLUS	MLI	Field crops & vegetables	Private
2	AINOMA	NER	Field crops & vegetables	Private
3	BILOHF	CIV	Field crops & vegetables	Private
4	Da-Allgreen Seeds	NGA	Field crops & vegetables	Private
5	DowDuPont	USA	Field crops	Listed
6	East-West Seed	THA	Vegetables	Private
7	Faso Kaba	MLI	Field crops & vegetables	Private
8	GAWAL	CHN	Field crops & vegetables	Private
9	Heritage Seeds	GHA	Field crops	Private
10	Maslaha Seeds	NGA	Field crops	Private
11	Monsanto	USA	Field crops & vegetables	Listed
12	NAFASO	BFA	Field crops	Private
13	Pop Vriend Seeds	NLD	Vegetables	Private
14	Premier Seed	NGA	Field crops & vegetables	Private
15	Seed Co	ZWE	Field crops & vegetables	Listed
16	SEDAB	SEN	Field crops	Private
17	SEMAGRI	CMR	Vegetables	Private
18	Soprosa	MLI	Field crops & vegetables	Private
19	Syngenta (ChemChina)	CHE	Field crops & vegetables	Private
20	Technisem	FRA	Vegetables	Private
21	Tropicasem	SEN	Field crops & vegetables	Private
22	Value Seed	NGA	Field crops & vegetables	Private

1. Landscaping the Seed Sector in Western and Central Africa

1.1 Background

Agriculture is the economic and social mainstay of nearly 500 million smallholder farmers worldwide. While this sector is the largest generator of jobs and food security, agriculture on the African sub-continent is currently at a crossroads: persistent food shortages are compounded by threats from climate variability. Sub-Saharan Africa is dominated by rain-fed agriculture, while 75% of its surface area is dry land or desert. This makes the region highly vulnerable to droughts and floods, threatening its agricultural sector and food security. Many African countries experience severe water scarcity, which is likely to increase in the coming years.

Boosting the agriculture sector's productivity, profitability and sustainability is essential for fighting hunger and poverty, tackling malnutrition, and ensuring food security. It is well known that seeds are the most important input in crop production; they are the basic unit of plant propagation, and as such, are a crucial component of agriculture. Quality seeds are a prerequisite to successful agriculture, and constitute a major pathway for the success of regional food security goals, with the potential to increase overall productivity by nearly 40%. Seed companies are well positioned to develop and provide access to quality seeds in Africa.

1.2 Methodology

This landscaping study summarizes key players in the private seed industry in Western and Central Africa and covers 20 countries, excluding Equatorial Guinea and Mauritania, which are nonetheless included in the geographic scope of the index. The aim of this study is to generate data to support the development of a regional Access to Seeds Index for Western and Central Africa. The report provides analysis and results for 20 countries of the Western and Central Africa region and covers the following areas: (1) country context; (2) overview of the seed industry; (3) a list of the key players in the local seed industry.

To identify key players in the private seed industry, revenue and country data were collected from national institutions. A literature review was undertaken to inform the country profiles. Interviews were conducted with the leaders of national seed agencies and some of the enterprises involved in the seed sector at country level. In the case of those countries where there is limited seed company involvement in seed production, packaging and marketing, data was collected from seed producer cooperatives and from agricultural input supplier enterprises. Furthermore, some information was obtained first-hand through visits to seed enterprises.

List of country focal points, responsible for country profiles

Country	Focal point
Benin	Isabelle Ahouandjinou Megbleto, President of Benin National Seed Trade Association (ANASEB)
Burkina Faso	Semde R. Abdoulaye, Seed Service Expert, Ministry of Agriculture
Cameroon	Ernert Ngoumbé, National Seed Service, Ministry of Agriculture
Central African Republic	Rodrigue Yakemdé, Focal point of WTO, Ministry of Agriculture
Chad	Moundibaye Allarangaye, Breeder, National Research Center
Côte d'Ivoire	Esse Koudia, National Seed Service, Ministry of Agriculture
Democratic Republic of Congo	Antoine Frangoie, Agronomist and Seed Expert
Gabon	Calixte Mbeng, Agronomist, Ministry of Agriculture
Ghana	Solomon Ansah Gian, National Seed Specialist, Ministry of Agriculture
Guinea	Moussa Kane, President of Niger National Seed Trade Association (APIDIA)
Guinea-Bissau	Domigos Fonseca, National Seed Service, Ministry of Agriculture
Liberia	Julius M. Bass, Farmer Based Organization, Member of ROPPA
Mali	Mamadou Kayentao, President of National Seed Trade Association (ASSEMA)
Niger	Baina Danjimo, National Seed Specialist-WASP
Nigeria	Okelola Sunday Folarin, Seed Production Specialist, National Agricultural Seed Council
Republic of Congo (Brazzaville)	Zangtinda Marcel Ouedraogo, Agronomist and Consultant
Senegal	Adama Keita, National Seed Specialist, WASP/WAAP
Sierra Leone	Turay Momoh Yusif, Acting Head of the Sierra Leone Seed Certification Agency (SLeSCA)
The Gambia	Fayinkeh Mahamadou, President NACOFAG and ROPPA board member
Togo	August Essiomle, Agronomist, Ministry of Agriculture

The list of seed companies per country is a current snapshot, and subject to changes over time. The selection is based on: (1) having an integrated seed business model; (2) having a portfolio with a focus on vegetable crops and field crops; (3) regional presence or a dominant position in one country; (4) physical presence and business activities in the region and (5) peer recognition as a leading company. Seed volumes and revenues were considered where possible to determine size and dominance in a given country or multiple countries.

The studies and company selection were discussed and approved by a regional expert review committee which convened in Abidjan, Côte d'Ivoire, on 10 October 2017. The committee underscored that the potential of the seed sector in Western and Central Africa lies in its diversity, which should be expressed by the selection of companies for the regional index. Therefore, a combination of both local and international companies was selected to reflect this diversity. The committee also advised to undertake an additional study into the role of seed cooperatives. Seed cooperatives feature in many of the country profiles but have not currently been selected for the regional index due to limited activity in breeding.

Regional Expert Review Committee for Western and Central Africa

1. Kodjo Agbegnido, Agribusiness and Marketing Specialist to CORAF/WECARD
2. Amadou Moctar Beye, Seed System Specialist at AfricaRice
3. Issoufou Kapran, Program Officer Seed Production & Dissemination at Alliance for a Green Revolution in Africa (AGRA)
4. Kouamé Miezan, Executive Director at AfricaSeeds
5. Ousmane Ndiaye, Director at Association Sénégalaise pour la Promotion du Développement par la Base, au Sénégal (ASPRODEB)
6. Folarin Sunday Okelola is the Senior Technical Advisor to the Director General of the National Agricultural Seeds Council in Nigeria
7. Adigun Stephen Oludapo is Communication Officer at Seed Entrepreneurs Association of Nigeria (SEEDAN)

1.3 Overview of the Regional Seed Industry in Western and Central Africa

The seed sector in sub-Saharan Africa is dominated by informal and formal supply systems. The informal refers to systems where farmers obtain, develop, produce, maintain and distribute seeds from one growing season to the next, whether retained from previous harvests or acquired from farmers' social networks (farmer-to-farmer gifts, exchanges and trade). Most smallholder farmers heavily rely on this system of seed supply.

The informal seed system provides a rich diversity of seed, including varieties that are relevant to farmers and adapted to local weather conditions. It offers dynamic channels of seed distribution that can reach the most remote farming communities, and accounts for approximately 80-90% of seeds planted in Western and Central Africa. Quality standards in this system are not controlled by national or regional policies and regulations, but are guided by the local knowledge and experience of farming communities.

The formal sector is regulated by national seed committees and quality standards controlled by national seed certification agencies. In the region, the formal seed sector comprises many institutions including government, civil society organizations, research agencies, the private sector as well as development partners (NGOs and CBOs). Institutions involved in seed breeding, production, supply and marketing are registered and regulated by national/regional policies and acts.

Formal commercial seed activities cover seeds and planting materials of several crop varieties developed, released and registered (national and regional seed catalogues and/or lists) by national public institutions and produced and marketed across the region. There is a low level of seed exports, largely informal, to other countries in Western and Central Africa and beyond. There is also a vigorous and lucrative private seed sector importation component, mostly from Europe and Asia, covering mainly vegetable seeds.

The seed industry in Western and Central Africa has evolved due to changes in research and development approaches that occurred in three major phases. First, up until the 1980s the provision of seeds was state-managed in many countries, and crop varieties mainly originated from national research institutions and CGIAR centers. This was followed by the liberalization of the industry in many countries, whereby the role of the public sector in providing seeds decreased and the private sector progressively grew its activities in production and marketing of certified seeds. Despite this shift, public breeding and release of new crop varieties was still largely dominated by public research institutions such as NARI and CGIAR. From 1990 to present, the private sector has been increasing its role in varietal development and seed production.

Besides the modest involvement of multinational companies, farmer groups and cooperatives have also increased in number and size. Their role in seed supply is relatively important compared to other regions, such as Eastern and Southern Africa. In Western and Central Africa, seed industry development – in terms of high level capacity building and infrastructure – is largely donor supported.

Multinational companies such as DowDuPont, Monsanto, Syngenta (ChemChina) and Technisem have increasingly shown interest in Western and Central Africa, resulting in the establishment of their branches in countries such as Nigeria, Senegal, Ghana and Burkina Faso. However, their seed market shares and activities remain relatively low. Local companies and enterprises continue to experience significant growth.

Overview of identified leading seed companies per country

- **Companies selected for the 2019 Access to Seeds Index**
- Companies that did not meet the selection criteria

1. Benin
- Benin Semences
- Accueil Paysan
- FAS
- Prochimat
- Mont Cassado
- Dallas Cyties

2. Burkina Faso
- **NAFASO**
- NANKOSEM
- Sourou Agro Business
- Entreprise EPAM
- KING AGRO
- FAGRI
- **Monsanto**

3. Cameroon
- **SEMAGRI**
- Rhoticam
- Phytograines
- **Technisem/Tropicasem**
- JACO
- The Farmer House
- Jardin des Agriculteurs
- AgroPlants
- **Pop Vriend Seeds**

4. Chad
- IHDL
- FENOPS
- ESCOR-Agro
- SahelAgritec
- Le Reveil

5. Côte d'Ivoire
- CRNA
- ONDR
- BFCD
- SPV-CI
- Agro-Services
- **Technisem**
- **BILOHF**

6. Democratic Republic of Congo
- GAVANAT
- CEPROSEM
- CORIDEK
- APSK
- INERA
- APSKO
- CESIM
- **DowDupont**

7. Gabon
- GCIAE
- Horta Gabon
- **Technisem**

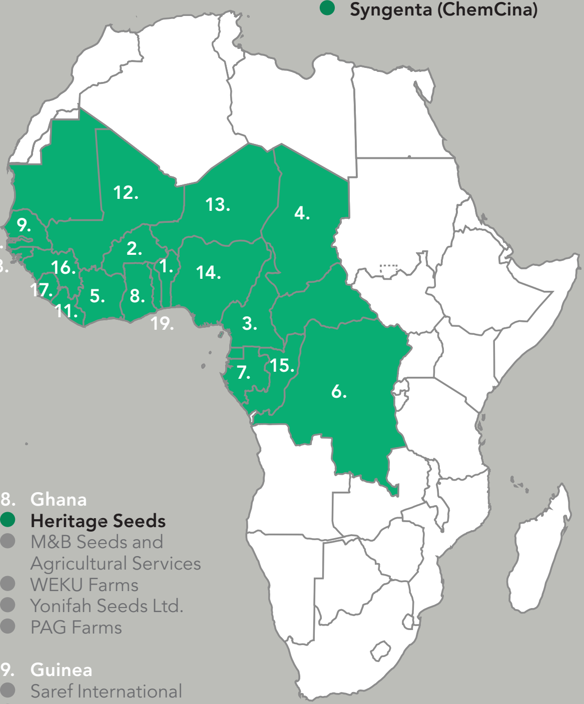
8. Ghana
- **Heritage Seeds**
- M&B Seeds and Agricultural Services
- WEKU Farms
- Yonifah Seeds Ltd.
- PAG Farms

9. Guinea
- Saref International
- Agriculture Qualité
- SPCIA
- Entreprise Tidiane Agriculture
- Comptoir Agricole
- Coopérative semencière de Koba

10 Guinea-Bissau
- MBORMAF
- APALCOF
- Contuboel Semence
- LVIA

11. Liberia
- Arjay Farm
- BRAC
- Agriculture Infrastructural Investment Company
- Dokodan Farmers Cooperative
- Gbeelay-Geh Women Cooperative
- GREEN STAR
- Aim Global Company Ltd.

12. Mali
- **AGRIPLUS**
- **Faso Kaba**
- Seneso
- **Soprosa**
- Comptoir 2000 SA
- Camara Semences
- **Syngenta (ChemCina)**



13. Niger
- **AINOMA**
- La Sahélienne
- Alhéri
- GANDU
- Ets HUSA'A
- Ambouta
- FESA

14. Nigeria
- **Premier Seed**
- **Value Seed**
- **Maslaha Seeds**
- **DA-Allgreen Seeds**
- ITN HYDROMAK
- **GAWAL**
- Savannah Seeds
- JAMMYNAGARI Seed
- **Seed Co**
- **East-West Seed**

15. Republic of Congo (Congo Brazzaville)
- CONGOSEM
- IRA
- CNSA

16. Senegal
- CCPA
- **SEDAB**
- GIE Khaly Amar Fall
- CNT
- RESOPP
- RNCPS
- SOCODISPA
- ETB TAMBEDOU et Fils
- **Tropicasem**
- Niayes Sarraut
- **Technisem**

17. Sierra Leone
- Seed Multiplication Programme (SMP)
- Seed Tech International
- Debar Group
- Farming First Sierra Leone
- Genesis Farm
- Mountain Lion

18. The Gambia
- Gambia Horticultural Enterprises
- Afric Agro Action
- RAYAN farm & poultry
- Niani Banni Seed Cooperative

19. Togo
- Ets LE PAYSAN
- ESOP-Semences
- Abé Solo-Seeds Company
- Cooperatives
- **Technisem**
- STIEA
- MONFITH

Disclaimer: Country borders or names do not necessarily reflect the Access to Seeds Foundation's official position. Maps used are for illustrative purposes and do not imply the expression of any opinion on the part of the Foundation, concerning the legal status of any country or territory or concerning the delimitation of frontiers or boundaries.

1.4 Policy and Regulatory Framework

Under the framework of the Regional Economic Communities (RECs), the processes of developing and implementing regional harmonized seed policy covering all countries within the community is ongoing. In May 2008, the ECOWAS Council of Ministers adopted the harmonized Seed Regulation (C/REG. 4/05/2008) that is geared towards facilitating the production, quality control, certification and marketing of plant seeds and plant seedlings.

The harmonized regulation focuses on three aspects: (1) registration and release of crop varieties, including entry into national and regional catalogues; (2) seed quality control and certification, including accreditation; (3) seed import and export, including quarantine.

Outputs delivered through these processes include facilitating (1) production of quality seeds; (2) seed marketing within sub-regions; (3) farmer access to quality seeds; (4) development of a favorable policy environment for the emergence of the private sector while increasing public investment (national seed fund) and (5) the implementation of public-private partnerships in the delivery of quality seeds.

The regulation covers the regions of the Economic Community of West African States (ECOWAS), the Union Economique et Monétaire Ouest Africaine (UEMOA) and the Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS). These three regional bodies aim to improve the agriculture sector in the region, as its performance has not met expectations due to structural, technical, organizational, economic and financial constraints.[1] The Seed Regulation aims to create, in the ECOWAS-UEMOA-CILSS region, favorable conditions for the emergence of a strong seed industry capable of ensuring a regular and sustainable supply of quality seeds and plants, in sufficient quantities and at affordable prices. These three regional bodies have signed a tripartite agreement to jointly implement the harmonized regulation of ECOWAS in their respective member states.

With similar processes ongoing in Central Africa, the Economic Community of Central African States (ECCAS) and the Central African Economic and Monetary Community (CEMAC) are conducting several consultative meetings to develop a regional harmonized regulation. Similarly, with the support of organizations such as FAO, countries have developed and adopted national seed policies and seed acts to regulate their national seed industry. These reforms are being developed and implemented to create favorable conditions necessary for the private sector, to ensure the regular supply of certified seeds in appropriate quantity and quality to farmers.

2. Country profiles

Country specific profiles were developed by national focal points, who provided overviews of local seed sectors as well as a list of leading seed companies in their respective countries. Information has been sourced from existing literature and interviews with national, regional and international seed sector players using focal points in each country.

2.1 Benin

Country focal point: Isabelle Ahouandjinou Megbleto, President of Benin National Seed Trade Association (ANASEB)

Leading seed companies in Benin

Company	Crops	Countries
Benin Semences	Vegetables	Benin
Accueil Paysan	Field crops, vegetables	Benin, Togo
FAS	Field crops	Benin
Prochimat	Field crops, vegetables	Benin
Mont Cassado	Field crops	Benin
Dallas Cyties	Field crops	Benin

Background

Agriculture employs nearly 80% of the total population. In 1978-1984, eight government-established seed production farms were created under the direction of the Centres d'Action Régionale pour le Développement Rural (CARDER). A study of the seed sector carried out in 1989 led to the restructuring of the sector with the implementation of a National Seed Plan for the period 1990-1995. This plan, which reduced the number of government operated seed farms to three, affirmed the need for certified seed production. It aimed to open a window for private players to enter the seed market. Towards the end of this period, a second plan was drawn up for the period 1995-2000, followed by further restructuring of the seed sector.

Based on area harvested, Benin's main food crops are cassava, yam, maize, sorghum, dry beans and rice. The country also relies on the cultivation of cash crops such as cotton, cashew and palm oil, mainly for export. Cereals such as maize and rice play a prominent role in the country's Strategic Plan for Agricultural Sector Recovery (2009-2015, PSRSA).

Seed industry

Despite national initiatives to restructure the seed sector, the timely availability of quality seeds remains a constraint faced by farmers. In Benin, cooperatives dominate seed production and supply systems. Except for companies importing vegetable seed, very few enterprises operate in the formal seed sector. Multinational companies hardly employ seed activities in the country.

Only in recent years have several producers started formalizing themselves as a seed company. Benin Semences and Accueil Paysan are two of the few companies importing vegetable seeds. Other larger companies, such as FAS and Mont Cassado, focus on field crop seed production and dissemination. Companies such as Prochimat and Dallas Cyties mainly focus on seed distribution. All active companies focus on their home market, with relatively little seed distribution crossing borders.

2.2 Burkina Faso

Country focal point: Semde R. Abdoulaye, Seed Service Expert, Ministry of Agriculture

Leading seed companies in Burkina Faso

Company	Crops	Countries
Neema Agricole du Faso (NAFASO)	Field crops	Burkina Faso and sub-region
NANKOSEM	Vegetables	Burkina Faso and sub-region
Sourou Agro Business	Field crops, vegetables	Burkina Faso and sub-region
Entreprise EPAM	Field crops	Burkina Faso, Togo
KING AGRO	Vegetables	Burkina Faso, Cote d'Ivoire, Mali, Niger, Ghana, Benin, Togo, Niger, Liberia
Faso Agriculture et Intrants (FAGRI)	Field crops	Burkina Faso, Cote d'Ivoire, Mali, Liberia, Benin
Monsanto	Field crops	Global

Background
Agriculture employs around 90% of the total population. Burkina Faso's economy saw an annual growth rate of 6% between 2000 and 2012.[2] The country's public institute for agricultural research, the Institut de l'Environnement et de Recherches Agricoles (INERA), is tasked with, among other things, increasing the general uptake of quality seeds throughout the country. In 2016, INERA designed a framework agreement on future public-private partnerships for producing initial classes of seed.[3]

Burkina Faso is a relatively leading country within West Africa having a seed policy and regulation in place and with a functional seed committee, certification agency, updated national catalogue and active private sector association.[4] Burkina Faso is a member of the African Intellectual Property Organisation (OAPI) and, as such, is subject to its PVP system. The ECOWAS common seed regulations are in effect, and the government has developed a regulation for seeds in line with ECOWAS policy that includes the Comité National des Semences (CNS).[5]

Seed industry
In Burkina Faso, the private seed sector faces multiple technical, infrastructural and financial challenges. Against this backdrop, three structures were set up to support the production, marketing and distribution of seeds in the country: l'Association des Grossistes et Détaillants d'Intrants Agricoles (AGRODIA), l'Association Nationale des Entreprises Semencières du Burkina Faso (ANES-BF) and l'Union Nationale des Producteurs Semenciers du Burkina (UNPS-B).

The number of local companies is increasing while their activities are growing across borders. NAFASO is a leading company in Burkina Faso, with an active presence in 14 additional countries in West Africa. NANKOSEM has a major presence in the region as well, with representation in seven countries outside of Burkina Faso. It partners with Technisem and Tropicasem with a focus on vegetable crops. Sourou Agro Business is another dominant company in the region.

Aside from vegetable seed companies being active in the country through agents and other companies, multinational companies show some activities as well. Monsanto has been active in Burkina Faso since 2000 with a focus on cotton.

2.3 Cameroon

Country focal point: Ernert Ngoumbé, National Seed Service, Ministry of Agriculture

Leading seed companies in Cameroon

Company	Crops	Countries
SEMAGRI	Field crops, mainly maize, vegetables	Cameroon, Gabon, Congo, Chad
Rhoticam	Vegetables	Cameroon
Phytograines	Field crops, vegetables	Global
Technisem/Tropicasem	Vegetables	Global
JACO	Vegetables	Central Africa
Farmer House	Field crops, vegetables	Central Africa
Jardin des Agriculteurs	Field crops, vegetables	Cameroon
AgroPlants	Field crop, mainly maize	Cameroon, Chad
Pop Vriend Seeds	Vegetables	Global

Background
In Cameroon, agriculture occupies 2.3 million hectares (15%) of the more than 15 million hectares of cultivable land. In 2012, exports of agricultural goods totaled 390,000 billion CFA, while imports totaled 655,000 billion CFA, yielding a trade deficit of 265,000 billion CFA, highlighting the importance of Cameroon establishing its own food production and self-sustaining seed enterprise.[6]

The Ministry of Scientific Research and Innovation (MINRESI) has a unit that deals with the dissemination of agricultural innovation, alongside its Agricultural Research Institute (IRAD). Cameroon established a seed law in 2001 relating to seed production and marketing.[7] In 2005, the country established the National Seed Council (NSC)[8] through a decree, which sought to promote, organize, and stimulate the development of a dependable seed industry; regulate and control the registration of released varieties; protect farmers from the sale of counterfeit seeds; and facilitate the production and marketing of high quality seeds in the country. Furthermore, it tends to enact the development and promotion of new plant varieties as part of the national seed policy.[9]

The National Agricultural Investment Plan (NIPA) aims to develop research on improved high yield seeds and increase competitiveness among farms. The Ministry of Agriculture and Rural Development ensures regulation of seeds as well as the breeding of various seed varieties. The creation of a Seed Fund facilitated the quantitative emergence of basic and pre-basic seeds in Cameroon. Seed produced in this way is distributed as a subsidy to small producers.

Seed industry
The formal seed system is composed of government entities, agricultural institutions, NGOs, small enterprises, and private sector companies involved in different seed related activities. The private seed sector in Cameroon is slowly emerging as it collaborates with local actors.

SEMAGRI is a local company that partners with the Senegalese company Tropicasem. It is one of the few companies that extensively trials vegetable seed varieties at its station in Douala. As with other examples, it imports vegetable seeds and distributes them throughout the country. Rhoticam (Réseau des horticulteurs du Cameroun) represents a network of actors in horticulture seeds in Cameroon. Pop Vriend Seeds is another example of an international vegetable seed company that is distributing seeds in Cameroon through local distributors.

DowDuPont, though its brand Pannar, is active in the country and represented by the company Farmer House. Farmer House is also involved in vegetable seeds. JACO is a company that mainly offers other agricultural inputs, with a small portfolio in vegetable seeds. The multi-national agribusiness company Olam produces seeds in Cameroon, though it does not consider this its core business.

2.4 Central African Republic

Country focal point: Rodrigue Yakemdé, Focal point of WTO, Ministry of Agriculture

Leading seed companies in Central African Republic

Minimal seed company activity in Central African Republic due to politico-military unrest.

Background

The Central African Republic has experienced unprecedented iterative politico-military unrest over the past decade, causing significant damage to agricultural production in the country. The Central African Institute for Agronomic Research (ICRA) has suffered from these circumstances, with its seed stations having been severely affected.

Starting in 2014, the country's main agricultural research agency, Central African Institute for Agricultural Research (ICRA), resumed activity due to support from WHH, PREVES and FAO at its three stations in Boukoko, Bole and Poumbaïdi.

Presently, four public agricultural agencies are operational. In addition to ICRA, the Central African Agency for Agricultural Development (ACDA), the National Seed Office (ONASEM) and Agricultural Services at the Central and Prefectures or Sub-Prefectures, are responsible for agricultural monitoring and supervision.

Seed industry

Presently, the reconstitution of national seed supply is only carried out through introductions and imports from abroad. The seed landscape is dominated by NGOs and governmental institutions. Larger (multinational) private seed companies are absent. The vegetable seeds are imported by NGOs, international organizations and donors (FAO) and distributed to farmers.

ICRA is the primary public institution for the production and propagation of plant material, providing for the exploration, introduction, characterization and evaluation of food crops; varietal creation; the production of pre-basic and basic seed under contract with specialized producers. Besides ICRA projects, NGOs and many small private actors intervene in the seed sector.

2.5 Chad

Country focal point: Moundibaye Allarangaye, Breeder, National Research Center

Leading seed companies in Chad

Company	Crops	Countries
Initiative Humanitaire pour Développement Local (IHDL)	Field crops, vegetables	Chad
Fédération Nationale des Organisations des Producteurs de Semences du Tchad (FENOPS)	Field crops	Chad
Etude, Suivi, Construction et Organisation des ruraux (ESCOR-Agro)	Field crops	Chad and sub-region
SahelAgritec	Field crops, vegetables	Chad
Le Reveil	Field crops	Chad

Background
Agriculture employs 78% of the total population in Chad, more than half of whom are women.[10] In 2013, agriculture accounted for 40% of Chad's GDP. Most agricultural production comes from small family farms with an average size of two to five hectares. Agricultural production systems are primarily rain-fed. The introduction of improved seeds, fertilizers, pesticides, and agricultural mechanization have increased agricultural productivity. Utilization of improved or certified seeds is low.

The government has set several objectives to increase the availability of field crop seeds and give impetus to agricultural production.[11] The government's 2006-2015 Master Plan for Agriculture (SDA) aims to develop the sustainable increase of agricultural productivity. The SDA intends to promote the modernization of agriculture, and reflects the will of the government to refocus its political functions and transfer the production and marketing functions to the private sector.

Seed industry
Various actors focus on the dissemination of certified seed in the country. The NGO Initiative Humanitaire pour Développement Local (IHDL) focuses both on the multiplication and marketing of field crops and vegetable crop seeds, and, on capacity building activities for smallholder farmers. The Fédération Nationale des Organisations des Producteurs de Semences du Tchad (FENOPS) facilitates the activities of a large group of seed producers throughout the country.

Etude, Suivi, Construction et Organisation des Ruraux (ESCOR-Agro) is a one of the few private enterprises active in seed production, distribution of agricultural inputs, supply of agrifood products, the construction of rural infrastructure and provision of services in the field of study and monitoring. SahelAgritec produces field crop seeds and distributes field crop and vegetable seeds. Le Reveil focuses mainly on the production of cereal seeds.

2.6 Côte d'Ivoire

Country focal point: Esse Koudia, National Seed Service, Ministry of Agriculture

Leading seed companies in Côte d'Ivoire

Company	Crops	Countries
Centre National de Recherches Agronomiques (CRNA)	Field crops, vegetables	Cote d'Ivoire
Office National de Développement de la Rizculture (ONDR)	Field crops, mainly rice	Cote d'Ivoire
Bureau de Formation et de Conseil en Développement (BFCD)	Field crops, vegetables	Cote d'Ivoire
Société de Productions Végétales (SPV-CI)	Vegetables	Cote d'Ivoire
Agro-Services	Field crops, vegetables	Cote d'Ivoire
Semivoire	Vegetables	Cote d'Ivoire
BILOHF	Field crops, vegetables	Cote d'Ivoire, Guinea, Mali

Background
Agriculture employs 65% of the total population, with extensive manual cultivation accounting for 25% of GDP and 60% of exports. Food production has increased steadily by an average of 4% per year, achieved mainly by increasing the area under cultivation and not by intensifying production using quality inputs: seeds and pesticides. Currently, yields for most food crops are largely below their potential. The production of off-season fresh vegetables is mainly found in peri-urban areas.

In 1984, the national government created the Office of Seeds and Plants (OSP) within the framework of the National Seed Plan of 1984-1990. Prior to 1984, food crops were not subject to special seed programs. These farms were managed by the Agricultural Projects Technical Bureau (BETPA), a state structure. By 2013, a National Plant Varieties catalogue and the Comité National des Semences et Plants (CONASEM)[12] were established for the promotion, guidance and monitoring of agricultural production activities, as well as the control and marketing of agricultural plant seed species.

Seed industry
In Côte d'Ivoire, there is limited private company activity specializing in the production, packaging and marketing of certified seeds. In the production and dissemination of basic seeds, the public agency Centre National de Recherches Agronomiques (CRNA) plays an important role. The Office National de Développement de la Riziculture (ONDR) plays a similar role in the supply of rice seed.

Privately owned enterprises such as Bureau de Formation et de Conseils en Développement (BFCD) and Société de Productions Végétales (SPV-CI) produce and market field crop and vegetables seeds as they also develop capacity building activities. Local companies Semivoire and Agro-Services are specialized in the marketing of seeds of vegetable crops, whereby Semivoire partners with French vegetable seed company Technisem.

BILOHF operates its own rice seed farm in Côte d'Ivoire and is one of the few Ivorian companies that has modest sales activities outside the country. BILOHF offers multiple improved rice varieties to farmers in the region. Multinational seed companies have limited activities in the country, although Bayer has its rice portfolio, along with Syngenta (ChemChina) and GSN Semences.

2.7 Democratic Republic of Congo

Country focal point: Antoine Frangoie, Agronomist and Seed Expert

Leading seed companies in The Democratic Republic of Congo

Company	Crops	Countries
Groupe d'Action pour la Valorisation de la Nature (GAVANAT)	Field crops, vegetables, local crops	DRC
Centre de Production de Semences (CEPROSEM)	Vegetables	DRC
CORIDEK	Field crops, local crops	DRC
APSK	Field crops, vegetables	DRC
Institut National d'Etudes et des Recherches Agronomiques (INERA)	Field crops, local crops	DRC
APSKO	Field crops	DRC
CESIM	Field crops, vegetables	DRC
DowDuPont	Field crops	Global

Background

Despite its agricultural potential and the availability of natural resources, agricultural production in the Democractic Republic of Congo (DRC) has stagnated or declined over the past years.[13] Food imports are steadily on the rise due to growing cities, increasing food prices, and purchasing power of the poorest. Compared to actual need, certified seed production is low while demand is high – most seed available is non-certified. Similarly, foreign seed supply has not yet been established in a formal way.

The country does not have a seed law in place. As of November 2016, DRC began developing the Commission Technique d'Admission au Catalogue des Variétés (CTAC). This development is based on the harmonized Dar-es-Salaam Declaration on Agriculture and Food Security (SADC), adapted to the customs specific to the administration of the DRC and to be chaired by the Secretary General in charge of agriculture, varietal listing in the national catalog, among others. Until the CTAC becomes operational, the varietal catalog is published by the Official Control Service, in this case, the Service National des Semences (SENASEM).

Seed industry

Despite the size and potential of DRC, major global seed companies are not active in the country. There is, however, limited activity by DowDuPont through its brand Pannar. The seed industry is dominated by local companies and small groups of seed producers. The NGO Groupe d'Action pour la Valorisation de la Nature (GAVANAT) is an important seed supplier. The National Agronomic Research Institution (INERA) also functions as a seed provider, having a breeding program and producing basic seed. INERA also produces certified seeds.

Existing seed enterprises are either the former seed farms of the SENASEM network or new seed farms. These groups are organized at the provincial level. The Seed Production Center (CEPROSEM) specializes in the development and multiplication of seeds of varieties of market gardening crops. CORIDEK is a union of 24 seed producer organizations in the country.

2.8 Gabon

Country focal point: Calixte Mbeng, Agronomist, Ministry of Agriculture

Leading seed companies in Gabon

Company	Crops	Countries
Gabonaise de Chimie (GCIAE)	Field crops, mainly maize, vegetables	Gabon
Horta Gabon	Vegetables	Gabon
Agrigab (Technisem)	Vegetables	Gabon

Background

Agriculture employs approximately 95% of Gabon's population, accounting for 5% of its GDP. Gabon imports the bulk of its food, spending roughly 250 billion CFA ($504 million) annually on goods from Asia, South America, the USA and Europe. Currently, there are over 20 million hectares of unplanted arable land, representing substantial agricultural potential.[14]

Smallholder farmers constitute a large majority of the agriculture sector in Gabon. Such holdings are between one and two hectares in size, and primarily cultivate plantain, cassava, taro, yam and various other vegetables.[15]

Developing the agriculture sector is a key part of the 2015 Plan National d'Investissement Agricole de Sécurité Alimentaire et Nutritionnelle (PNIASAN) which aims to significantly reduce the country's dependence on imported goods by increasing domestic agricultural productivity. The program, Gabonaise des Réalisations Agricoles et des Initiatives des Nationaux Engagés (GRAINE), also launched in 2015, is a public-private partnership aimed toward expanding domestic agricultural production. A primary partner in this effort is the Singapore-based company, Olam.

Seed industry

The seed sector in Gabon can be characterized as being relatively underdeveloped; the bulk of companies active in the country are mostly involved in the marketing and sale of seed. The availability of quality and certified seed for Gabonese farmers is low. The seed capital of the country is mainly provided by producers themselves, in addition to agro-industrial companies and public development projects, such as through IFAD, a UN financial institution. The country's seed patrimony largely consists of uncertified seed, regular seed from producer's personal reserves and seeds purchased from local markets.

The presence of seed companies in Gabon is currently limited, with only three leading companies identified: Gabonaise de Chimie (GCIAE), a trading company that offers market garden seeds, fertilizers and agricultural equipment; Horta Gabon, which specializes in intensive fruit and vegetable production, in addition to tomato, sweet pepper and lettuce seed production; and Agrigab/ Technisem, which distributes vegetable seeds from the Technisem group (such as peppers, tomato, zucchini, maize etc.).

2.9 Ghana

Country focal point: Solomon Ansah Gian, National Seed Specialist, Ministry of Agriculture

Leading seed companies in Ghana

Company	Crops	Countries
Heritage Seeds	Field crops	Ghana
M&B Seeds and Agricultural Services	Field crops	Ghana
WEKU Farms	Field crops	Ghana
Yonifah Seeds Ltd.	Field crops	Ghana
PAG Farms	Field crops	Ghana

Background

Agriculture employs approximately 50% of the Ghanian population, with smallholder productivity accounting for 23% of national GDP in 2012.[16] Nearly 90% of farm holdings are less than two hectares in size. Agriculture in Ghana is largely rain-fed and subsistence-based, with basic technology used to produce 80% of total output. Currently, Ghana is a net importer of agricultural products, importing mainly consumer-ready commodities such as rice, wheat, sugar and poultry.

Prior to 1990, the public sector thoroughly dominated the seed sector. The 2010 Plants and Fertilizer Act (part II) facilitates the private sector's role in the seed industry in Ghana. Further, the private sector is represented in the National Seed Council as well as the National Variety Release and Registration Committee. There is an organized National Seed Trade Association of Ghana (NASTAG) and a National Seed Policy (NSP). In 2016, Ghana ratified the ECOWAS-UEMOA-CILSS Regulations and has initiated the National Seed Plan, which has defined ten priority projects that, if implemented, will catalyze the orderly growth of the seed sector.

Seed industry

Multiple local seed producers and companies are active in Ghana with a focus on the production and distribution of field crops. One of the leading companies is Heritage Seeds, which produces and markets certified seeds for several different field crops. Other larger companies are M&B Seeds and Agricultural Services, WEKU Farms, Yonifah Seeds Ltd., PAG Farms and Orison Farms Enterprise. These enterprises focus mainly on field crops. Vegetable seeds are distributed by companies such as Meridian Seeds and Nurseries Ghana.

The multinational company East-West Seed also provides vegetable seeds and extension services to farmers through the 2SCALE program. To encourage a network of farmer dealers to use agriculture best practice production techniques, DowDuPont, in collaboration with USAID, launched the Ghana Advanced Maize Seed Adoption Program (GAMSAP) in 2014.

2.10 Guinea

Country focal point: Moussa Kane, President of Niger National Seed Trade Assosiation (APIDIA)

Leading seed companies in Guinea

Company	Crops	Countries
Saref International	Field crops, mainly maize, vegetables	Guinea, Sierra Leone, Liberia
Agriculture Qualité	Field crops, vegetables	Guinea
SPCIA	Field crops, vegetables	Guinea
Entreprise Tidiane Agriculture	Field crops	Guinea, Sierra Leone, Liberia
Comptoir Agricole	Field crops, vegetables	Guinea
Coopérative semencière de Koba	Field crops, mainly rice	Guinea
PAG Farms	Field crops	Ghana

Background

Agriculture employs 80% of the population, and is the main source of income for 57% of Guinea's rural population. Smallholdings dominate: 64% of the farms have less than two hectares, and only 4% cover more than seven hectares. International food prices, which account for 32% of country imports, increased by 89% between 2006-2008, primarily driven by cereal prices (rice and wheat) that increased by an average of 132%.

The country spends $142 million a year on importing 300,000 tons of rice to offset the per capita food deficit. Millions of family farmers are supporting their main needs through the production of rice on a total area of 846,500 hectares. Rice is the most important crop in Guinea, which accounts for 50% of irrigated land.

The lack of a functioning rural credit system is one of the key factors that prevents the modernization of equipment and the use of inputs. To address the challenge of access to quality seeds for smallholders, the National Seed Committee was established, and seed certification is undertaken by the Seeds, Plants and Fertilizers Division of the Ministry of Agriculture. The government recognizes the important role that the private sector can play in supplying farmers with seeds at a reasonable cost, and encourages private operators to invest in the implementation of a seed policy.

Seed industry

Since its inception, the West African Agricultural Productivity Program (WAAPP) funded by the World Bank has supported the supply of seeds to farmers in countries in the region, including Guinea. WAAPP, under the regional coordination of CORAF/WECARD, is a program that aims to generate and disseminate improved technologies in participating countries. It has become an important player in the Guinean seed sector.

There are several public actors that provide seeds to farmers, which include: La Centre Semencier de Koba, Le Centre Kilissi, Le Centre de Bordo, Le Centre de Gueckedou and Enterprise Tidiane Agriculture. Multinational companies do not have substantial activities in Guinea. Saref International is an important company from Guinea, supplying maize and vegetable seeds throughout the country. Most companies active in Guinea originate within the country and mainly have activities within country borders. Examples include: Agriculture Qualité, SPCIA and Entreprise Tidiane Agriculture.

Farmer cooperatives play an active role in providing seeds to farmers. These groups are regionally organized or grouped around specific crops. One example is the Coopérative semencière de Koba.

2.11 Guinea-Bissau

Country focal point: Domigos Fonseca, National Seed Service, Ministry of Agriculture

Leading seed companies in Guinea-Bissau

Company	Crops	Countries
MBORMAF	Field crops, vegetables	Guinea-Bissau
APALCOF	Field crops	Guinea-Bissau
Contuboel Semence	Field crops	Guinea-Bissau
LVIA	Field crops, vegetables	Guinea-Bissau

Background
Agriculture employs 83% of Guinea-Bissau's labor force and contributes 56% of its GDP. Only 12% of the total land area is under permanent or seasonal cultivation.

Guinea-Bissau is characterized by many decades of political instability. Despite improvements, Guinea-Bissau continues to record food deficits of about 90,000 tons on average. Net national food production is insufficient to cover the country's food requirements, and malnutrition and food insecurity have become a structural constraint in Guinea-Bissau.

The government established the National Institute of Agricultural Research with the support of FAO, CORAF/WECARD and USAID, to restructure the seed sector through training seed inspectors and seed multipliers.

In addition, the mandate given by the national research institute also includes quality control of field seeds in 40 localities selected for seed production. These localities are distributed in four regions of the country (Cacheu, Oio, Bafatá and Gabú). This mandate, exercised by the various research centers, concerns not only the monitoring of farmers and seed producers, but also seed companies, cooperatives and associations (national or foreign).

Seed industry
The seed sector in Guinea-Bissau is composed of cooperatives, seed producer associations, NGOs and small local private actors. The Association des Productrices et d´Autopromotion pour la Lutte Contre la Faim (APALCOF) is an NGO that, among others, provides seeds to farmers. APALCOF was founded in 1990 by rural women in the Bafata province with the aim of improving rural women's living conditions, addressing gender inequalities in Guinea-Bissau's agricultural programs, and reducing poverty.

LVIA is an NGO that supports farmers' associations in different regions such as Quinara, Oio and Tombali. It supports the provision of means of production (seeds, fertilizers, agro-food processing machines, agricultural equipment) and technical materials with the aim of promoting the increase of local agricultural production.

The fragility of the country is one reason why foreign companies have not invested in Guinea-Bissau's seed industry. Hence, international seed companies are not active in the country. Contuboel Semence is a smaller company that deals in rice, maize and sesame.

2.12 Liberia

Country focal point: Julius M. Bass, Farmer Based Organization, Member of ROPPA

Leading seed companies in Liberia

Company	Crops	Countries
Arjay Farm	Field crops, vegetables	Liberia
BRAC	Field crops, vegetables	Global
Agriculture Infrastructural Investment Company	Field crops	Liberia
Dokodan Farmers Cooperative	Field crops	Liberia
Gbeelay-Geh Women Cooperatives	Field crops	Liberia
GREEN STAR	Field crops	Liberia
AIM Global Company Ltd.	Vegetables	Liberia

Background

Over 70% of the Liberian population is involved in farming, whereby the majority uses outdated techniques and inputs. Productivity rates are low. With the restoration of peace and creation of a constitutional government in 2006, stakeholders – including the Ministry of Agriculture, donors, development partners and farmers – have supported fast-tracking institutional reforms, emphasizing the seed sector's development.

Within the past decade, the Ministry of Agriculture (MOA) improved its plans and strategies for regenerating the seed sector, reflected in the Lift Liberia Interim Poverty Reductions strategy (PRS) (2008); the Food and Agriculture Policy and Strategy (FAPS) (2009); the national Food Security and Nutrition Strategy (FSNS) (2008); and the Liberia Agriculture Sector Investment Program (LASIP) (2009-2010), all underpinning the Comprehensive African Agriculture Development Program (CAADP) compact signed in 2009.

The Government of Liberia, through the Ministry of Agriculture, has adopted a seed regulation that was prepared in 2012. The ECOWAS C/REG.4/05/2008 has served as a guide for drafting Liberia seed regulations with the forthcoming creation of a seed board. Currently, Liberia has no plant variety protection law.

The West Africa Agricultural Productivity Project (WAAPP-Liberia) has, among other things, supported the recovery of the Central Agricultural Research Institute (CARI), Liberia's only agricultural research institute, which was badly damaged during the country's civil wars. Liberia was the one of the hardest-hit countries during the 2015 Ebola crisis, which greatly impacted its food production.

Seed industry

Governmental institutions, farmer organizations, CBOs, cooperatives and private companies are involved in the seed sector. Most of the larger seed enterprises in the country focus on field crop seed production and distribution, such as the Agriculture Infrastructural Investment Company. Arjay Farm is a small enterprise that mainly focuses on producing and selling rice seed.

The Bangladeshi organization BRAC has been active in Liberia since 2008, producing and distributing rice, maize and vegetable seeds. AIM Global Company Limited sells improved vegetables seeds in Liberia. Farmer cooperatives are servicing a niche or specific region in the country. Leading cooperatives are Dokodan Farmers Cooperative and Gbeelay-Geh Women Cooperatives.

2.13 Mali

Country focal point: Mamadou Kayentao, President of National Seed Trade Association (ASSEMA)

Leading seed companies in Mali

Company	Crops	Countries
AGRIPLUS	Field crops, vegetables	Mali, Senegal, Guinea and Cote d'Ivoire
Faso Kaba	Field crops, vegetables	Mali and sub-regional
Seneso	Field crops, vegetables, local crops	Mali
Soprosa	Field crops, vegetables	Mali, Senegal, Burkina Faso, Nigeria, Cote d'Ivoire, Ghana
Comptoir 2000 SA	Field crops, vegetables	Mali
Camara Semences	Field crops, vegetables	Mali
Syngenta (ChemChina)	Field crops, vegetables	Global

Background

Nearly three-quarters of Mali's 15.3 million people rely on agriculture for their food and income. Most are subsistence farmers, growing rain-fed crops on small plots of land.[17]

Civil unrest and severe drought have been impacting agricultural production for many years. However, the country has managed to increase food production of crops such as sorghum, millet, groundnuts, cowpeas and maize, as well as rice, making the country less reliant on food imports.

The seed sector is governed by the 2010 Seed Law. This law is based on the 2006 Loi d'Orientation Agricole, which aims to increase agricultural productivity and improve access to high quality seeds. The law is in line with the ECOWAS seed regulation. However, the level of available certified seed remains low.

Seed industry

Mali has liberalized its economy over the last decade, resulting in a more interactive seed system whereby multiple players are active,[18] including public and private sector players, as well as farmers' organizations and NGOs. The role of private seed companies remains relatively low, supplying only a small portion of the seeds used by farmers.

AGRIPLUS and Soprosa are two main Malian private seed companies that are active in other countries besides Mali. AGRIPLUS represents various international seed brands such as Sakata and SAIS Italy. It produces 20% of its own seeds while also producing seeds through contracts. Soprosa has a diverse portfolio and an integrated seed business model, in addition to offering youth training programs in seed production.

With support from multiple partnerships such as ICRISAT, APCAM and IFRA, the company Faso Kaba has grown at a rapid pace over the past years. The company has an integrated seed business model and distributes its products on a sub-regional level. Another private company, Seneso, conducts trials and produces vegetables seeds and field crop seeds respectively, but is exclusive to Mali. It has contract producers in three regions and an experimental farm just outside Bamako.

Other larger companies are Comptoir 2000 SA and Camara Semences, both active in field and vegetable crops, but also exclusively based in Mali. The Syngenta Foundation is active in Mali through its Seeds2B program, aiming to improve access to quality seeds in the country.

2.14 Niger

Country focal point: Baina Danjimo, National Seed Specialist-WASP

Leading seed companies in Niger

Company	Crops	Countries
Ferme Semenciere AINOMA	Field crops, vegetables, local crops	Niger
La Sahélienne	Field crops, vegetables	Niger
Alhéri	Field crops, vegetables	Niger
GANDU	Field crops, vegetables	Niger
Ets HUSA'A	Field crops, vegetables	Niger
Ambouta	Field crops	Niger
Ferme Semencière Amaté (FESA)	Field crops, local crops	Niger
Alfarey Mazaada	Field crops	Niger

Background

Agriculture employs 85% of Niger's labor force, and supplies 40% of its GDP. The agricultural sector is highly affected by climatic change, contributing to food deprivation for nearly 20 million people. Even in the years of balanced or surplus production, only six out of ten households cover their food needs for a period of more than three months[19] due to multiple constraints, which include low soil fertility and leaching; low input use by producers (only 3.8% of area under cultivation uses certified seed); and lack of agricultural mechanization.

In 1976, a national seed production system was established, including government-led production and control of quality seeds for all cultivated species. These production centers also have land (400-500ha) to produce government subsidized certified seeds and supervise private production.

In 2008, the regional seed regulation ECOWAS-UEMOA-CILSS was adopted, in addition to the publication of a regional catalog. In 2015, the National Seed Committee was created, which swore in 90 seed inspectors throughout the country and created an administrative foundation to implement seed legislation. The 3N Initiative (Nigerians Nourish Nigerians) is estimated to have seen a 30% increase in the use of certified seed since 2012.

Seed industry

Between 1989-2002, local seed companies began producing certified seed of food crops. The Association of Private Seed Producers of Niger was established in 1999 by companies, producer groups and emerging seed producers.

The private seed sector in Niger is comprised of individual seed multipliers, seed producer groups, agrodealers and seed companies. Individual seed multipliers and seed producer groups generally produce certified field seeds with the support of partners such as NGOs and seed companies. These partners provide the inputs and sometimes the technical support that allows multipliers who often have only land. There is a limited group of seed companies active in the country. However, this number is growing. Niger currently has nearly 24 registered seed companies compared to only six in 2012. Eight of them are considered leading and are listed.

Vegetable seeds are mostly imported from abroad. Local companies are increasingly producing and marketing field crop seeds, including sesame, millet and sorghum. Currently, AINOMA is a leading local seed company in Niger, with seed production, seed import, marketing and capacity building activities. The company mainly produces millet, sorghum, groundnut and cowpea, in addition to local crops such as sorrel and okra. Further, AINOMA collaborates with other local and multinational companies, including, but not limited to, Alhéri, Enza Zaden and Advanta. Other larger companies are La Sahélienne and Alhéri, both with a field crop and vegetable portfolio.

2.15 Nigeria

Country focal point: Okelola Sunday Folarin, Seed Production Specialist, National Agricultural Seed Council

Leading seed companies in Nigeria

Company	Crops	Countries
Premier Seed	Field crops, vegetables	Nigeria and sub-region
Value Seed	Field crops	Nigeria
Maslaha Seeds	Field crops	Nigeria
DA-AllGreen	Field crops, vegetables	Nigeria
ITN HYDROMAK	Field crops	Nigeria
GAWAL	Field crops	Nigeria
Savannah Seeds	Field crops	Nigeria
JAMMYNAGARI Seed	Field crops	Nigeria
East-West Seed	Vegetables	Global
Seed Co	Field crops, vegetables	Global

Background

Agriculture is the largest sector of Nigeria's economy, and employs 65% of its labor force. Nigeria is the continent's leading consumer of rice, one of the largest producers of rice in Africa, and simultaneously one of the largest rice importers in the world. The country is also the largest producer of cassava in the world.[20]

There is no plant variety protection law currently operational in Nigeria even though the country is a signatory to various treaties of the FAO and the TRIPS agreement. However, work is ongoing is ongoing to develop a model plant variety law that will be in line with the UPOV 1991 convention and a licensing policy exists that allows licensing of publicly bred varieties to private producers.

The public seed sector is run by the Federal Ministry of Agriculture and Rural Development (FMARD), the National Agricultural Seeds Council (NASC), which works under FMARD, and the Crop Varieties Registration and Release Committee (CVRRC). The latter is responsible for varietal evaluation, release, and registration in the national catalogue of registered and released varieties.

The National Agricultural Research Institutes (NARIs) also play a significant role in the agriculture sector. NARIs, among others, produce foundation seed. Moreover, CGIAR is an important player in Nigeria, with ongoing activities in the country through IITA, ICRISAT, and AfricaRice.

Seed industry

Unlike many countries in West Africa, the role of the private sector has been vital to the transition and growth of Nigeria's seed industry. Private sector participation in breeding and variety release has led to an increase in its share in variety release in the country, which was dominated by the public sector up until 2000. The private sector now constitutes 13% of variety releases in the seed market, with the public seed sector constituting the remaining 87%.

According to NASC, there are 157 registered seed companies in Nigeria, with the majority producing less than 1,000 MT of seeds annually. The Seed Entrepreneurs Association of Nigeria (SEEDAN) is the main private seed trading body in Nigeria with approximately 67 registered members.

Most private seed companies in Nigeria are domestic. This group of companies is led by Premier Seed, which has a integrated seed business model and sales activities across Nigerian borders. Other important local companies, such as Value Seed and Maslaha Seeds, are producing and distributing seeds throughout the country. DA-Allgreen is a leading company in cassava with its own cassava nursery on site. The company Green Agriculture West Africa Limited (GAWAL) is an example of a company registered in Nigeria with Chinese owners.

Multinational seed companies focused on hybrid seed production are penetrating the commercial seed production and distribution market, including Seed Co, DowDuPont, Syngenta (ChemChina) and Monsanto. Their shares in the market are, however, relatively low. Also, East-West Seed has established distribution in Nigeria.

2.16 Republic of Congo (Congo Brazzaville)

Country focal point: Zangtinda Marcel Ouedraogo, Agronomist and Consultant

Leading seed companies in the Republic of Congo (Congo Brazzaville)

Company	Crops	Countries
CONGOSEM	Vegetables	Regional
L'Institut national de Recherche Agronomique (IRA)	Vegetables	Republic of Congo
Centre National de Semences Améliorées (CNSA)	Field crops	Republic of Congo

Background

Though endowed with exceptional natural resources, Congo Brazzaville is one of the poorest countries in the world. More than 100 billion CFA worth of food is imported into the country every year.[21] Given the prospect of lower oil revenues (accounting for more than 60% of GDP, 90% of exports, and 80% of governmental budget) and rising food costs, the Congolese government has identified agriculture as a national priority.

Congo Brazzaville currently does not have a national seed policy. However, a regional project is being established for the Harmonization of Seed Policy in the CEMAC area. As the agricultural sector is embryonic, there is no national catalog of plant species and plant varieties. For now, a seed law is being drafted and will be submitted to the national assembly.

The country gets support from FAO through the Project to Support the Development of the National Seed Plan. This project aims to create opportunities for the private seed sector in Congo and for Congolese agriculture in general. Almost 95% of crop production is carried out by small-scale producers at the grass-roots level.

Seed industry

Since the cessation of state-owned enterprises with the Structural Adjustment Programs of the 1990s, the agricultural sector is mainly based on traditional practices.[22] The private sector's involvement in the rural sector is limited, and mainly involving the sale of vegetable seeds.

Pre-basic seed of cereals such as rice and maize are produced only by the L'Institut National de Recherche Agronomique (IRA), and further multiplied by the Centre National de Semences Améliorées (CNSA). Breeding and production as well as seed marketing are also at an embryonic stage.

Throughout the country market garden seed dealers are active, mostly representing CONGOSEM. These dealers sell seeds at sub-regional level. CONGOSEM was established in 2011 in Brazzaville. The company is specialized in the import and distribution of vegetable seeds and other agricultural products adapted to tropical climates. As such, CONGOSEM partners with Technisem and Takii, among others.

2.17 Senegal

Country focal point: Adama Keita, National Seed Specialist, WASP/WAAP

Leading seed companies in Senegal

Company	Crops	Countries
Cadre de Concentration des Producteurs d'Arachide (CCPA)	Field crops	Senegal
Sahélienne d'Entreprise de Distribution et d'Agro Business (SEDAB)	Field crops	Senegal
GIE Khaly Amar Fall	Field crops	Senegal
Coumba Nord Thiam (CNT)	Field crops, mainly rice	Senegal
Réseau des Organisations Paysannes et Pastorales (RESOPP)	Field crops	Senegal
Réseau National des Coopératives de Producteurs de Semences (RNCPS)	Field crops	Senegal
Société de Commercialisation et de Distribution de Produits Agricoles (SOCODISPA)	Field crops	Senegal
Etablissement Tambedou et Fils (ETB TAMBEDOU et Fils)	Field crops	Senegal
Tropicasem	Vegetables	Regional
Niayes Sarraut (NS)	Vegetables	Regional
Technisem	Vegetables	Global

Background

Agriculture employs 70% of the labor force in Senegal, accounting for 18% of its GDP. Most Senegalese farms are small, operating on nearly 2.5 hectares. In addition to unpredictable rainfall, the agriculture sector in Senegal struggles with challenges ranging from inaccessible credit to unstable land tenure.[23] As a result, Senegal largely relies on food imports to offset productivity shortages and meet food demands of its main staples, millet and sorghum.

Senegal adopted a framework for economic and social policy, the Plan Sénégal Emergent (PSE-2014) with an agricultural component, the Programme d'Accélération de la Cadence de l'Agriculture Sénégalaise (PRACAS). Plant research and varietal improvement is largely carried out by the country's research institution, the Institute Sénégalais de Recherches Agricoles (ISRA), which produces breeder and foundation seeds for all main field crops. The Division des Producteurs de Semences (DISEM) is responsible for seed quality control.

Senegal has a legal and regulatory framework governed by law,[24] which relates to variety registration, production and certification of seeds and plants. The country has also implemented related decrees on establishing a directory of species and varieties of plants cultivated in Senegal[25] and established a National Advisory Committee for Seeds and Plants[26] that oversees regulation of the production, certification and trade of seeds and plants.[27] The national framework is reinforced by the implementation of the ECOWAS harmonized seeds framework.

Seed industry

Various players are active in the Senegalese seed sector, mainly focused on local markets. There are few companies in Senegal that operate outside the country. Cadre de Concertation des Producteurs d'Arachide (CCPA) is a large producer organization that focuses primarily on the production of certified groundnut (arachide) seeds with some activities in maize, millet and sorghum. It operates in four regions in the country. Varietal selection is done through collaboration with the public agency ISRA. Other cooperatives or producer organizations active in the country are, among others, RESOPP Réseau des Organisations Paysannes et Pastorales (RESOPP) and Réseau National des Coopératives de Producteurs de Semences (RNCPS).

Sahélienne d'Entreprise de Distribution de d'Agro-Business (SEDAB) is one of the few local private companies that distributes seeds throughout Senegal. The company mainly focuses on groundnut, maize and rice. It contracts producers for seed multiplication programs throughout the country. SEDAB also works with the ISRA in varietal selection. The companies GIE Khaly Amar Fall and CNT are also active in a variety of field crops.

Tropicasem is another local company in Senegal, which offers hybrid maize and a variety of vegetable seeds. It partners with multinational seed companies such as Technisem, Takii and DowDuPont (Pannar). Tropicasem is one of the few local companies that has a regional presence. The company maintains a distribution network (stores and resellers) that provide coverage of market gardening areas and proximity to producers as well as offering a permanent supply thanks to a computerized central stock. Technisem has established a breeding and research facility in Senegal.

Multiple multinational vegetable seed companies distribute seeds in Senegal, such as Enza Zaden, Bejo and Rijk Zwaan (Agroseed). Syngenta Foundation is active in Senegal through its Seeds2B program, aimed at improving access to quality seeds in the country.

2.18 Sierra Leone

Country focal point: Turay Momoh Yusif, Acting Head of the Sierra Leone Seed Certification Agency (SLeSCA)

Leading seed companies in Sierra Leone

Company	Crops	Countries
Seed Multiplication Programme (SMP)	Field crops, vegetables, local crops	Sierra Leone
Seed Tech International	Field crops, vegetables, local crops	Sierra Leone
Debar Group	Field crops, vegetables, local crops	Sierra Leone
Farming First Sierra Leone	Field crops, vegetables, local crops	Sierra Leone
Genesis Farm	Field crops	Sierra Leone
Mountain Lion	Field crops, mainly rice	Sierra Leone

Background
In Sierra Leone, the informal seed sector predominates with a clear majority of farmers saving their own seed from both local and improved varieties, especially for rice. Local varieties are mostly used for crops other than vegetables. In the public sector, the Sierra Leone Agricultural Research Institute (SLARI) and the Seed Multiplication Programme (SMP) are key actors. The intention of the government to privatize the SMP has not yet materialized.

The private sector involvement in Sierra Leone is nascent; first promoted by AGRA from 2011 to 2013, when it supported four pilot seed enterprises. These enterprises have the potential to become more important in the future, due of their proximity to farmers and ability to meet location-specific needs, especially in terms of adapted varieties and reduced transportation costs for seeds.

Private enterprises account for more than half of the certified seed produced in the country. The formal sector focuses mainly on rice seed because more improved varieties are available than for any other crop.

Seed industry
Three classes of seed can be distinguished in Sierra Leone: breeder seed, foundation seed and certified seed. The public sector produces breeder seed (e.g. SLARI) and foundation seed (e.g. SMP), whereas the private sector produces certified seed for commercialization.

The SMP is set up by the national government in collaboration with the Federal Republic of Germany to facilitate access to credit for rural populations and the provision of quality seed rice with a bid to achieving self-sufficiency in food. SMP plays an important role in the provision of seeds in Sierra Leone.

Seed Tech International is an agrodealer with a broad agricultural portfolio. The company works with farmers and farmer groups in Bombali, Kambia and Koinadugu in the Northern Province, Bo in the Southern Province and Kenema in the Eastern Province of Sierra Leone. Only the SMP and Seed Tech International import vegetable seeds into the country.

The private company, Mountain Lion, is involved in rice production and processing (milling) of paddy purchased from commercial grain growers in the country. Mountain Lion also undertakes seed production on a small scale, and mainly relies on smallholder farmers to supply the paddy needed for milling. Other important local companies are Debar Group, Farming First Sierra Leone, and Genesis Farm.

2.19 The Gambia

Country focal point: Fayinkeh Mahamadou, President NACOFAG and ROPPA Board member

Leading seed companies in The Gambia

Company	Crops	Countries
Gambia Horticultural Enterprises (GHE)	Field crops, vegetables	The Gambia
Afric Agro Action	Field crops, vegetables	The Gambia
RAYAN Farm & Poultry	Vegetables	The Gambia
Exchange Crossroad for Economic Integration of Associated Cooperatives (ECEIAC)	Field crops	The Gambia
Niani Banni Seed Cooperative	Field crops, mainly groundnut	The Gambia

Background
Agriculture employs over 60% of Gambia's labor force, with the average farm size between 1.5-2 hectares. The Gambia has a high percentage of rural poverty, with agriculture being primarily subsistence-based. Since 1994, The Gambia has been defining and implementing poverty alleviation and reduction strategies aimed at operationalizing the country's Vision 2020 program. In each of these policy processes, the Agriculture and Natural Resources (ANR) sector has featured prominently.

Under the Ministry of Agriculture's authority, the National Seed Council (NSC) was established to advise the Gambian government on all matters relating to seed policy; all ensuing legislations and protocols; as well as seed industry planning and implementation. The Council follows the Seed Quality Control and Marketing Act of 2014 and National Seed Policy of 2014.

Members of NSC are multi-stakeholder, and include the Ministry of Agriculture (DOA & NARI), seed sector representatives, farmer associations, seed growers, universities, NGOs and development partners. The Variety Release Committee (VRC) is the technical arm of the National Seed Council responsible for the procedures for variety release.

Seed industry
The National Agricultural Research Institute (NARI) is responsible for the production of breeder seed and foundation seed in The Gambia. Certified seed cooperative producers have been set up in four districts for the dissemination of seeds to farmers.

A larger private company active in the country is Gambia Horticultural Enterprises (GHE), which produces certified maize, groundnut and millet seeds, and imports vegetable seeds from mostly European companies. Afric Agro Action also imports vegetable seeds from international companies such as Technisem and Vikima Seed from Denmark and has a focus on groundnut seed production. Exchange Crossroad for Economic Integration of Associated Cooperatives (ECEIAC) and Niani Banni Seed Cooperative are focused on the production of various field crop seeds and function as associations for groups of seed producers.

2.20 Togo

Country focal point: August Essiomle, Agronomist, Ministry of Agriculture

Leading seed companies in Togo

Company	Crops	Countries
Ets LE PAYSAN	Field crops	Togo
Abé Solo-Seeds Company	Field crops	Togo
Togo Semence/Technisem	Vegetables	Togo
STIEA	Field crops, vegetables	Togo, Benin, Liberia
MONFITH	Vegetables	Togo, Benin

Background
Agriculture employs 70% of Togo's labor force and contributes 40% to its GDP. The Togolese government implemented a National Agricultural Investment and Food Security Program (PNIASA) between 2010-2015, which aimed to support producers in accessing agricultural inputs; facilitating the financing of producers through credit lines and supporting research; and extension services in the development and transfer of technology.

Following the PNIASA, which ended in 2016, the Ministry of Agriculture launched a process to develop the National Plan for Agricultural Investment, Food and Nutrition Security (PNIASAN) for the period 2017-2026, which includes measures that incentivize the establishment of seed producers and companies in the country.

Seed industry
The production and marketing of basic seeds is carried out by the Togolese Agricultural Research Institute (ITRA), while those of certified crops are mainly insured by seed enterprises, cooperatives or individual seed producers.

Emerging seed companies are Ets LE PAYSAN and Abé Solo-Seeds Company. The latter mainly focuses on soybean. Farmer-led organizations are important seed providers in the country, such as ESOP-Semences, the National Network of Certified Togo Seed Producers, and Cooperative Societies such as COOP-CA Otissan, SCOOPS of the Two Sunny Hills, SCOOPS Good Seed, SCOOPS Super Seed, SCOOPS Dakalfan and SCOOPS Lando. Improved varieties of maize, rice, sorghum, soybeans, cowpeas and groundnuts are the most prevalent in terms of production and marketing. Togo Semence is the main supplier of vegetable seeds; the company represents Technisem in Togo.

Endnotes

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