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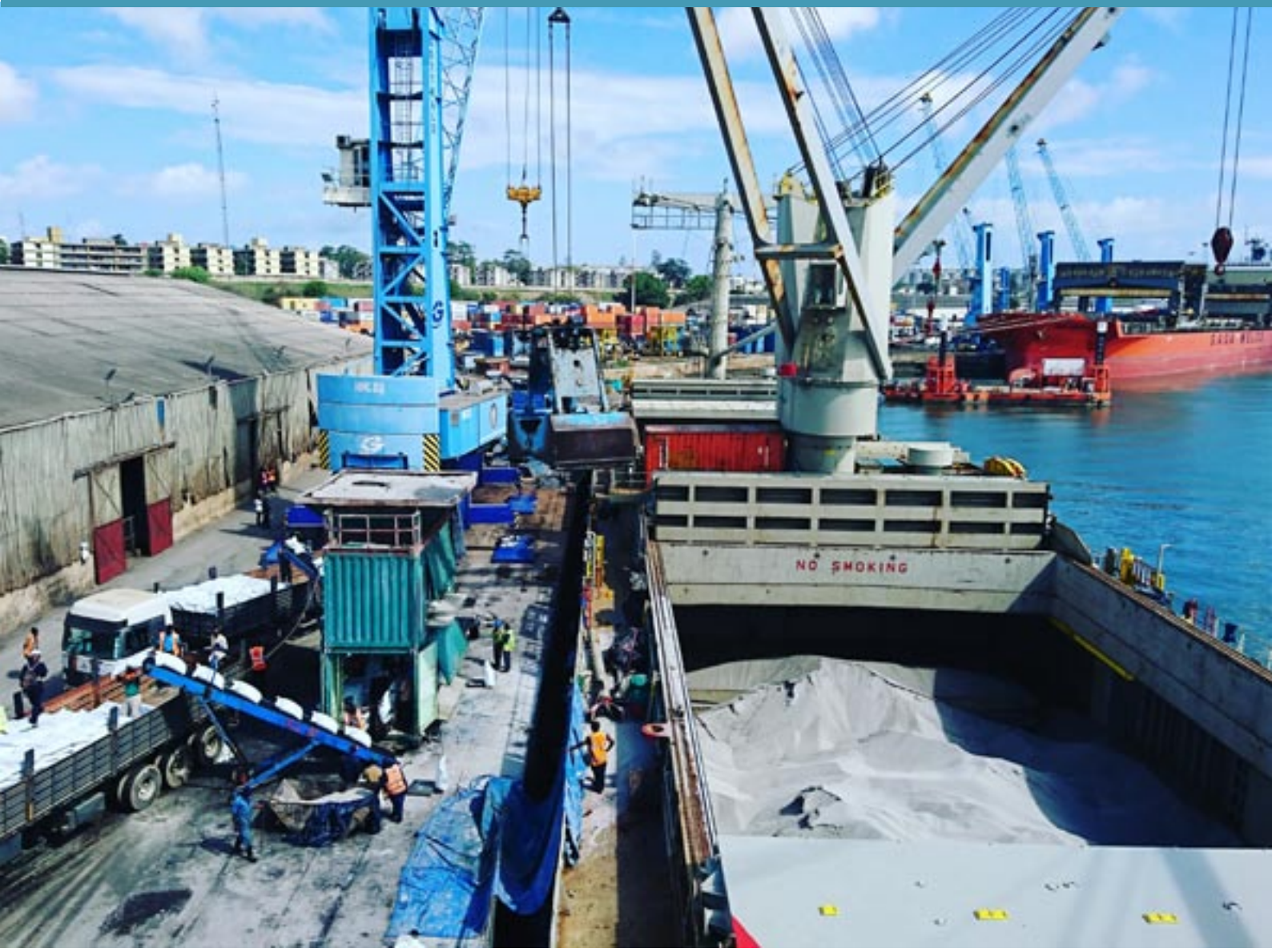


WEST AFRICA FERTILIZER BUSINESS INFORMATION GUIDE

2023 EDITION

USAID
FROM THE AMERICAN PEOPLE

CEDEAO
ECOWAS

wafa
West African Fertilizer Association
Association Ouest-Africaine
de l'Engrais

IFDC
Developing Agriculture from the Ground Up

CONTENTS

May 2023

This publication is made possible by the generous support of the American people through Feed the Future, the U.S. Government's Global Hunger and Food Security Initiative. The contents are the responsibility of IFDC in collaboration with the West Africa Fertilizer Association (WAFA) and do not necessarily reflect the views of Feed the Future or the United States Government.


DAL DON DUTCH HARBOR

1. INTRODUCTION TO THE GUIDE

INTRODUCTION

The Economic Community of West African State's (ECOWAS) regional fertilizer policy focuses on stimulating fertilizer supply and demand in the region to support the region's drive to help smallholder farmers access and use appropriate fertilizers to increase agricultural productivity, as well as support the public and private sector actors to promote sustainable fertilizer business development.

The current fertilizer situation across the region calls for more concerted effort to support ECOWAS enforce its fertilizer policy and provide direction to fertilizer supply chain actors, to ensure that the already-low use of fertilizers by West African farmers due to various reasons including costs, availability, and accessibility, is not worsened by the inability of farmers to access the needed fertilizers to produce the quantity of food the region needs.

Over the past five years (2018-2023), the **Feed the Future Enhancing Growth through Regional Agricultural Input Systems (EnGRAIS)** project for West Africa, implemented by the International Fertilizer Development Center (IFDC), has been working with ECOWAS and other regional partners, including economic communities, to address issues affecting agricultural inputs, especially fertilizer, through:

- Strengthening a competitive and inclusive regional fertilizer market, led by the private sector, in partnership with the **West African Fertilizer Association (WAFA)**.
- The development and dissemination of agricultural input packages, in cooperation with the **West and Central African Council for Agricultural Research and Development (CORAF)**.
- The improvement and harmonization of fertilizer policies and regulatory systems in West Africa.

The **West Africa Fertilizer Business Information Guide (WAFBIG)** provides an overview of the fertilizer business environment in West Africa to guide policy and business decision-making that aims to improve fertilizer supply, demand, access, and use to enable the region's smallholder farmers to increase their yields and improve their livelihoods.

This Guide is critical to regional fertilizer supply chain stakeholders, especially as the region prepares to provide the needed information to support ECOWAS make a region-specific contribution to the upcoming African Fertilizer and Soil Health Summit being planned by the African Union Commission. It is equally critical at a time fertilizer data and information are needed most to address agricultural/fertilizer-related issues that have the potential to impact the fertilizer sector in the region.

This is the third edition of the Guide and includes updated information and statistics on the West Africa fertilizer markets, production and blending units, fertilizer logistics and costs, as well as the regulatory policy environment. Stakeholders are encouraged to use and disseminate this document extensively to make fertilizer statistics and information available to all regional actors.

Patrice Annequin, EnGRAIS COP

EnGRAIS PROJECT INTERMEDIATE RESULTS (IRS) AND PARTNERS

IR 1 Private Sector	IR 2 Input packages	IR 3 Policies	IR 4 Sharing Data
Competitive, inclusive, **private sector**-led, regional fertilizer market strengthened, in partnership with **WAFA**	Comprehensive **input packages** developed and disseminated in cooperation with **CORAF**	Fertilizer **policy** and regulatory systems across West Africa improved and harmonized in accordance with **ECOWAS** guidance	Facilitating knowledge dissemination of large-scale, high-quality fertilizer **market data**

OVERVIEW OF WEST AFRICAN COUNTRIES

ECOWAS – Economic Community of West African States

UEMOA – West African Economic and Monetary Union

CILSS – Permanent Interstate Committee for Drought Control in the Sahel

WAFA – West African Fertilizer Association

WEST AFRICA

Geographical area	Land 7,320,361 km²; Water 107,048 km² Total: 7,427,409 km²
Population	**421,013,100 (July 2020 est.)**
Labor force (in agriculture)	134,990,500 (average; 2017 est.)
GDP by sector (2017 est.)	30.6% (average) agriculture 20.3% (average) industry 49.2% (average) services
Land use (2011 est.)	47.7% agricultural land 24.7% forest 27.6% other

ECOWAS

Member states	**Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo**
Geographical area	Land 5,030,461 km²; Water 82,248 km² Total: 5,112,709 km²
Population	400,130,268 (July 2020 est.)
Labor force	127,899,500 (2017 est.)
GDP by sector (2017 est.)	29.3% agriculture 20.1% industry 50.7% services
Land use (2011 est.)	48.8% agricultural land 27.4% forest 23.7% other

UEMOA

Member states	**Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal, Togo**
Geographical area	Land 3,464,350 km²; Water 41,759 km² Total: 3,506,109 km²
Population	129,778,795 (July 2020 est.)
Labor force (Agriculture)	44,149,300 (average; 2017 est.)
GDP by sector (2017 est.)	32.0% agriculture 21.3% industry 46.8% services
Land use (2011 est.)	46.1% agricultural land 25.9% forest 28.1% other

BENIN

Capital & major city ..... **Porto-Novo**, Cotonou (seat of government)
Geographical area ..... Land 110,622 km^2; Water 2,000 km^2
Total: 112,622 km^2
Population ..... 12,864,634 (July 2020 est.)
Labor force ..... 3.662 million (2007 est.)
GDP real growth rate ..... 2015: 2.1% – 2016: 4.0% – 2017: 5.6%
GDP by sector (2017 est.) ..... 26.1% agriculture
22.8% industry
51.1% services
Major agricultural products ..... **Cotton, maize, cassava (manioc, tapioca), yams, beans, palm oil, groundnuts, cashews, livestock**
Major industries ..... Textiles, food processing, construction materials, cement
Land use (2011 est.) ..... 31.3% agricultural land
40% forest
28.7% other

BURKINA FASO

Capital & major city ..... **Ouagadougou**, Bobo-Dioulasso
Geographical area ..... Land 273,800 km^2; Water 400 km^2
Total: 274,200 km^2
Population ..... 20,835,401 (July 2020 est.)
Labor force ..... 8.501 million (2016 est.)
GDP real growth rate ..... 2015: 3.9% – 2016: 5.9% – 2017: 6.4%
GDP by sector (2017 est.) ..... 31.0% agriculture
23.9% industry
44.9% services
Major agricultural products ..... **Cotton, groundnuts, shea nuts, sesame, sorghum, millet, maize, rice, livestock**
Major industries ..... Cotton lint, beverages, agricultural processing, soap, cigarettes, textiles, gold
Land use (2011 est.) ..... 44.2% (2016 est.) agricultural land
19.3% (2016 est.) forest
36.5% (2016 est.) other

CAPE VERDE

Capital & major city ..... **Praia**, Mindelo
Geographical area ..... Land 4,033 km^2; Water – km^2
Total: 4,033 km^2
Population ..... 583,255 (July 2020 est.)
Labor force ..... 196,100 (2007 est.)
GDP real growth rate ..... 2015: 1.0% – 2016: 4.7% – 2017: 4.0%
GDP by sector (2017 est.) ..... 8.9% agriculture
17.5% industry
73.7% services
Major agricultural products ..... **Bananas, maize, beans, sweet potatoes, sugarcane, coffee, groundnuts, fish**
Major industries ..... Food and beverages, fish processing, shoes and garments, salt mining, ship repair
Land use (2011 est.) ..... 18.6% agricultural land
21% forest
60.4% other

CHAD

Capital & major city ..... **N'Djamena**, Moundou
Geographical area ..... Land 1,259,200 km^2; Water 24,800 km^2
Total: 1,284,000 km^2
Population ..... 16,877,357 (July 2020 est.)
Labor force ..... 5.654 million (2017 est.)
GDP real growth rate ..... 2015: 1.8% – 2016: -6.4% – 2017: -3.1%
GDP by sector (2017 est.) ..... 52.3% agriculture
14.7% industry
33.1% services
Major agricultural products ..... **Cotton, sorghum, millet, groundnuts, sesame, maize, rice, potatoes, onions, cassava (manioc, tapioca), cattle, sheep, goats, camels**
Major industries ..... Oil, cotton textiles, brewing, natron (sodium carbonate), soap, cigarettes, construction materials
Land use (2011 est.) ..... 39.6% agricultural land
9.1% forest
51.3% other

CÔTE D'IVOIRE

Capital & major city ..... **Yamoussoukro**, Abidjan
Geographical area ..... Land 318,003 km^2; Water 4,460 km^2
Total: 322,463 km^2
Population ..... 27,481,086 (July 2020 est.)
Labor force ..... 8.747 million (2017 est.)
GDP real growth rate ..... 2015: 8.8% – 2016: 8.3% – 2017: 7.8%
GDP by sector (2017 est.) ..... 20.1% agriculture
26.6% industry
53.3% services
Major agricultural products ..... **Coffee, cocoa beans, bananas, palm kernels, maize, rice, cassava (manioc, tapioca), sweet potatoes, sugar, cotton, rubber, timber**
Major industries ..... Foodstuffs, beverages, wood products, oil refining, gold mining, truck and bus assembly, textiles, fertilizer, building materials, electricity
Land use (2011 est.) ..... 64.8% agricultural land
32.7% forest
2.5% other

GAMBIA

Capital & major city ..... **Banjul**, Serekunda
Geographical area ..... Land 10,120 km^2; Water 1,180 km^2
Total: 11,300 km^2
Population ..... 2,173,999 (July 2020 est.)
Labor force ..... 777,100 (2007 est.)
GDP real growth rate ..... 2015: 5.9% – 2016: 0.4% – 2017: 4.6%
GDP by sector (2017 est.) ..... 20.4% agriculture
14.2% industry
65.4% services
Major agricultural products ..... **Rice, millet, sorghum, groundnuts, maize, sesame, cassava (manioc, tapioca), palm kernels, cattle, sheep, goats**
Major industries ..... Peanuts, fish, hides, tourism, beverages, agricultural machinery assembly, woodworking, metalworking, clothing
Land use (2011 est.) ..... 56.1% agricultural land
43.9% forest
0% other

GHANA

Capital & major city ..... **Accra**, Kumasi
Geographical area ..... Land 227,533 km^2; Water 11,000 km^2
Total: 238,533 km^2
Population ..... 29,340,248 (July 2020 est.)
Labor force ..... 12.49 million (2017 est.)
GDP real growth rate ..... 2015: 3.8% – 2016: 3.7% – 2017: 8.4%
GDP by sector (2017 est.) ..... 18.3% agriculture
24.5% industry
57.2% services
Major agricultural products ..... **Cocoa, rice, cassava (manioc, tapioca), groundnuts, maize, shea nuts, bananas, timber**
Major industries ..... Mining, lumbering, light manufacturing, aluminum smelting, food processing, cement, small commercial ship building, petroleum
Land use (2011 est.) ..... 69.1% agricultural land
21.2% forest
9.7% other

GUINEA BISSAU

Capital & major city ..... **Bissau**, Bafata
Geographical area ..... Land 28,120 km^2; Water 8,005 km^2
Total: 36,125 km^2
Population ..... 1,927,104 (July 2020 est.)
Labor force ..... 731,300 (2013 est.)
GDP real growth rate ..... 2015: 6.1% – 2016: 6.3% – 2017: 5.9%
GDP by sector (2017 est.) ..... 50.0% agriculture
13.1% industry
36.9% services
Major agricultural products ..... **Rice, maize, beans, cassava (manioc, tapioca), cashew nuts, groundnuts, palm kernels, cotto, timber, fish**
Major industries ..... Agricultural products processing, beer, soft drinks
Land use (2011 est.) ..... 44.8% agricultural land
55.2% forest
0% other

GUINEA

Capital & major city ..... **Conakry**, Camayenne
Geographical area ..... Land 245,717 km^2; Water 140 km^2
Total: 245,857 km^2
Population ..... 12,527,440 (July 2020 est.)
Labor force ..... 5.558 million (2017 est.)
GDP real growth rate ..... 2015: 3.8% – 2016: 10.5% – 2017: 8.2%
GDP by sector (2017 est.) ..... 19.8% agriculture
32.1% industry
48.1% services
Major agricultural products ..... **Rice, coffee, pineapples, mangoes, palm kernels, cocoa, cassava (manioc, tapioca), bananas, potatoes, sweet potatoes, cattle, sheep, goats, timber**
Major industries ..... Bauxite, gold, diamonds, iron ore, light manufacturing, agricultural processing
Land use (2011 est.) ..... 58.1% agricultural land
26.5% forest
15.4% other

LIBERIA

Capital & major city ..... **Monrovia**, Gbarnga
Geographical area ..... Land 96,320 km^2; Water 15,049 km^2
Total: 111,369 km^2
Population ..... 5,073,296 (July 2020 est.)
Labor force ..... 1.677 million (2017 est.)
GDP real growth rate ..... 2015: 0.0% – 2016: -1.6% – 2017: 2.5%
GDP by sector (2017 est.) ..... 34.0% agriculture
13.8% industry
52.2% services
Major agricultural products ..... **Rubber, coffee, cocoa, rice, cassava (manioc, tapioca), palm oil, sugarcane, bananas; sheep, goats, timber**
Major industries ..... Mining (iron ore and gold), rubber processing, palm oil processing, diamonds
Land use (2011 est.) ..... 28.1% agricultural land
44.6% forest
27.3% other

MALI

Capital & major city ..... **Bamako**, Sikasso
Geographical area ..... Land 1,220,190 km2; Water 20,002 km2
Total: 1,240,192 km2
Population ..... 19,553,397 (July 2020 est.)
Labor force ..... 6.447 million (2017 est.)
GDP real growth rate ..... 2015: 6.2% – 2016: 5.8% – 2017: 5.4%
GDP by sector (2017 est.) ..... 41.8% agriculture
18.1% industry
40.5% services
Major agricultural products ..... **Cotton, millet, rice, maize, vegetables, groundnuts, cattle, sheep, goats**
Major industries ..... Food processing, construction, phosphate and gold mining
Land use (2011 est.) ..... 34.1% agricultural land
10.2% forest
55.7% other

MAURITANIA

Capital & major city ..... **Nouakchott**, Nouadhibou
Geographical area ..... Land 1,030,700 km^2; Water – km^2
Total: 1,030,700 km^2
Population ..... 4,005,475 (July 2020 est.)
Labor force ..... 1.437 million (2017 est.)
GDP real growth rate ..... 2015: 0.4% – 2016: 1.8% – 2017: 3.5%
GDP by sector (2017 est.) ..... 27.8% agriculture
29.3% industry
42.9% services
Major agricultural products ..... **Dates, millet, sorghum, rice, maize, cattle, camels, sheep**
Major industries ..... Fish processing, oil production, mining (iron ore, gold, copper)
Land use (2011 est.) ..... 38.5% agricultural land
0.2% forest
61.3% other

NIGER

Capital & major city	**Niamey**, Zinder
Geographical area	Land 1,266,700 km^2; Water 300 km^2 Total: 1,267,000 km^2
Population	22,772,361 (July 2020 est.)
Labor force	6.5 million (2017 est.)
GDP real growth rate	2015: 4.3% – 2016: 4.9% – 2017: 4.9%
GDP by sector (2017 est.)	41.6% agriculture 19.5% industry 38.7% services
Major agricultural products	**Cowpeas, cotton, groundnuts, millet, sorghum, cassava (manioc, tapioca), rice, cattle, sheep, goats, camels, donkeys, horses, poultry**
Major industries	Uranium mining, petroleum, cement, brick, soap, textiles, food processing, chemicals, slaughterhouses
Land use (2011 est.)	35.1% agricultural land 1% forest 63.9% other

NIGERIA

Capital & major city	**Abuja**, Lagos
Geographical area	Land 910,768 km^2; Water 13,000 km^2 Total: 923,768 km^2
Population	214,028,302 (July 2020 est.)
Labor force	60.08 million (2017 est.)
GDP real growth rate	2015: 2.7% – 2016: -1.6% – 2017: 0.8%
GDP by sector (2017 est.)	21.1% (2016 est.) agriculture 22.5% industry 56.4% services
Major agricultural products	**Cocoa, groundnuts, cotton, palm oil, maize, rice, sorghum, millet, cassava (manioc, tapioca), yams, rubber, cattle, sheep, goats, pigs, timber, fish**
Major industries	Crude oil, coal, tin, columbite, rubber products, wood, hides and skins, textiles, cement and other construction materials, food products, footwear, chemicals, fertilizer, printing, ceramics, steel
Land use (2011 est.)	78% agricultural land 9.5% forest 12.5% other

SENEGAL

Capital & major city	**Dakar**, Pikine
Geographical area	Land 192,530 km^2; Water 4,192 km^2 Total: 196,722 km^2
Population	15,736,368 (July 2020 est.)
Labor force	6.966 million (2017 est.)
GDP real growth rate	2015: 6.4% – 2016: 6.2% – 2017: 7.2%
GDP by sector (2017 est.)	16.9% agriculture 24.3% industry 58.8% services
Major agricultural products	**Groundnuts, millet, maize, sorghum, rice, cotton, tomatoes, green vegetables, cattle, poultry, pigs, fish**
Major industries	Agricultural and fish processing, phosphate mining, fertilizer production, petroleum refining, zircon and gold mining, construction materials, ship construction and repair
Land use (2011 est.)	46.8% agricultural land 43.8% forest 9.4% other

SIERRA LEONE

Capital & major city	**Freetown**, Bo
Geographical area	Land 71,620 km^2; Water 120 km^2 Total: 71,740 km^2
Population	6,624,933 (July 2020 est.)
Labor force	2.972 million (2017 est.)
GDP real growth rate	2015: -20.5% – 2016: 6.3% – 2017: 3.7%
GDP by sector (2017 est.)	60.7% (2016 est.) agriculture 6.5% industry 32.9% services
Major agricultural products	**Rice, coffee, cocoa, palm kernels, palm oil, groundnuts, cashews, poultry, cattle, sheep, pigs, fish**
Major industries	Diamond mining, iron ore, rutile and bauxite mining, small-scale manufacturing (beverages, textiles, footwear)
Land use (2011 est.)	56.2% agricultural land 37.5% forest 6.3% other

TOGO

Capital & major city	**Lomé**, Sokodé
Geographical area	Land 54,385 km^2; Water 2,400 km^2 Total: 56,785 km^2
Population	8,608,444 (July 2020 est.)
Labor force	2.595 million (2007 est.)
GDP real growth rate	2015: 5.7% – 2016: 5.1% – 2017: 4.4%
GDP by sector (2017 est.)	28.8% agriculture 21.8% industry 49.8% services
Major agricultural products	**Coffee, cocoa, cotton, yams, cassava (manioc, tapioca), maize, beans, rice, millet, sorghum, livestock, fish**
Major industries	Phosphate mining, agricultural processing, cement, handicrafts, textiles, beverages
Land use (2011 est.)	67.4% agricultural land 4.9% forest 27.7% other

Source: CIA (World Factbook) and worldpopulationreview.com

2. FERTILIZER MARKETS

FERTILIZER MARKETS BY THE NUMBERS

The International Fertilizer Development Center (IFDC), through the AfricaFertilizer initiative, has been working with the CountrySTAT program of the Food and Agriculture Organization of the United Nations, over the past eight years, to produce and disseminate reliable and up-to-date official statistics on fertilizers produced, imported, exported, and consumed in countries within sub-Saharan Africa. In 2012, Fertilizer Technical Working Groups (FTWG) were established in 11 sub-Saharan African countries.

These working groups have been responsible for reviewing country-level data and presenting statistics results tables for validation by National Technical Working Groups before such data are published. In West Africa, a partnership between AfricaFertilizer and the West Africa Fertilizer Association (WAFA) aims to improve the quality and availability of fertilizer data in terms of production, trade and consumption to enable decisionmakers to have and use reliable fertilizer data for formulation and monitoring of agricultural development policies, strategies on food security, promotion of trade within the West Africa region and beyond, as well as updating stakeholders, on an annual basis at stakeholder workshops.

The FTWGs, through the facilitation of AfricaFertilizer and WAFA, with the support of partners, including Development Gateway, meet once a year to validate fertilizer statistics for each country. In 2021, statistics were reported for nine countries, adding Benin, Niger, and Togo to the previous set of six. In 2023, six FTWG workshops have been held in West Africa, with the remaining three to be held in the third quarter of the year.

Images below and opposite: Scenes from Fertilizer Technical Working Groups workshops in Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, and Senegal. These workshops bring key fertilizer public and private sector institutions and civil society organizations together to analyze and validate in country fertilizer trade and apparent consumption statistics and publish same to help stakeholders make informed decisions.

Group photo of IFDC and Partners at the AfricaFertilizer Rebranding and Launching Event.

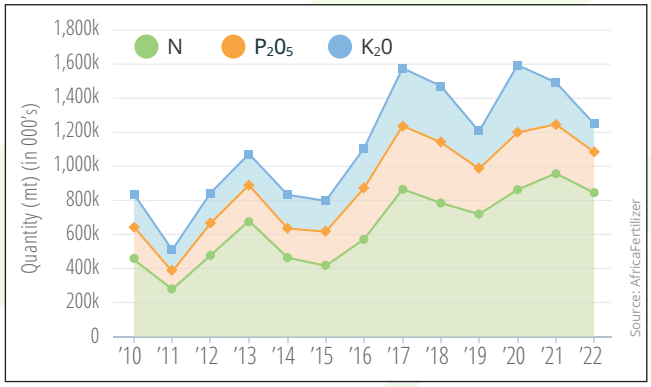
FERTILIZER FACTSHEET 2023

REGIONAL OVERVIEW

AfricaFertilizer
Data-Driven Decisions for African Food Systems

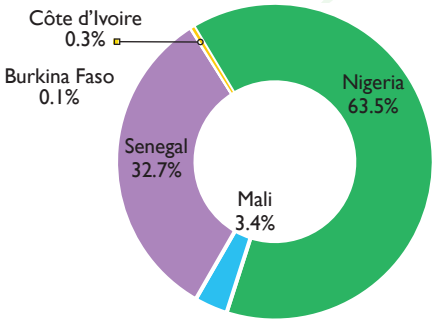
West African Fertilizer Association
Association Ouest-Africaine de l'Engrais

FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022

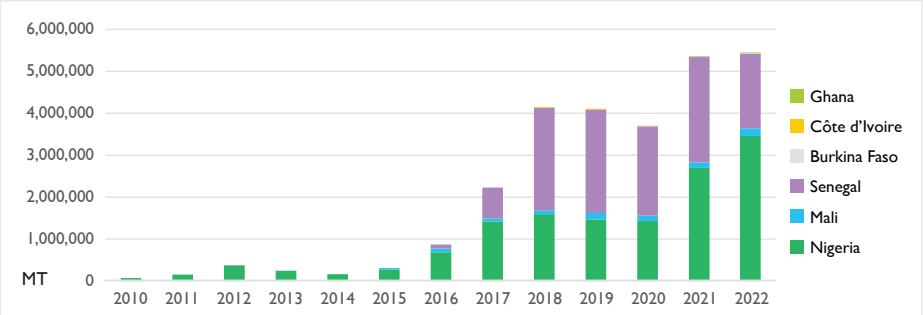


SIX COUNTRIES IN THE WEST AFRICA SUB-REGION

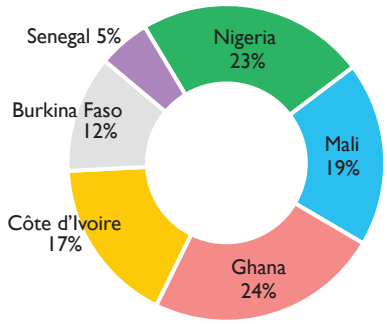
FERTILIZER PRODUCTION 2022



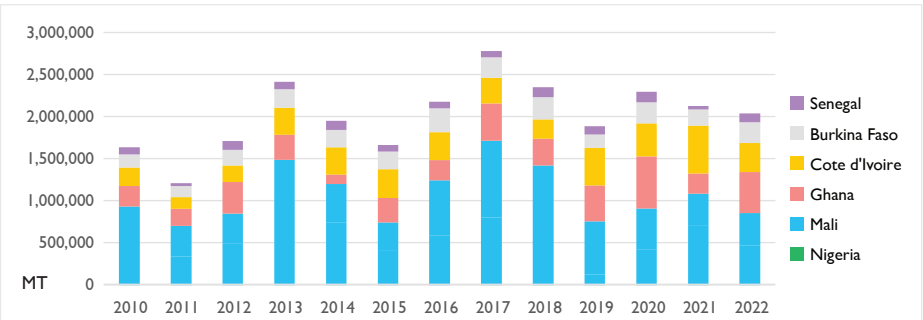
FERTILIZER PRODUCTION – 2011-2022



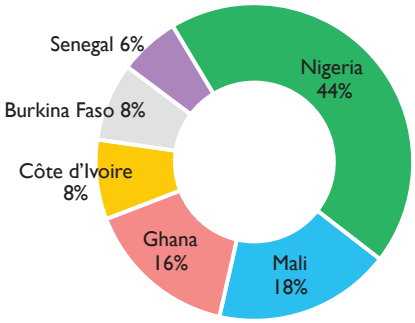
FERTILIZER IMPORTS 2022



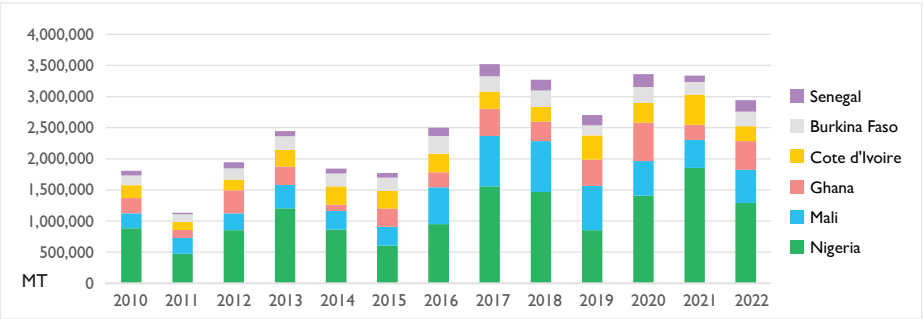
FERTILIZER IMPORTS – 2011-2022



APPARENT CONSUMPTION 2020



FERTILIZER APPARENT CONSUMPTION – 2011-2020



IFDC
Developing Agriculture from the Ground Up

For more info: AfricaFertilizer.org and WAFAfertilizer.org

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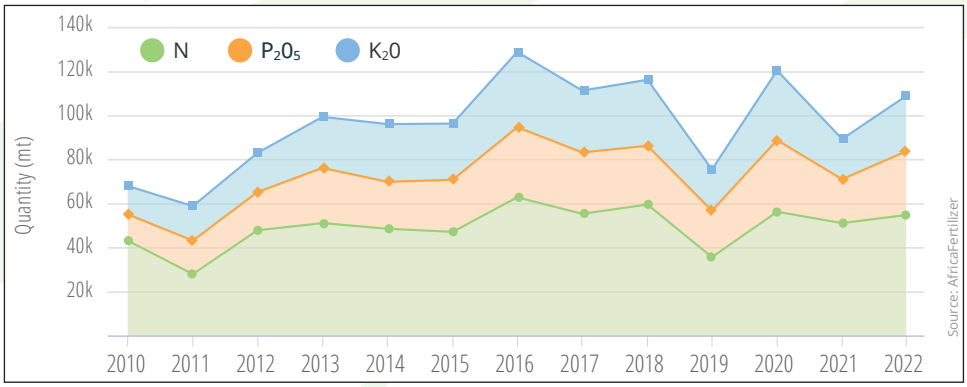
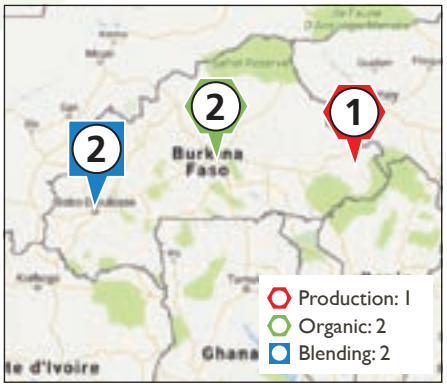
FERTILIZER FACTSHEET 2023 BURKINA FASO

AfricaFertilizer
Data-Driven Decisions for African Food Systems

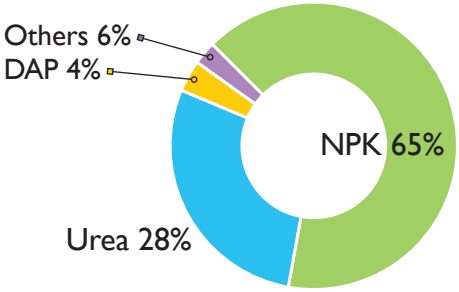
FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022



FERTILIZER PRODUCTION & BLENDING PLANT SITES



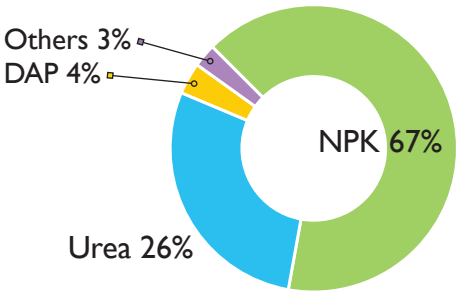
FERTILIZER IMPORTS 2022



FERTILIZER IMPORTS 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NPK	138,608	84,239	105,013	178,526	171,473	165,558	114,215	176,329	116,163	158,633
Urea	57,332	63,298	55,712	68,056	60,855	72,433	33,425	66,289	72,066	69,142
DAP	6,493	17,057	13,881	7,827	4,537	4,290	2,635	3,192	4,296	8,650
MOP	2,079	20,447	13,149	9,225	3,495	8,253	2,611	4,601	1,403	637
Others	14,611	21,582	20,420	19,606	5,217	13,014	7,537	966	567	6,334
Total	**219,122**	**206,623**	**208,175**	**283,241**	**245,576**	**263,548**	**160,423**	**251,377**	**194,495**	**243,397**

APPARENT CONSUMPTION 2022



FERTILIZER APPARENT CONSUMPTION 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NPK	138,443	84,199	105,013	178,526	171,473	165,553	113,315	176,329	116,083	157,258
Urea	57,332	63,298	55,712	68,056	60,855	72,313	33,425	66,289	71,675	61,147
DAP	6,493	17,057	13,881	7,827	4,537	4,290	2,634	3,192	5,440	8,650
MOP	2,079	20,447	13,149	9,225	3,495	8,253	2,611	3,901	1,403	537
Others	14,616	21,582	20,420	19,606	5,217	15,334	12,437	5,429	5,303	6,885
Total	**218,962**	**206,583**	**208,175**	**283,241**	**245,576**	**265,743**	**164,422**	**255,140**	**199,904**	**234,478**

DEMAND FOR FERTILIZER BY CROP AND SEASON

Sowing | Growing | Harvest | ◆ Fertilizer peak demand

Season	Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Major season (long rains)	Maize			◆	◆	◆	◆						
	Millet					◆	◆	◆	◆				
	Sorghum			◆	◆	◆	◆						
	Rice	◆	◆										◆
	Cotton					◆	◆	◆					

Source: FAO/GIEWS, FEWSNET

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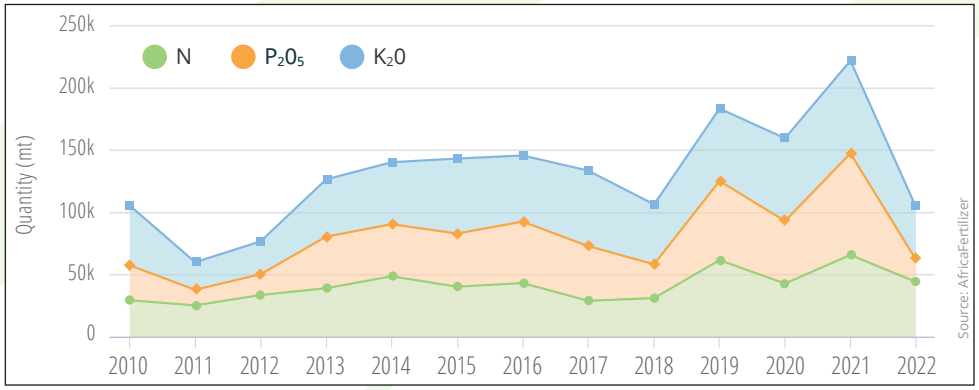
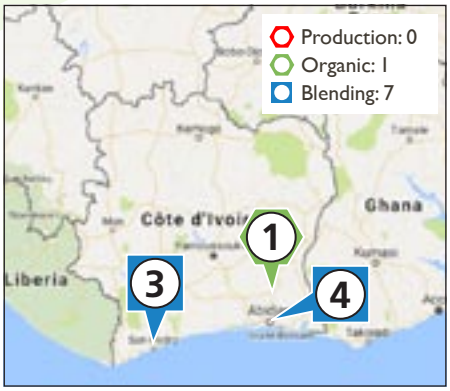
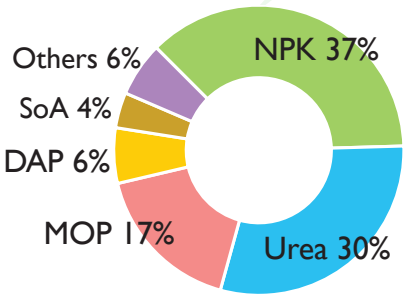
FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022



FERTILIZER PRODUCTION & BLENDING PLANT SITES



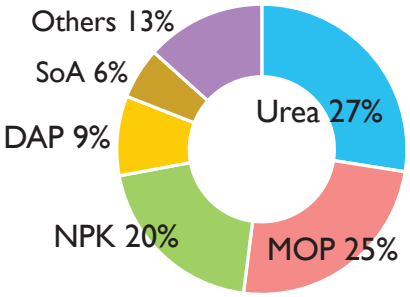
FERTILIZER IMPORTS 2022



FERTILIZER IMPORTS 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NPK	60,004	23,522	68,770	54,224	34,687	58,499	94,127	54,356	120,268	127,921
Urea	52,436	74,180	65,775	66,682	43,790	43,066	90,955	87,592	98,987	102,748
MOP	65,910	88,441	96,732	82,073	99,902	64,415	89,260	108,648	112,186	58,866
DAP	47,320	40,198	19,505	39,881	25,217	15,793	51,057	40,983	51,330	21,338
SoA	36,742	38,816	22,741	20,175	21,573	13,888	27,830	14,244	29,409	13,651
TSP	25,475	29,317	43,881	55,348	62,045	16,505	65,397	64,734	97,762	-
Others	33,041	29,444	24,410	13,937	15,709	20,131	25,220	20,377	57,244	20,902
Total	**320,929**	**323,918**	**341,813**	**332,320**	**302,924**	**232,298**	**443,847**	**390,935**	**567,186**	**345,425**

APPARENT CONSUMPTION 2022



FERTILIZER APPARENT CONSUMPTION 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Urea	44,566	68,428	55,850	59,157	42,269	39,698	89,615	69,569	90,623	65,718
MOP	64,607	77,958	91,993	80,401	97,312	62,671	86,539	106,893	108,359	58,690
NPK	4,034	15,948	30,482	30,353	4,697	49,302	37,840	4,656	53,764	47,953
DAP	47,218	33,459	19,160	39,298	24,953	15,761	48,047	35,916	46,550	21,253
SoA	36,252	38,691	22,258	20,170	19,424	13,888	27,830	14,244	29,409	13,651
TSP	25,475	29,285	43,853	55,348	62,039	16,505	65,397	64,734	97,762	-
Others	45,428	29,192	24,277	13,320	20,462	34,512	30,814	21,460	59,151	31,896
Total	**267,581**	**292,961**	**287,873**	**298,047**	**271,157**	**232,337**	**386,083**	**317,473**	**485,619**	**239,160**

DEMAND FOR FERTILIZER BY CROP AND SEASON

Sowing | Growing | Harvest | ◆ Fertilizer peak demand

Season	Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Major season (long rains)	Cotton (North)						◆	◆	◆				
	Cotton (Central)						◆	◆	◆				
	Cocoa (less than 3 years)				◆	◆			◆				
	Cocoa (Year 3 and more)				◆	◆		◆	◆				
	Oil palm (less than 3 years)			◆	◆					◆	◆		
	Oil palm (Year 3 and more)		◆	◆				◆			◆		
	Maize			◆	◆	◆							
	Rice					◆	◆	◆					
Minor season (short rains)	Cassava, Maize, Millet, Sorghum, Rice, Yam								◆	◆	◆		

Source: FAO/GIEWS, FEWSNET

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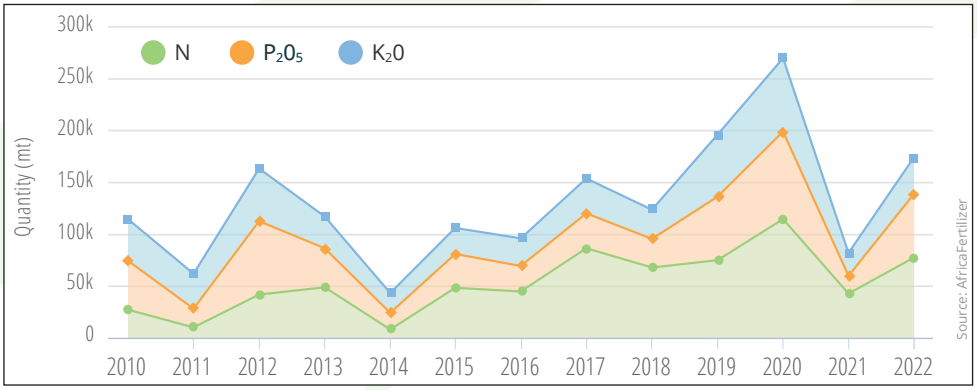
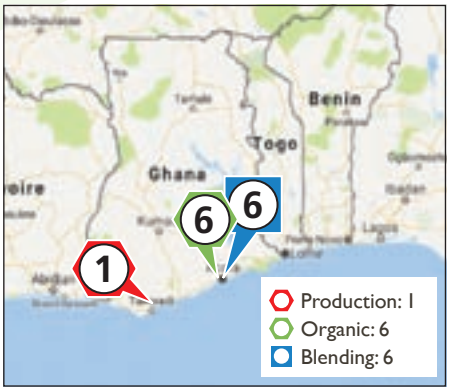
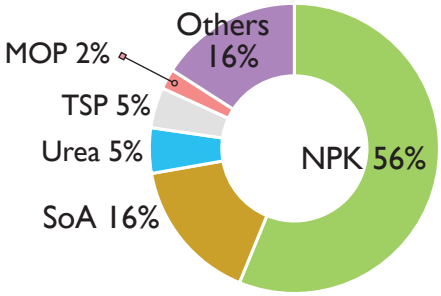
FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022



FERTILIZER PRODUCTION & BLENDING PLANT SITES



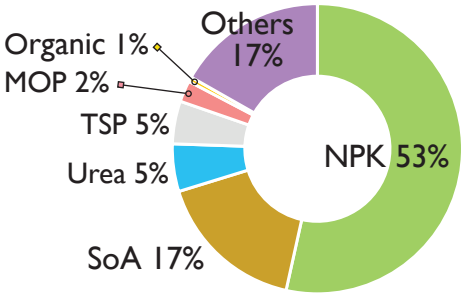
FERTILIZER IMPORTS 2022



FERTILIZER IMPORTS 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NPK	117,047	44,880	138,140	132,632	213,887	224,176	217,024	299,423	152,267	272,106
SoA	54,863	6,282	64,015	23,268	43,865	10,084	17,326	43,994	32,561	77,737
Urea	36,104	202	18,348	39,035	88,259	42,005	77,011	89,956	3,800	24,505
TSP	47,173	21,258	32,052	13,802	26,766	9,460	29,300	35,268	-	21,900
MOP	19,849	22,715	18,707	13,842	24,235	15,993	42,235	55,611	15,329	10,941
Organic	6,465	5,523	7,818	8,772	37,643	5,875	4,673	219	2,495	1,877
Others	16,414	10,223	11,077	8,532	9,582	7,564	37,542	94,167	32,610	77,137
Total	**297,915**	**111,083**	**290,156**	**239,883**	**444,236**	**315,157**	**425,110**	**618,638**	**239,062**	**486,203**

APPARENT CONSUMPTION 2022



FERTILIZER APPARENT CONSUMPTION 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NPK	113,794	39,344	137,902	132,632	210,387	220,176	215,617	296,641	151,693	245,691
SoA	54,863	6,282	64,015	23,268	43,865	10,084	17,326	43,994	32,561	77,082
Urea	36,104	-	18,253	39,035	88,259	42,002	76,921	88,379	3,451	24,369
TSP	47,173	19,613	32,052	13,802	26,766	9,460	29,300	35,268	-	21,885
MOP	19,801	22,702	18,707	13,842	24,235	15,712	42,235	55,611	15,329	10,941
Organic	6,465	5,523	7,818	8,747	37,568	5,868	4,663	219	6,692	2,432
Others	16,136	10,223	11,077	8,532	9,582	7,564	37,542	93,829	32,607	77,118
Total	**294,336**	**103,688**	**289,822**	**239,858**	**440,661**	**310,866**	**423,603**	**613,942**	**242,334**	**459,518**

DEMAND FOR FERTILIZER BY CROP AND SEASON

Sowing | Growing | Harvest | ◆ Fertilizer peak demand

Season	Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Major season (long rains)	Cassava (first year)				◆	◆	◆						
	Cassava (second year)												
	Maize (North)						◆	◆	◆				
	Maize (South)			◆	◆	◆							
	Millet and Sorghum					◆	◆	◆	◆				
	Rice (North)					◆	◆	◆	◆				
	Rice (South)				◆	◆	◆						
	Yam	◆	◆	◆	◆								
Minor season (short rains)	Cassava, Maize, Millet, Sorghum, Rice, Yam							◆	◆	◆			

Source: FAO/GIEWS, FEWSNET

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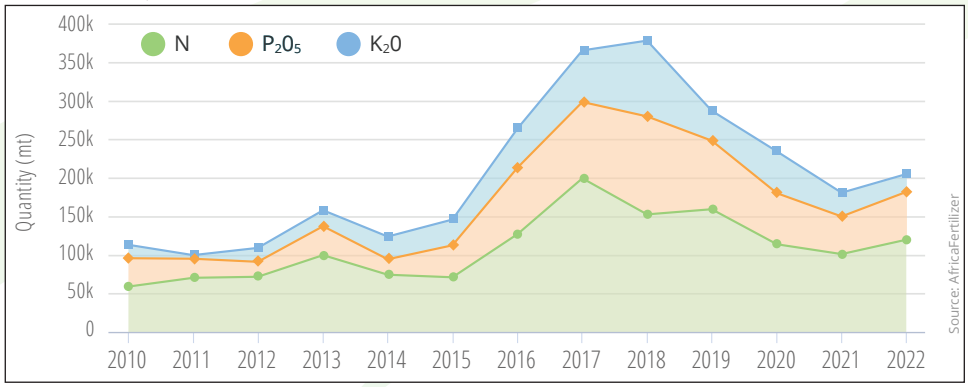
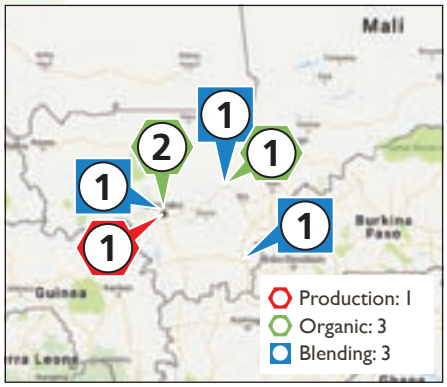
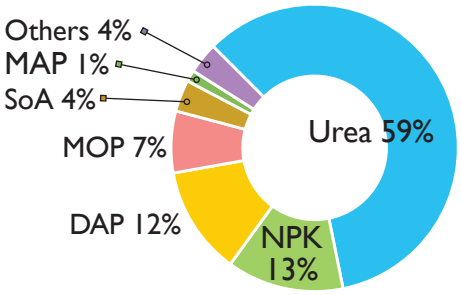
FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022



FERTILIZER PRODUCTION & BLENDING PLANT SITES



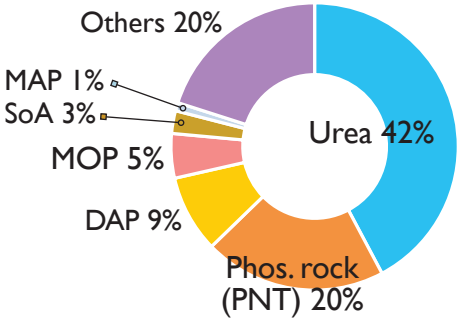
FERTILIZER IMPORTS 2022



FERTILIZER IMPORTS 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Urea	188,492	171,550	132,565	252,745	395,583	225,504	284,941	207,642	192,127	227,372
NPK	46,351	95,283	57,065	28,322	39,589	7,484	115,310	92,502	76,867	50,466
DAP	5,384	3,875	4,604	39,508	69,300	55,701	13,268	26,464	29,817	46,766
MOP	60,908	66,071	54,180	106,633	153,659	166,984	53,682	77,380	42,611	26,648
SoA	57,146	55,279	18,897	57,915	98,337	90,219	55,136	17,873	18,487	13,678
MAP	94,247	57,133	58,146	120,767	120,776	143,064	73,707	51,689	16,765	4,930
Others	23,434	11,835	2,378	45,686	33,280	16,790	33,759	8,286	4,753	13,431
Total	**475,962**	**461,027**	**327,835**	**651,575**	**910,524**	**705,746**	**629,804**	**481,836**	**381,426**	**383,292**

APPARENT CONSUMPTION 2022



FERTILIZER APPARENT CONSUMPTION 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Urea	169,514	128,963	131,562	219,405	354,014	225,414	284,746	201,598	186,618	224,545
PNT	-	-	-	36,755	40,403	45,000	110,120	64,651	69,561	109,090
DAP	5,384	3,875	4,354	39,448	59,918	84,305	13,028	26,394	29,763	46,266
MOP	34,513	43,082	54,180	82,905	110,995	163,934	53,682	77,152	42,611	26,648
SoA	40,844	23,290	18,897	47,759	74,722	90,219	55,136	17,873	18,352	13,578
MAP	64,778	28,587	58,146	87,427	96,112	143,064	73,707	51,689	16,572	4,930
Others	56,952	67,662	33,336	76,956	69,716	64,440	119,031	114,384	86,754	106,678
Total	**371,985**	**295,459**	**300,474**	**590,655**	**805,879**	**816,375**	**709,451**	**553,741**	**450,231**	**531,736**

DEMAND FOR FERTILIZER BY CROP AND SEASON

Sowing | Growing | Harvest | ◆ Fertilizer peak demand

Season	Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Major season (long rains)	Irrigated Rice	Growing	Growing	Harvest	Harvest					◆	◆	◆	◆
	Maize					◆	◆	◆	◆	Harvest	Harvest	Harvest	Harvest
	Millet					◆	◆	◆	◆	Harvest	Harvest	Harvest	
	Rainfed Rice						◆	◆	◆	◆	◆	◆	Harvest
	Sorghum					◆	◆	◆	Growing	Harvest	Harvest	Harvest	
	Cotton					◆	◆	◆	Growing		Harvest	Harvest	

Source: FAO/GIEWS, FEWSNET

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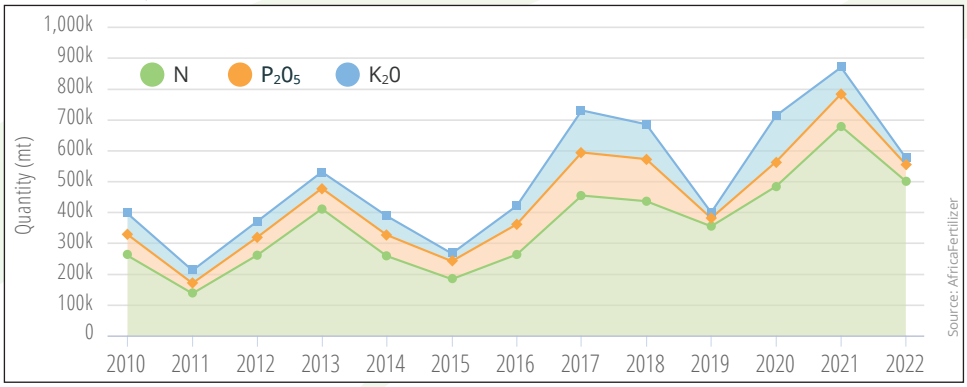
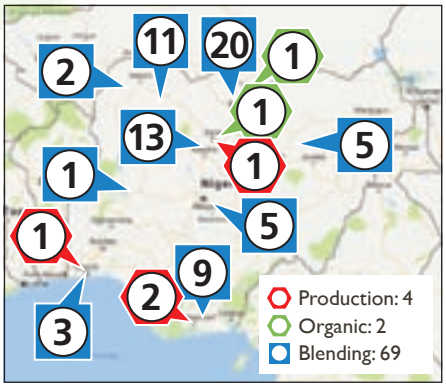
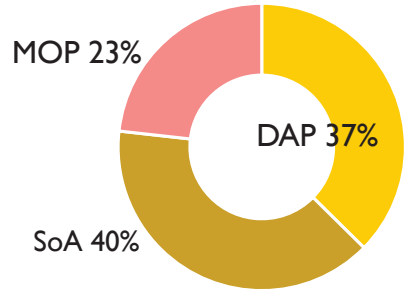
FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022



FERTILIZER PRODUCTION & BLENDING PLANT SITES



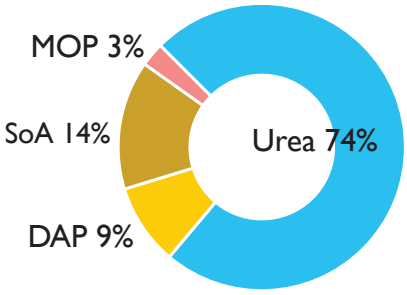
FERTILIZER IMPORTS 2022



FERTILIZER IMPORTS 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
DAP	-	-	5,500	5,250	102,770	92,956	56,800	168,181	292,158	177,776
SoA	12,284	2,321	10,483	27,450	40,248	17,700	41,533	49,056	237,869	187,297
MOP	13,532	13,721	408	3,683	121,846	95,373	29,275	199,733	176,291	110,476
NPK	294,980	344,879	165,684	380,455	399,949	351,821	1,785	1,016	27	1
NP com.	-	36,164	47,986	115,645	96,984	111,500	-	-	-	-
Urea	598,616	291,966	120,346	21,013	12	-	-	-	-	-
Others	94,547	53,167	67,569	40,498	42,284	48,101	2,064	11,316	576	110
Total	**1,013,959**	**742,216**	**417,976**	**593,994**	**804,093**	**717,450**	**131,458**	**429,303**	**706,922**	**475,661**

APPARENT CONSUMPTION 2022



FERTILIZER APPARENT CONSUMPTION 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Urea	765,731	423,966	319,656	386,383	760,734	758,499	730,151	988,343	1,303,423	955,980
DAP	-	-	5,500	5,250	102,770	92,956	56,800	168,181	229,588	118,678
SoA	12,301	2,321	10,483	27,450	40,248	17,700	41,533	49,056	182,845	188,740
MOP	13,921	13,721	408	3,683	121,846	95,373	29,275	199,733	142,846	34,996
NPK	270,919	344,879	165,684	380,455	399,949	351,821	1,785	1,016	27	-
SSP	37,682	571	16,751	16,599	16,550	19,854	1,507	11,255	-	-
NP com.	87,988	68,535	47,986	115,845	96,984	111,500	-	-	-	-
Others	25,417	20,225	51,429	23,699	25,735	28,247	557	61	576	110
Total	**1,213,959**	**874,216**	**617,897**	**959,364**	**1,564,816**	**1,475,950**	**861,609**	**1,417,646**	**1,859,306**	**1,298,505**

DEMAND FOR FERTILIZER BY CROP AND SEASON

Sowing | Growing | Harvest | ◆ Fertilizer peak demand

Season	Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Major season (long rains)	Cassava (South)					◆	◆	◆					
	Maize (North main)					◆	◆	◆					
	Maize (South main)			◆	◆	◆							
	Millet						◆	◆					
	Sorghum				◆	◆	◆						
	Rice				◆	◆	◆						
	Yam		◆	◆	◆								
Minor season (short rains)	Cassava, Maize, Millet, Sorghum, Rice, Yam	◆	◆									◆	◆

Source: FAO/GIEWS, FEWSNET

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FERTILIZER FACTSHEET 2023 SENEGAL

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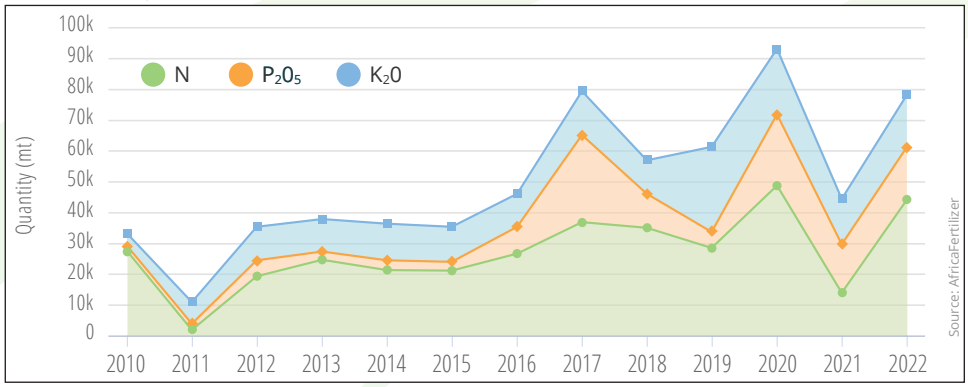
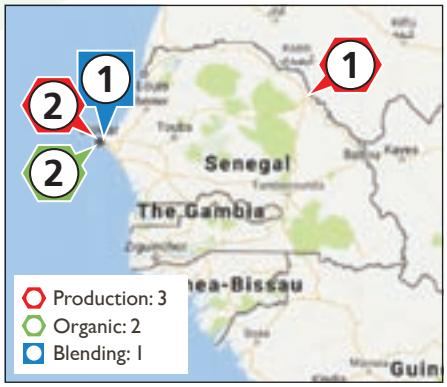
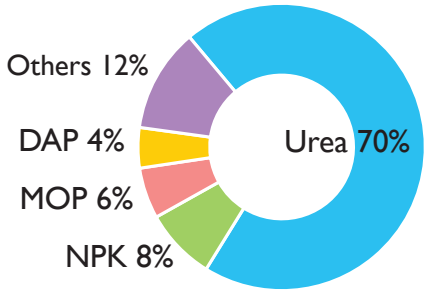
FERTILIZER CONSUMPTION IN NUTRIENTS, 2010-2022



FERTILIZER PRODUCTION & BLENDING PLANT SITES



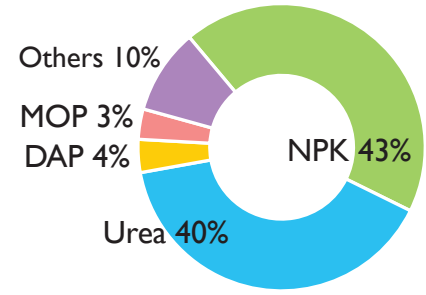
FERTILIZER IMPORTS 2022



FERTILIZER IMPORTS 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Urea	48,509	54,406	41,295	44,917	53,940	69,481	58,257	69,949	13,500	75,223
NPK	18,664	27,873	16,428	22,008	5,304	39,000	23,385	28,172	7,495	8,687
MOP	12,403	13,640	12,580	520	9,982	3,444	4,538	7,566	4,548	6,183
DAP	2,261	6,011	2,313	8,263	-	500	1,187	1,625	203	4,892
Others	4,301	5,058	6,218	2,683	2,259	4,469	8,767	16,487	12,175	12,595
Total	**86,138**	**106,989**	**78,835**	**78,391**	**71,485**	**116,894**	**96,134**	**123,799**	**37,920**	**107,579**

APPARENT CONSUMPTION 2022



FERTILIZER APPARENT CONSUMPTION 2013-2022 (MT)

Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NPK	18,180	17,330	16,068	69,780	69,581	83,699	88,341	97,310	67,484	78,617
Urea	47,587	40,855	40,522	44,917	53,351	62,185	45,459	65,393	8,125	72,217
DAP	-	-	-	13,514	61,081	18,146	11,148	17,306	7,460	6,742
MOP	12,398	13,640	12,580	520	9,982	3,444	4,517	7,566	4,376	6,183
Others	3,582	4,378	6,129	3,340	2,259	6,350	12,338	16,434	13,707	17,373
Total	**81,747**	**76,203**	**75,299**	**132,071**	**196,254**	**173,823**	**161,804**	**204,010**	**101,153**	**181,132**

DEMAND FOR FERTILIZER BY CROP AND SEASON

Sowing | Growing | Harvest | ◆ Fertilizer peak demand

Season	Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Major season (long rains)	Groundnut						◆	◆	◆	◆			
	Maize						◆	◆	◆				
	Millet and Sorghum						◆	◆	◆				
	Rice						◆	◆	◆	◆	◆		
	Cotton					◆	◆	◆					
Minor season (short rains)	Groundnut, Maize, Millet, Rice					◆	◆	◆	◆				

Source: FAO/GIEWS, FEWSNET

IFDC
Developing Agriculture from the Ground Up

wafa
West African Fertilizer Association
Association Ouest-Africaine de l'Engrais

For more info: AfricaFertilizer.org and WAFAfertilizer.org

3. FERTILIZER PRODUCTION

FERTILIZER PRODUCTION AND BLENDING IN WEST AFRICA

Since 2015, IFDC has been listing fertilizer plants in operation in sub-Saharan Africa. The fertilizer industry details are collected through a registration survey undertaken by AfricaFertilizer, with support from the Feed the Future EnGRAIS project and WAFA for the West African chapter reported in this publication. The details are obtained directly from the companies by use of questionnaires, from company websites, and from secondary data from various fertilizer-oriented institutions.

This section is segmented into 3 categories:

- **Production plants:** Those which undertake mining and/or some type of chemical reaction to produce fertilizer. Typically, these are large specific product plants such as urea, ammonia, DAP, MAP, TSP, SSP, MOP, SOP, or NPK compound fertilizers.
- **Blending plants:** Those which mix macro- and micro-nutrient products to obtain a final product ready to use.
- **Future projects:** Those either under construction or likely to be operational within the next five years.

At the beginning of 2023, a total of 136 fertilizer plants (+28 from the 2022 edition) are known to be operational in West Africa. They include:

- **11** fertilizer production plants (unchanged), including **3** producing nitrogen-based fertilizers and **6** producing phosphate-based fertilizers
  - › **1** micronutrient production plant (unchanged)
  - › **1** lime supplements production plant (unchanged)
- **17** organic fertilizer plants (unchanged)
- **91** blending facilities (+12)
- **15** future projects (-1)

Accredited Laboratories: The register lists **31** public and private **Soil Testing and Fertilizer Quality Control Laboratories** in operation in West Africa. These laboratories can run tests on fertilizers, soil, water, or plants. *See page 86.*

FERTILIZER PRODUCTION PLANTS

NITROGEN PRODUCTION

Notore Chemicals Industries Ltd and Indorama Eleme Fertilizers & Chemicals Ltd, both in Rivers State, Nigeria, were previously the only plants producing urea and ammonia in West Africa. The new Dangote plant in Lagos State came on stream in 2021 as the third nitrogen producer in the region.

PHOSPHATE PRODUCTION

Several phosphate mines in West Africa extract phosphate rock but process the phosphate at a different level.

Industries Chimiques du Sénégal (ICS/Indorama) processes phosphate rock to phosphoric acid and uses that in their plant in Mbao to produce DAP and TSP.

Toguna Agro Industries grinds and granulates the natural phosphate of Tilemsi for West Africa regional use, and *Société Nouvelle des Phosphates du Togo* (SNPT) exports all their production of phosphate rock abroad. Other phosphate rock extraction activities are done by *Société d'Études et de Réalisation des Phosphates de Matam* (SERPM) and *Société Minière de la Vallée du Fleuve* (SOMIVA) both in Matam, Senegal, and *Société d'Exploitation des Phosphates du Burkina* (SEPB) in Diapaga, Burkina Faso.

POTASH PRODUCTION

There are no current manufacturers of potash in West Africa but there are 2 potash deposits that have been identified and are being considered for development.

Note: Capacities listed are nominal and not operational capacities.

More detailed information on all plants listed in this register can be found on the AfricaFertilizer official website: https://africafertilizer.org/production/

ABBREVIATIONS

Metric tons per hour (**mtph**) – day (**mtpd**) – year (**mtpy**)

QUICK REFERENCE

PRODUCTION – NITROGEN

No.	Country	Plant Site	Company	Product	Commissioned
1	Nigeria	Lagos	Dangote Fertilizer Ltd	Urea	2021
2	Nigeria	Onne, Rivers State	Notore Chemical Industries Plc	Urea	1988
3	Nigeria	Port Harcourt	Indorama Eleme Fertilizers & Chemicals Ltd	Urea	2016

PRODUCTION – SOIL SUPPLEMENTS AND MICRO-NUTRIENTS

No.	Country	Plant Site	Company	Product	Commissioned
1	Ghana	Takoradi	Carmeuse Lime Products GH Ltd	Lime supplements	2020
2	Nigeria	Kaduna	Cybernetics Nigeria Ltd	Micronutrients	1985

PRODUCTION – ORGANIC FERTILIZERS

No.	Country	Plant Site	Company	Product	Commissioned
1	Benin	Allada	Bio Phyto	Organic fertilizers	2013
2	Burkina Faso	Ouagadougou	Arom-H/Sol Fertile	Organic fertilizers	2014
3	Burkina Faso	Ouagadougou	Faso Biogaz	Biodigester (2,500 m^3)	2015
4	Côte d'Ivoire	Adzopé	Éléphant Vert Côte d'Ivoire	Industrial composting	2014
5	Ghana	Accra (Jamestown)	Ga Mashie Aerobic Compost	Organic compost	2013
6	Ghana	Adjen Kotoku	Accra Compost & Recycling Plant (ACARP)	Organic compost	2012 & 2021
7	Ghana	Akorley, Somanya	JVL-YKMA Recycling Plant	Organic fertilizers	2020
8	Ghana	Ashaiman	Safisana	Anaerobic digester	2016
9	Ghana	Mpasatia/Nkawie	New Okaff Industries Ltd	Organic fertilizers	2018
10	Ghana	Tema (Borteyman)	JVL Fortifier Compost	Organic compost	2017
11	Mali	Bamako	Orgafert	Organic fertilizers	2018
12	Mali	Bamako	PROFEBA	Organic fertilizers	2017
13	Mali	Ségou	Éléphant Vert Mali	Organic fertilizers	2012
14	Nigeria	Kaduna	Dharul Hijrah Fertilizer Co. LTD	Organic fertilizers	2016
15	Nigeria	Kano	Excel Standards LTD	Compound fertilizer granulation plant & bulk blending plant	2013
16	Senegal	Dakar	Biotoss	Organic fertilizers	2017
17	Senegal	Dakar	Éléphant Vert Sénégal	Composting platform	2019

PRODUCTION – PHOSPHATES

No.	Country	Plant Site	Company	Product	Commissioned
1	Burkina Faso	Diapaga	Société d'Exploitation des Phosphates du Burkina (SEPB)	Natural Phosphate Rock	2012
2	Mali	Bamako	Toguna Agro Industries – Tilemsi	Natural Phosphate Rock	2009
3	Senegal	Dakar	Industries Chimiques du Sénégal (ICS)	Phosphate Rock, Phosphoric Acid, DAP, NPK, Gypsum	1976
4	Senegal	Dakar	Société d'Études et de Réalisation des Phosphates (SERPM)	Phosphate Rock	2007
5	Senegal	Matam	Société Minière de la Vallée du Fleuve (SOMIVA)	Phosphate Rock	2008
6	Togo	Kpémé	Société Nouvelle des Phosphates du Togo (SNPT)	Phosphate Rock	1961

BLENDING

#	Country	Plant Site	Company	Year Est.
1	Burkina Faso	Bobo Dioulasso	CIPAM SA	2003
2	Burkina Faso	Bobo Dioulasso	Industries Chimiques Fertilisantes d'Afrique (IFCA)	2016
3	Burkina Faso	Koupéla	Société d'Exploitation des Phosphates du Burkina (SEPB)	2023
4	Côte d'Ivoire	Abidjan	Agro West Africa – Abidjan	2012
5	Côte d'Ivoire	Abidjan	Sea Invest	2013
6	Côte d'Ivoire	Abidjan	SOLEVO Côte d'Ivoire – Abidjan – Unit 1	2001
7	Côte d'Ivoire	Abidjan	SOLEVO Côte d'Ivoire – Abidjan – Unit 2	2022
8	Côte d'Ivoire	Abidjan	Yara Côte d'Ivoire	1990
9	Côte d'Ivoire	San Pedro	Agro West Africa – San Pedro	2020
10	Côte d'Ivoire	San Pedro	Société d'Engrais d'Amenagement et de Phytosanitaire de Côte d'Ivoire (SEAP CI)	2011
11	Côte d'Ivoire	San Pedro	SOLEVO Côte d'Ivoire – San Pedro	2020
12	Ghana	Asuboi	Glofert Ltd	2018
13	Ghana	Kpone	Louis Dreyfus Commodities LTD (previously MacroFertil Ghana)	2013
14	Ghana	Tema	Agricultural Manufacturing Group Ltd (AMG)	2020
15	Ghana	Tema	Chemico Ltd	2004
16	Ghana	Tema	Omnifert (2 units)	2017/2019
17	Ghana	Tema	Yara Ghana Ltd	2007
18	Mali	Bamako	Toguna Agro Industries	2006
19	Mali	Ségou	Doucouré Partenaire Agro Industries (DPA)	2011
20	Mali	Sikasso	Société Générale des Fertilisants (SOGEFERT)	2010
21	Nigeria	Abia	Edusquare & Company Nigeria Ltd	1998
22	Nigeria	Abuja	J Marine Logistics	2020
23	Nigeria	Akwa-Ibom	Greenwell Technologies Ltd	2010
24	Nigeria	Bauchi	Bauchi Fertilizer Blending Company Ltd	1999
25	Nigeria	Benue	Sora Fertilizer & Chemicals	1985
26	Nigeria	Delta	Validivar Fertilizer & Chemical Ltd	2021
27	Nigeria	Ebonyi	Ebonyi State Fertilizer & Chemical Company Ltd	2004
28	Nigeria	Edo	WACOT Ltd (plant reactivated in 2017 after 14 years)	2003
29	Nigeria	Enugu	Tecboom Fertilizer Company Ltd	2022
30	Nigeria	Gombe	Al-Yuma Fertilizers & Chemicals Company Ltd – Gombe	2022
31	Nigeria	Gombe	Gombe Fertilizer Blending Plant	2001
32	Nigeria	Gombe	Springfield Agro Ltd	2000
33	Nigeria	Gusau	Al-Yuma Fertilizers & Chemicals Company Ltd – Gusau	2018
34	Nigeria	Gusau	Zam Agro-Chemicals & Fertilizer Company Ltd	2019
35	Nigeria	Gusau	Zamfara State Fertilizer Blending Plant	1998
36	Nigeria	Jigawa	Abdullazeez Fertilizer Company Ltd	2011
37	Nigeria	Jigawa	Jigawa State Fertilizer & Chemical Company	2021
38	Nigeria	Jigawa	Malam Alu Agro Allied Company	2017
39	Nigeria	Jigawa	Northern Fertilizer Company Ltd	2021
40	Nigeria	Jos	Bejafta Fertilizer & Chemical Company Ltd	1998
41	Nigeria	Kaduna	Barbedos Ltd	2018
42	Nigeria	Kaduna	Fertilizer & Chemicals Ltd	1988
43	Nigeria	Kaduna	Golden Fertilizer Company Ltd – Kaduna	2018
44	Nigeria	Kaduna	Linkside Elhyatt Ltd	2020
45	Nigeria	Kaduna	Matrix Fertilizer Ltd	2018
46	Nigeria	Kaduna	MFB Fertilizer & Chemical Companies Ltd	2013
47	Nigeria	Kaduna	OCP Africa Fertilizer Nigeria Ltd	2021
48	Nigeria	Kaduna	Superphosphate Fertilizer & Chemical	1988
49	Nigeria	Kaduna	Zaria Fertilizer & Rice Mill (formerly American Tobacco)	2019
50	Nigeria	Kano	Al-Yuma Fertilizers & Chemicals Company Ltd – Kano	2016
51	Nigeria	Kano	Boko Agro Allied Nigeria Ltd	2020

#	Country	Plant Site	Company	Year Est.
52	Nigeria	Kano	Citizen Fertlizers & Chemical Company Ltd	2017
53	Nigeria	Kano	Continental Fertilizer Ltd	2009
54	Nigeria	Kano	Freedom Fertilizer Company Ltd	2021
55	Nigeria	Kano	Guarantee Fertilizer Ltd	2021
56	Nigeria	Kano	Hamdala Fertilizer Company	2019
57	Nigeria	Kano	Kano State Input Supply Company	1981
58	Nigeria	Kano	Lionheart Fertilizer Chemicals & Agricultural Processing Co.	2021
59	Nigeria	Kano	Namalale Fertilizer & Chemical Company Ltd	2017
60	Nigeria	Kano	Plantmate Fertilizer Ltd	2021
61	Nigeria	Kano	Sasisa Fertilizer Nigeria Ltd	1999
62	Nigeria	Kano	Shenzhen Global Service	2020
63	Nigeria	Kano	Solar Fertilizer & Chemical Product Ltd	2016
64	Nigeria	Kano	Waraka Fertilizer Company Ltd	2020
65	Nigeria	Kano State	Green Plant Agro Solution Ltd	2021
66	Nigeria	Katsina	Funtua Fertilizers & Chemicals	2003
67	Nigeria	Katsina	Gobarau Agro Allied Ltd	2020
68	Nigeria	Katsina	Greentide Agro Ltd	2018
69	Nigeria	Katsina	Jargaba Fertilizer Company	2019
70	Nigeria	Katsina State	Danraka Fertilizer Company Ltd	2022
71	Nigeria	Katsina State	Eminent Fertilizer Company Ltd	2022
72	Nigeria	Katsina State	Manhajo Fertilizer Company Ltd	2022
73	Nigeria	Kebbi	Albarka Fertilizer & Chemical Company Ltd	2017
74	Nigeria	Kogi	TAK Agro & Chemicals	2019
75	Nigeria	Lagos	Golden Fertilizer Company Ltd – Lagos	2019
76	Nigeria	Lagos	Premium Agrochemicals Ltd	2019
77	Nigeria	Lagos	Whitfield Venture Ltd	2022
78	Nigeria	Nassarawa	Enar Suhara Continental Ltd	2020
79	Nigeria	Nassarawa	Kwandare Fertilizer Blending Plant	2020
80	Nigeria	Nassarawa	Space Age Continental Investment Ltd	2020
81	Nigeria	Niger	Crystallizer Nigeria Ltd	1996
82	Nigeria	Niger	Morris Fertilizers & Chemicals	1988
83	Nigeria	Niger	Savannah Fertilizer Services Ltd	2019
84	Nigeria	Niger	Kaffo Mines Ltd	1955
85	Nigeria	Osun	Sanrot Agro-Allied Ltd	2022
86	Nigeria	Rivers	Notore Chemical Industries Plc (revamped in 2019)	2019
87	Nigeria	Rivers	PrimeGold Fertilizers	2009
88	Nigeria	Sokoto	Alelawa Fertilizer & Chemical Company Ltd	2013
89	Nigeria	Zamfara State	SIDSAM Fertilizer Company	2021
90	Senegal	Dakar	SEDAB	2019
91	Togo	Lomé	Compagnie des Intrants Agricoles du Togo (CIAT)	2011

FUTURE PROJECTS

No.	Country	Plant Site	Company	Expected Operational Status
1	Burkina Faso	Bobo Dioulasso	Faso Fert	2023-2024
2	Burkina Faso	Bobo Dioulasso	Tropic Agro Chem	2023-2024
3	Côte d'Ivoire	Abidjan	OCP Côte d'Ivoire SA	2023-2024
4	Côte d'Ivoire	Yamoussoukro	Ivoire Formulation	2023-2024
5	Mali	Bourem	Sangoye	2023-2024
6	Nigeria	Abuja	Agtho Merchant & Co. Ltd	2023
7	Nigeria	Abuja	New Blender 3*	2023
8	Nigeria	Bayelsa	Brass Fertilizer	Unknown
9	Nigeria	Kano (near)	New Blender 2*	2023
10	Nigeria	Ogun	OCP Africa 1	2023
11	Nigeria	Rivers	New Blender 1*	2023
12	Nigeria	Sokoto	OCP Africa 2	2023
13	Senegal	Dakar	Amafrique SUARL	2023-2024
14	Senegal	Dakar	TSE	Unknown
15	Sierra Leone	Freetown	Mangara Agribusiness Company	2023

** Company name to be disclosed on completion.*

SOIL TESTING AND QUALITY CONTROL LABS

(see page 76)

No.	Country	Lab Site	Company/Organization	Type
1	Benin	Cotonou	Laboratoire des Sciences du Sol, Eaux et Environnement (LSSEE) [INRAB]	Public
2	Burkina Faso	Ouagadougou	Bureau National des Sols (BUNASOLS)	Public
3	Burkina Faso	Ouagadougou	Institut National pour l'Environnement et la Recherche Agricole (INERA)	Public
4	Côte d'Ivoire	Abidjan	ENVAL	Private
5	Côte d'Ivoire	Abidjan	Laboratoire National d'Appui au Développement Agricole (LANADA)	Public
6	Côte d'Ivoire	Vridi	Solevo Côte d'Ivoire	Private
7	Côte d'Ivoire	Vridi	Yara Côte d'Ivoire	Private
8	Ghana	Accra	EnvaServ Research Consult (ERC)	Private
9	Ghana	Accra	Ghana Atomic Energy Commission (GAEC)	Public
10	Ghana	Kwadaso	CSIR-Soil Research Institute	Public
11	Ghana	Pokuase	Plant Protection and Regulatory Services Directorate (PPRSD)	Public
12	Ghana	Tema	SGS Laboratory Services Ghana Ltd.	Private
13	Mali	Bamako	Laboratoire Sol-Eau-Plante (LABOSEP) [IER]	Public
14	Mali	Bamako	Toguna Agro Industries	Private
15	Mali	Kati	PROSLABS Microbio Consulting	Private
16	Niger	Niamey	Institut National de Recherche Agricole du Niger (INRAN)	Public
17	Niger	Niamey	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)	Int'l non-profit
18	Niger	Niamey	Quali-Control-Lab	Private
19	Nigeria	Benin City	Nigerian Institute for Oil-Palm Research (NIFOR)	Public
20	Nigeria	Ibadan	Institute of Agricultural Research and Training (IAR&T)	Public
21	Nigeria	Ibadan	ROTAS Soilab Ltd.	Private
22	Nigeria	Kaduna	National Fertilizer Development Centre (NFDC)	Public
23	Nigeria	Kano	Bayero University (BUK) Laboratory	Public
24	Nigeria	Lafia	Ta'al Lab	Private
25	Nigeria	Makurdi	Federal University of Agriculture	Public
26	Nigeria	Zaria	Soil Science Department, Ahmadu Bello University	Public
27	Senegal	Dakar	Centre National de Recherches Agronomiques (CNRA)/Bambey [ISRA]	Public
28	Senegal	Dakar	Institut de Recherche pour le Développement (IRD)	Public
29	Senegal	Dakar	Institut National de Pédologie (INP)	Public
30	Senegal	Mbao	Ceres-Locustox Foundation	Public
31	Togo	Lomé	Institut Togolais de Recherche Agronomique (ITRA)	Public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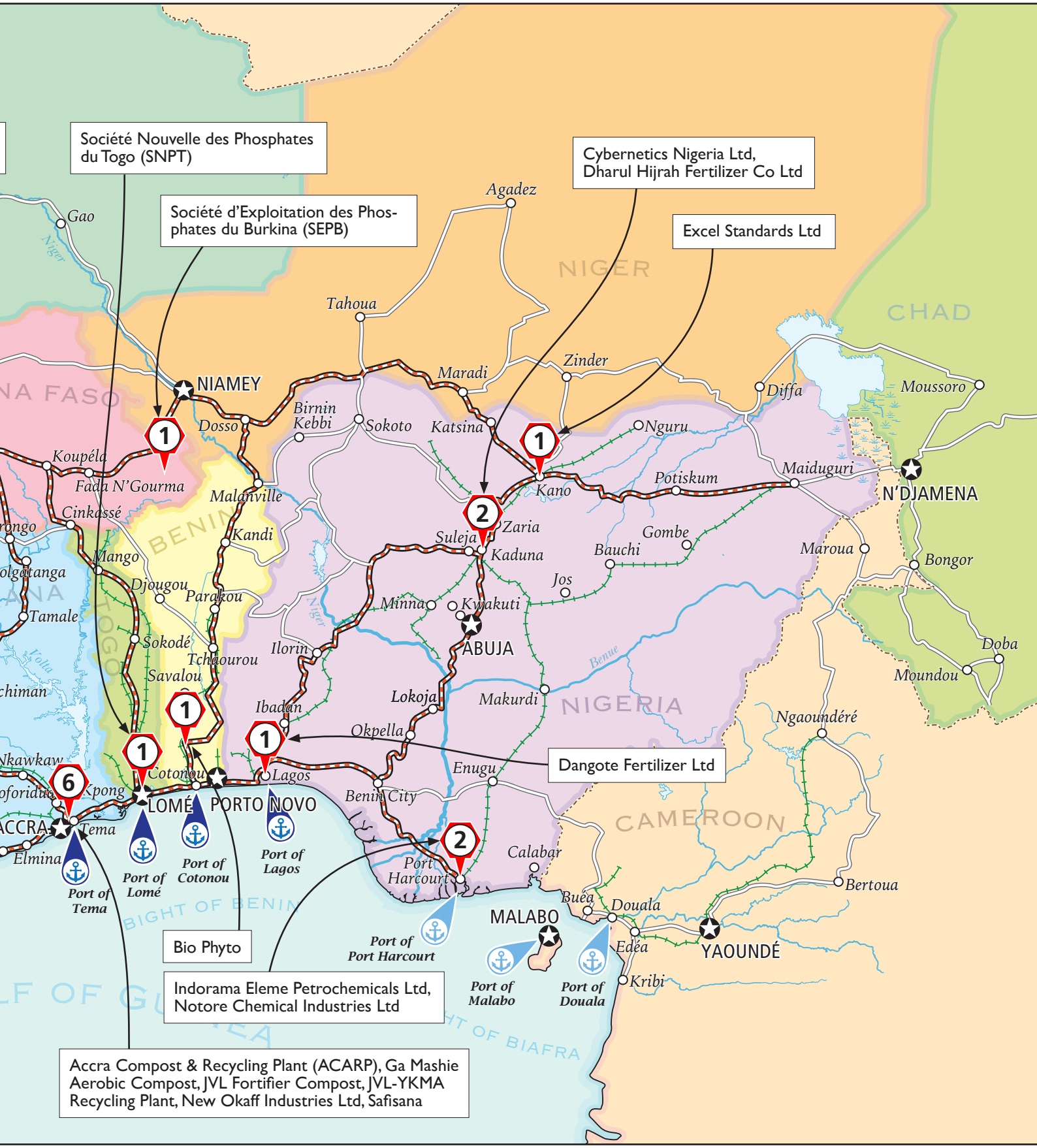
Daily

PRODUCTION


Industries Chimiques du Sénégal, Société d'Études et de Réalisation des Phosphates de Matam (SERPM), Élephant Vert Sénégal, Biotoss
PROFEBA, OrgaFert, Toguna Agro Industries – Tilemsi
Société Minière de la Vallée du Fleuve (SOMIVA)
Éléphant Vert Mali
Faso Biogaz, Arom-H/Sol Fertile
NOUAKCHOTT
Port of Nouakchott
Saint-Louis
Rosso
Kaédi
Louga
Linguère
Touba
Diourbel
Thiès
Kaffrine
Kaolack
DAKAR
Port of Dakar
BANJUL
Brikama
Port of Banjul
Mansôa
Bafatá
BISSAU
Port of Bissau
GAMBIA
GUINEA-BISSAU
Koundâra
Tambacounda
Kayes
Néma
Tombouctou
Tilemsi
Mopti
Ségou
BAMAKO
Koutiala
OUAGADOUGOU
Bougouni
Sikasso
Bobo-Dioulasso
Tumu
Wa
Bole
Boké
Kindia
Dabola
Kankan
Korhogo
Boundiali
CONAKRY
Port of Conakry
FREETOWN
Port of Freetown
Bo
Bonthe
Nzérékoré
Bouaké
Man
YAMOUSSOUKRO
Daloa
Gbarnga
MONROVIA
Port of Monrovia
Buchanan
Kumasi
Abidjan
Cape Coast
San Pedro
Sassandra
Takoradi
Port of San Pedro
Port of Abidjan
Port of Takoradi
Mindelo
CAPE VERDE
PRAIA
ATLANTIC OCEAN
SENEGAL
GUINEA
SIERRA LEONE
LIBERIA
CÔTE D'IVOIRE
Éléphant Vert Côte d'Ivoire
Carmeuse Lime Products
Number of fertilizer production plants operating at this location
Capital
City/town
Major port
Minor port
Country frontiers
Trade corridor
Roadway
Railway
Rivers, lakes
Sub-region limit


Société Nouvelle des Phosphates du Togo (SNPT)
Société d'Exploitation des Phosphates du Burkina (SEPB)
Cybernetics Nigeria Ltd, Dharul Hijrah Fertilizer Co Ltd
Excel Standards Ltd
Dangote Fertilizer Ltd
Bio Phyto
Indorama Eleme Petrochemicals Ltd, Notore Chemical Industries Ltd
Accra Compost & Recycling Plant (ACARP), Ga Mashie Aerobic Compost, JVL Fortifier Compost, JVL-YKMA Recycling Plant, New Okaff Industries Ltd, Safisana
NIAMEY
LOMÉ
PORTO NOVO
ACCRA
ABUJA
N'DJAMENA
YAOUNDÉ
MALABO
Port of Tema
Port of Lomé
Port of Cotonou
Port of Lagos
Port of Port Harcourt
Port of Malabo
Port of Douala
Gao
Agadez
Tahoua
Maradi
Zinder
Diffa
Moussoro
Birnin Kebbi
Sokoto
Katsina
Nguru
Dosso
Koupéla
Fada N'Gourma
Malanville
Kandi
Cinkassé
Mango
Djougou
Parakou
Tamale
Sokodé
Tchaourou
Savalou
Kano
Potiskum
Maiduguri
Zaria
Suleja
Kaduna
Gombe
Bauchi
Maroua
Bongor
Doba
Moundou
Jos
Minna
Kwakuti
Ilorin
Ibadan
Lokoja
Okpella
Makurdi
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Bertoua
Kribi
Elmina
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Xpong
Tema
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CAMEROON
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BIGHT OF BIAFRA

PRODUCTION PROFILES

✱ NEW TO THIS EDITION
◆ OPERATIONS PAUSED

BENIN

BIO PHYTO — ORGANIC — 2013

Plant site: Allada
Capacity: 8 mtph
Contact: Zodomè Gildas, Director
zodomegildas@biophyto-benin.com
+229 97 41 19 83

BURKINA FASO

SEPB — PRODUCTION — EST. 1978, RENOVATED 2012

Société d'Exploitation des Phosphates du Burkina

Plant site: Diapaga
Capacity: Natural Phosphate Rock 7,200 t/y
Contact: Boundia Alexandre Thiombiano, General Manager
boundia@gmail.com
+226 75 65 51 15

AROM-H/SOL FERTILE — PRODUCTION — 2014

Plant site: Ouagadougou
Capacity: 20 mtpd
Contact: Samuel Zongo, General Director
aromhsolfertile@gmail.com
+226 70 70 56 10

FASO BIOGAZ — ORGANIC — 2015

Plant site: Ouagadougou
Capacity: Biodigester of 2,500 m^3
Contact: TIONO Elie, Production Manager
tionoelie@yahoo.fr
+226 70 96 75 88

CÔTE D'IVOIRE

ÉLÉPHANT VERT CÔTE D'IVOIRE — ORGANIC — 2014

Éléphant Vert Côte d'Ivoire

Plant site: Adzopé
Capacity: 50,000 mtpy Industrial composting
Contact: Frank Le Bris, General Director
frank.lebris@elephant-vert.com
+225 07 98 94 97 96

GHANA

CARMEUSE LIME PRODUCTS GH LTD — PRODUCTION — 2020

Plant site: Takoradi (established in 1993; however, Agric Lime production began in 2020)
Capacity: 13,000 mtpy Terracalco, Dolomite, Lime Supplements (calcium carbonate)
Contact: Faisal Iddrisu, General Manager - Operations
faisal@carmeuseghana.com
+233 206 210 088

ACCRA COMPOST & RECYCLING PLANT (ACARP) — ORGANIC — 2012 & 2021

Plant site: Adjen Kotoku – 2 plants: A and B
Capacity: 0.958 mtph and 0.719 mtph – Organic Compost
Contact: Barnabas Abane Ampaw, Quality Control, Environment & Research Supervisor
bampaw@acarpghana.com
+233 302 213 500

GA MASHI AEROBIC COMPOST PLANT — ORGANIC — 2013

Plant site: Jamestown, Accra
Capacity: 48 mtpy Organic Compost
Contact: Martha Adjoa Nartey, Innovations Manager
m.annan@jekoraventures.com
+233 208 750 704

JVL FORTIFIER COMPOST PLANT — ORGANIC — 2017

Plant site: Borteyman, Tema
Capacity: 200-250 mtpy Organic Compost
Contact: Martha Adjoa Annan, Innovations Manager
m.annan@jekoraventures.com
+233 208 750 704

JVL-YKMA RECYCLING PLANT — ORGANIC — 2020

Plant site: Akorley, Somanya
Capacity: Organic Compost - Fortifier
Contact: Martha Adjoa Annan, Innovations Manager
m.annan@jekoraventures.com
+233 208 750 704

NEW OKAFF INDUSTRIES LTD

ORGANIC — 2018

Plant site: Mpasatia/Nkawie
Capacity: 5 mtph Organic Compost – Semi Automatic Operation. Green Biological Fermentation (Organic Compost)
Contact: Karikari Adjei-Frimpong, Director of Operations
newokaff@gmail.com
+233 502 798 882

SAFISANA

ORGANIC — 2016

Plant site: Ashaiman
Capacity: 0.409 tons Organic Compost Fertilizer
Contact: Joseph Anderson, Sales Manager
info@asasegyefo.com.gh, www.asasegyefo.com.gh
+233 302 972 380, +233 244 184 808

MALI

TOGUNA AGRO INDUSTRIES – TILEMSI

PRODUCTION — 2009

Plant site: Tilemsi (near Bamako)
Capacity: 300,000 mtpy Natural Phosphate Rock
Contact: Oumar Guindo, Managing Director
omguindo@groupetoguna.com
+223 66 74 00 60, +223 20 20 30 81,
+223 20 20 30 85

ÉLÉPHANT VERT MALI

ORGANIC — 2012

Plant site: Segou
Capacity: 50,000 mtpy
Contact: Moussa Sylla, Sales Manager
moussa.sylla@elephant-vert.com
+223 77 27 29 12

ORGAFERT

ORGANIC — 2018

Plant site: Bamako
Capacity: –
Contact: Sidibé Oumou Diallo, General Director
orgafertmali@yahoo.com
+223 65 50 75 75, +223 79 19 02 51

PROFEBA

ORGANIC — 2017

Plant site: Bamako
Capacity: 4,000 mtpy
Contact: Adama Moussa Dembélé, Coordinator
adamsdembele1@yahoo.fr
+223 20 21 00 40, +223 69 83 37 43

NIGERIA

CYBERNETICS NIGERIA LTD

PRODUCTION — 1985

Plant site: Kaduna
Capacity: Micronutrients 2,500 mtpy
Contact: Pius Kole-James, Managing Director & CEO
piuskolejames@yahoo.com
+234 80 53 15 88 52

DANGOTE FERTILIZERS LTD

PRODUCTION — 2021

Plant site: Lagos
Capacity: Urea 2,800,000 mtpy
Rakesh Nagpal, General Manager Marketing and Sales
rakesh.nagpal@dangoteprojects.com
+234 81 52 67 32 84, +234 90 23 60 05 68

INDORAMA ELEME FERT & CHEM LTD

PRODUCTION — 2016

Plant site: Rivers (Port Harcourt)
Capacity: Urea 3,000,000 mtpy
Contact: Dr. S.K. Srivastava, Head of Marketing
sksrivastava@indorama.com.ng
+234 81 50 82 92 70,+234 90 87 07 00 02

NOTORE CHEMICAL INDUSTRIES PLC

PRODUCTION — 1988

Plant site: Rivers (established 1988 as NAFCON, 2005 as NOTORE)
Capacity: Urea 400,000 mtpy
Contact: Ngozi Mba, Head, Corporate Communications
ngozi.mba@notore.com
+234 80 53 39 12 15

DHARUL HIJRA FERTILIZER CO LTD

ORGANIC — 2016

Plant site: Kaduna
Capacity: 8 mtph Organic Fertilizer Plant
Contact: Alkali M. Mamu, Chairman
dharulhijrahfertilizers@gmail.com
+234 80 39 79 52 20

EXCEL STANDARDS LTD

ORGANIC — 2013

Plant site: Kano
Capacity: 5 mtph Compound Fertilizer Granulation Plant,
10 mtph Bulk Blending Plant
Contact: Abubakar Zakariya Maimalari, CEO
exstan1@gmail.com
+234 80 33 20 31 72

SENEGAL

INDUSTRIES CHIMIQUES DU SENEGAL (ICS)

PRODUCTION — 1976

(Indorama-ICS)

Plant site: Dakar
Capacity: 250,000 mtpy – Phosphate rock, Phosphoric acid, DAP, NPK, Gypsum
Contact: Abdoulaye Dièye, Head of Fertilizer Sales
abdieye@ics.sn
+221 776 446 467

SERPM

PRODUCTION — 2007

Société d'Études et de Réalisation des Phosphates

Plant site: Dakar
Capacity: Phosphate Rock 25,000 mtpy
Contact: Malick Sow, General Manager
malickksoww@gmail.com
+221 775 422 654

SOMIVA

PRODUCTION — 2008

Société Minière de la Vallée du Fleuve

Plant site: Matam
Capacity: Phosphate Rock 25,000 mtpy
Contact: Edouard Diagne, Operations Manager
ediagne@somiva-sn.com
+221 775 408 828

BIOTOSS

ORGANIC — 2017

Plant site: Dakar
Capacity: 5,000 mtpy
Contact: Moulaye Kande, CEO
moulayekande59@yahoo.fr
+221 776 449 589

ÉLÉPHANT VERT SÉNÉGAL

ORGANIC — 2019

Plant site: Dakar
Capacity: Composting Platform
Contact: Christophe Berthevas, General Director
christophe.berthevas@elephant-vert.com
+221 784 830 491

TOGO

SNPT

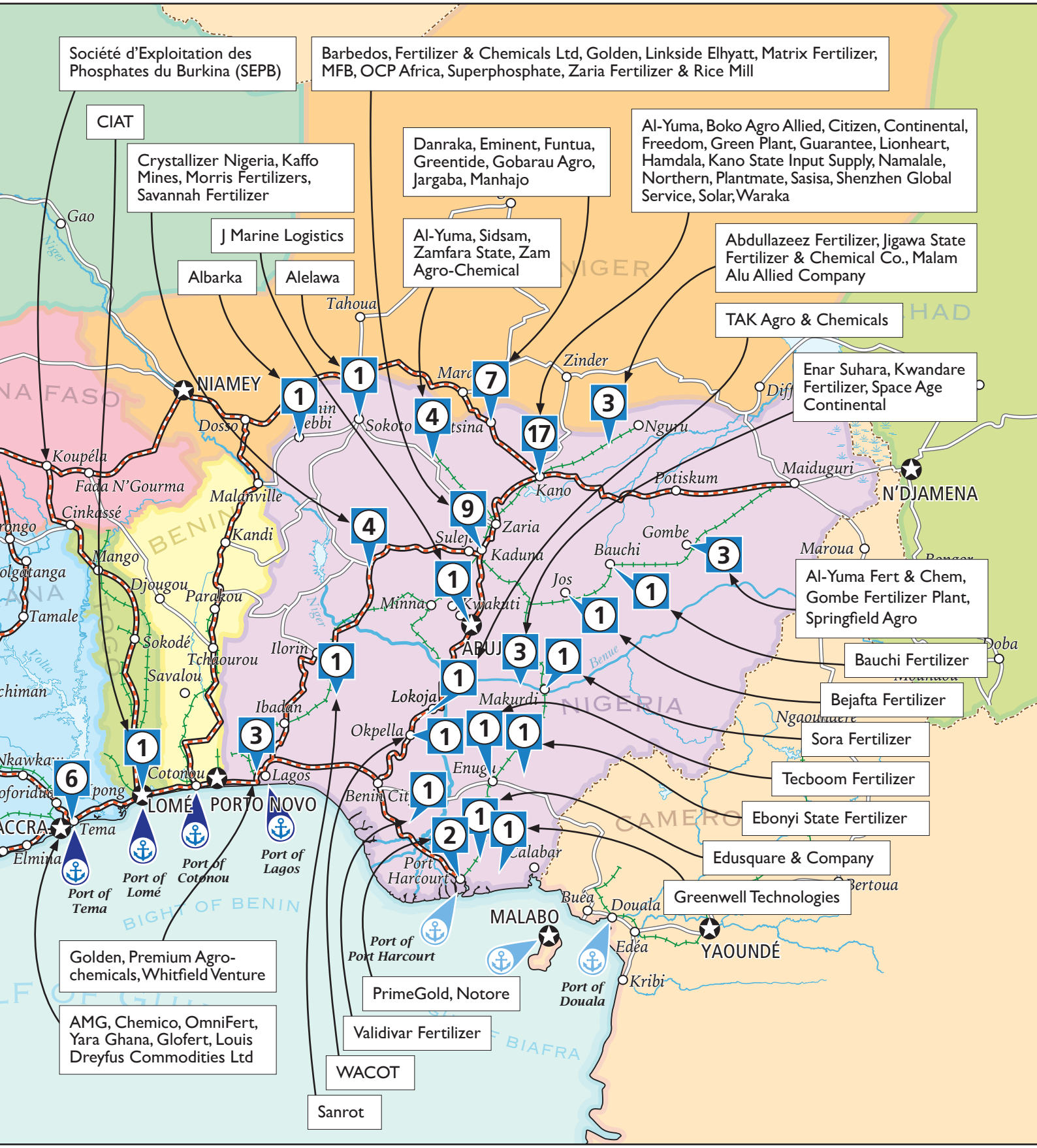
PRODUCTION — 1961

Société Nouvelle des Phosphates du Togo

Plant site: Kpémé
Capacity: 4,800,000 mtpy Phosphate Rock
Contact: Michel Kezie, General Manager
dg@phosphatesdutogo.com
+228 90 04 07 96

BLENDING


Doucouré Partenaire Agro-Industries
CIPAM SA, IFCA
SEDAB
Toguna Agro Industries
SOGEFERT
NOUAKCHOTT
Port of Nouakchott
MAURITANIA
MALI
'Ayoûn el 'Atroûs
Néma
Tombouctou
Tilemsi
Saint-Louis
Rosso
Kaédi
Louga
SENEGAL
Senegal
Linguère
Touba
DAKAR
Diourbel
Thiès
Kaffrine
Kaolack
Port of Dakar
Kayes
Mopti
Ségou
BANJUL
Brikama
Port of Banjul
Tambacounda
Gambia
BAMAKO
Niger
Koutiala
OUAGADOUGOU
BURKI
Mansôa
Bafatá
Koundâra
BISSAU
Port of Bissau
GAMBIA
Dabola
Bougouni
Sikasso
Bobo-Dioulasso
Nav
Tumu
Boké
Kindia
GUINEA
Kankan
Wa
Black Volta
GUINEA-BISSAU
CONAKRY
Port of Conakry
Korhogo
Boundiali
Bole
SIERRA LEONE
COTE D'IVOIRE
FREETOWN
Toguna Guinea Industries
Bo
Nzérékoré
Bouaké
Comoé
Sassandra
Port of Freetown
Bonthé
Gbarnga
Man
YAMOUSSOUKRO
Daloa
Kumasi
LIBERIA
MONROVIA
Buchanan
Abidjan
Cape Coast
San Pedro
Sassandra
Takoradi
Port of Monrovia
Port of San Pedro
Port of Abidjan
Port of Takoradi
Mindelo
CAPE VERDE
PRAIA
ATLANTIC OCEAN
GUL
Number of fertilizer blending plants operating at this location
Capital
ABUJA
City/town
Kindia
Major port
Minor port
Country frontiers
Trade corridor
Roadway
Railway
Rivers, lakes
Sub-region limit
Agro West Africa San Pédro, SEAP-CI, SOLEVO Côte d'Ivoire San Pédro
Agro West Africa Abidjan, SOLEVO Côte d'Ivoire Abidjan Units 1 & 2, Sea Invest, Yara Côte d'Ivoire


Société d'Exploitation des Phosphates du Burkina (SEPB)
Barbedos, Fertilizer & Chemicals Ltd, Golden, Linkside Elhyatt, Matrix Fertilizer, MFB, OCP Africa, Superphosphate, Zaria Fertilizer & Rice Mill
CIAT
Crystallizer Nigeria, Kaffo Mines, Morris Fertilizers, Savannah Fertilizer
Danraka, Eminent, Funtua, Greentide, Gobarau Agro, Jargaba, Manhajo
Al-Yuma, Boko Agro Allied, Citizen, Continental, Freedom, Green Plant, Guarantee, Lionheart, Hamdala, Kano State Input Supply, Namalale, Northern, Plantmate, Sasisa, Shenzhen Global Service, Solar, Waraka
J Marine Logistics
Al-Yuma, Sidsam, Zamfara State, Zam Agro-Chemical
Abdullazeez Fertilizer, Jigawa State Fertilizer & Chemical Co., Malam Alu Allied Company
Albarka
Alelawa
TAK Agro & Chemicals
Enar Suhara, Kwandare Fertilizer, Space Age Continental
Al-Yuma Fert & Chem, Gombe Fertilizer Plant, Springfield Agro
Bauchi Fertilizer
Bejafta Fertilizer
Sora Fertilizer
Tecboom Fertilizer
Ebonyi State Fertilizer
Edusquare & Company
Greenwell Technologies
Golden, Premium Agro-chemicals, Whitfield Venture
AMG, Chemico, OmniFert, Yara Ghana, Glofert, Louis Dreyfus Commodities Ltd
PrimeGold, Notore
Validivar Fertilizer
WACOT
Sanrot
NIAMEY
LOMÉ
PORTO NOVO
ACCRA
ABUJA
MALABO
YAOUNDÉ
N'DJAMENA
Port of Tema
Port of Lomé
Port of Cotonou
Port of Lagos
Port of Port Harcourt
Port of Douala
Gao
Koupéla
Fada N'Gourma
Dosso
Malanville
Kandi
Cinkassé
Mango
Djougou
Parakou
Tamale
Sokodé
Tchaourou
Savalou
Ilorin
Ibadan
Lagos
Cotonou
Okpella
Lokoja
Makurdi
Minna
Kwakuti
Sokoto
Tahoua
Zinder
Nguru
Kano
Zaria
Kaduna
Sulej
Potiskum
Maiduguri
Bauchi
Gombe
Maroua
Jos
Benin Cit
Enugu
Calabar
Port Harcourt
Buea
Douala
Edéa
Kribi
Elmina
Tema
Volta
Benue
Niger
BENIN
NIGERIA
CAMERO
BIGHT OF BENIN
BIAFRA

BLENDING PROFILES

✱ NEW TO THIS EDITION
◆ OPERATIONS PAUSED

BURKINA FASO

CIPAM SA

BLENDING — 2003

Plant site: Bobo Dioulasso
Capacity: 60 mtph EMT Weighcont Blender
Contact: Bassolet Armand, Operations Manager
armandb@cipam.bf
+226 78 03 61 10, +226 20 98 40 61

IFCA

BLENDING — 2016

Industries Chimiques Fertilisantes d'Afrique

Plant site: Bobo Dioulasso
Capacity: 60 mtph EMT Blender
Contact: Claude Isaac Zongo, Administrator
yissono@gmail.com, yalzongo@gmail.com
+226 76 61 57 10, +226 70 20 48 83

SEPB

BLENDING — 2016

Société d'Exploitation des Phosphates du Burkina

Plant site: Koupéla
Capacity: 60 mtph EMT Weighcont Blender
Contact: Boundia Alexandre Thiombiano, General Manager
boundia@gmail.com
+226 75 65 51 15

CÔTE D'IVOIRE

AGRO WEST AFRICA – ABIDJAN

BLENDING — 2012

Plant site: Abidjan
Capacity: 50 mtph RS Trading Blender
Contact: Ouattara Fatoumata Epse Mbanga, Agro-Industry Engineer
fatoumata.ouattara@citrans.net
+225 20 32 06 76, +225 07 58 80 92 46

AGRO WEST AFRICA – SAN PEDRO

BLENDING — 2020

Plant site: San Pedro
Capacity: 50 mtph RS Trading Blender
Contact: Ouattara Fatoumata Epse Mbanga, Agro-Industry Engineer
fatoumata.ouattara@citrans.net
+225 20 32 06 76, +225 07 58 80 92 46

SEA INVEST

BLENDING — 2013

Plant site: Abidjan
Capacity: 100 mtph EMT Shamrock Blender
Contact: Anthony Arcidiaco, General Director
anthony.arcidiaco@sea-invest.com
+225 07 48 51 98 55

SEAP-CI

BLENDING — 2011

◆ *Société d'Engrais d'Amendement et de Phytosanitaire de Côte d'Ivoire*

Plant site: San Pedro
Capacity: 40 mtph EMT Blender
Contact: Atse Fernand Niango, Head of Dev. & Commercial
fniango@seap-ci.net
+225 07 07 79 80 86

SOLEVO CÔTE D'IVOIRE – ABIDJAN, UNIT 1

BLENDING — 2001

Plant site: Abidjan
Capacity: 25 mtph EMT Shamrock Blender
Contact: Olivier KONAN, Regional Business Manager Agro
olivier.konan@solevogroup.com
+225 07 49 48 59 54

SOLEVO CÔTE D'IVOIRE – ABIDJAN, UNIT 2

BLENDING — 2022

* *Société d'Engrais d'Amendement et de Phytosanitaire de Côte d'Ivoire*

Plant site: Abidjan
Capacity: 45 mtph EMT Shamrock Blender
Contact: Olivier KONAN, Regional Business Manager Agro
olivier.konan@solevogroup.com
+225 07 49 48 59 54

SOLEVO CÔTE D'IVOIRE – SAN PEDRO

BLENDING — 2020

Plant site: San Pedro
Capacity: 25 mtph EMT Blender
Contact: Olivier KONAN, Regional Business Manager Agro
olivier.konan@solevogroup.com
+225 07 49 48 59 54

YARA CÔTE D'IVOIRE

BLENDING — 1990

Plant site: Abidjan
Capacity: 60 mtph blend - 90 mtph straight,
EMT 9T Blender & Bulkit 10T / Bagging Janodet
Contact: Kanigui Yeo, Managing Director
kanigui.yeo@yara.com
+225 05 55 27 27 27

GHANA

AMG

BLENDING — 2020

Agricultural Manufacturing Group Ltd

Plant site: Tema
Capacity: 100 mtph Yargus Blender
Contact: Henry Otoo-Mensah, General Manager
h.otoo-mensah@amgghana.com
+233 244 337 263

CHEMICO LTD

BLENDING — 2004

Plant site: Tema
Capacity: 90 mtph – 2 EMT Shamrock Blenders
Contact: Gregory Amprofi, Technical Manager
chemico@chemicogh.com, g.amprofi@chemicogh.com
+233 303 202 991, +233 243 306 695

GLOFERT LTD

BLENDING — 2018

Plant site: Asuboi
Capacity: 120 mtph EMT Weighcont Blender
Contact: Francis Dei, Vice President-Operations
francis.dei@glofert.com
+233 242 022 517

LOUIS DREYFUS COMMODITIES LTD

BLENDING — 2013

(previously Macrofertil)

Plant site: Kpone
Capacity: 20 mtph EMT Shamrock Blender
Contact: Mawunyo Puplampu, Operations Manager
Mawunyo.Puplampu@ldcom.com
+233 540 107 262

OMNIFERT (2 UNITS)

BLENDING — 2017 & 2019

Plant site: Tema
Capacity: 15 mtph & 50 mtph Bulk Blender
Contact: Kofi Annan-Dennis, General Manager
kofi.dennis@ominfert.com
+233 544 347 482, +233 209 415 959

YARA GHANA LTD

BLENDING — 2007

Plant site: Tema
Capacity: 90 mtph EMT Weighcont Blender
Contact: Danquah Addo-Yobo, Managing Director
danquah.addo-yobo@yara.com
+233 540 112 137, +233 302 770 079

MALI

DPA

BLENDING — 2011

Doucouré Partenaire Agro Industries

Plant site: Segou
Capacity: 120 mtph EMT Weighcont Blender
Contact: Fatoumata Binta Doucouré, Financial Director
fdoucoure@dpa-industries.com
+223 20 21 69 06, +223 66 16 80 17

SOGEFERT

BLENDING — 2010

Société Générale des Fertilisants

Plant site: Sikasso
Capacity: 120 mtph Layco by Yargus Declining Weight Blender
Contact: Ousmane Sidibe, CEO
ousmane.sidibe@sogefert.com
+223 76 40 31 15

TOGUNA AGRO INDUSTRIES – TILEMSI

BLENDING — 2006

Plant site: Bamako
Capacity: 140 mtph RS Trading Blender
Contact: Oumar Guindo, Managing Director
omguindo@groupetoguna.com
+223 66 74 00 60, +223 44 97 94 00,
+223 44 97 94 01

NIGERIA

ABDULLAZEEZ FERTILIZER CO LTD

BLENDING — 2011

Plant site: Jigawa
Capacity: 6 mtph NPK Blender
Contact: Safiyanu Abdullazeez, Managing Director
azeezfertilizercoy@gmail.com
+234 80 33 69 30 01

AL-YUMA FERT & CHEM CO LTD – GOMBE

BLENDING — 2022

* Plant site: Gombe
Capacity: 60 mtph Blender
Contact: Sabiu Tahir, Comptroller
sabiutahirhassan1@gmail.com
+234 80 64 89 55 10

AL-YUMA FERT & CHEM CO LTD – GUSAU

BLENDING — 2018

Plant site: Gusau
Capacity: 30 mtph Blender
Contact: Sabiu Tahir, Comptroller
sabiutahirhassan1@gmail.com
+234 80 64 89 55 10

AL-YUMA FERT & CHEM CO LTD – KANO

BLENDING — 2016

Plant site: Kano
Capacity: 100 mtph A.J. Sackett
Contact: Hamzat Faruk, Executive Director Commercial
hamzafaruk@gmail.com
+234 80 34 53 10 61

ALBARKA FERT & CHEM CO LTD

BLENDING — 2017

Plant site: Kebbi
Capacity: 50 mtph Bagtech Blending Plant
Contact: Engr. Mohammed Zauro, Chairman
zauromohammed@gmail.com
+234 80 35 89 85 00

ALELAWA FERT & CHEM CO LTD

BLENDING — 2013

Plant site: Sokoto
Capacity: 20 mtph Blender (Italian)
Contact: Alh. Suleiman Abubakar Fana, Managing Director
alelawaglobal@yahoo.com
+234 80 67 78 63 91

BARBEDOS LTD

BLENDING — 2018

Plant site: Kaduna
Capacity: 90 mtph Bagtech Blender
Contact: Mr. James Ayodele A., General Manager
+234 70 30 77 02 02

BAUCHI FERTILIZER BLENDING CO LTD

BLENDING — 1999

Plant site: Bauchi
Capacity: 25 mtph Blender
Contact: Baffa Aliyu Misau, Chairman
bappamaliyu@gmail.com
+234 80 33 46 84 70

BEJAFTA FERT & CHEM CO LTD

BLENDING — 1998

Plant site: Jos
Capacity: 50 mtph Blender
Contact: Hon Jacob Mallo, Managing Director & CEO
jacobmallo@yahoo.com
+234 81 84 88 11 14

BOKO AGRO ALLIED NIGERIA LTD

BLENDING — 2020

Plant site: Kano
Capacity: 30 mtph Bagtech
Contact: Nazir Abdullahi Alhassan, Manager
bokoagroallied@gmail.com
+234 80 32 17 36 56

CITIZEN FERT & CHEM CO LTD

BLENDING — 2017

Plant site: Kano
Capacity: 20 mtph Green Tech (Denmark)
Contact: Haris B. Haris, General Manager
harisbharis39@gmail.com
+234 80 37 05 33 67

CONTINENTAL FERTILIZER LTD

BLENDING — 2009

Plant site: Kano
Capacity: 90 mtph Bulk Blender
Contact: Alhaji Ibrahim Mohammed, CEO
continentalfertilizerlimited@gmail.com
+234 70 33 07 31 11

CRYSTALLIZER NIGERIA LTD

BLENDING — 1996

Plant site: Niger
Capacity: 10 mtph Blending Plant
Contact: Capt. Mohammed M. Musa, Managing Director
crystallizernigltd@yahoo.com
+234 80 33 74 18 81

DANRAKA FERTILIZER COMPANY LTD

BLENDING — 2022

* Plant site: Katsina State
Capacity: 15 mtph Blender – Yosung (Korea)
Contact: Abubakar Idris
danrakafertilizer77@gmail.com
+234 81 34 33 16 33

EBONYI STATE FERT & CHEM CO LTD

BLENDING — 2004

Plant site: Ebonyi
Capacity: 40 mtph Bulk Blender
Contact: Engr. Prof. Ogbonnaya Chukwu, General Manager
chuogbo@yahoo.com
+234 80 35 50 79 29

EDUSQUARE & CO NIGERIA LTD

BLENDING — 1998

Plant site: Abia
Capacity: 60 mtph Blender
Contact: Mr. Edu Ogbonnaya, Managing Director
edusquarecom@yahoo.com,
richfieldfertilizer@gmail.com
+234 80 33 22 72 57

EMINENT FERTILIZER COMPANY LTD

BLENDING — 2022

* Plant site: Katsina State
Capacity: 40 mtph Blender – Semi-automated
Contact: Zaiyard Abdullahi, Managing Director
danrakafertilizer77@gmail.com
+234 80 66 66 26 44

ENAR SUHARA CONTINENTAL LTD

BLENDING — 2020

Plant site: Nassarawa
Capacity: 45 mtph Blender - Beidou Chinese
Contact: Alh. Idris Ibrahim, Managing Director
ii_ndalatti@yahoo.com
+234 80 33 11 91 08

FERTILIZER & CHEMICALS LTD

BLENDING — 1988

Plant site: Kaduna
Capacity: 200 mtph A.J. Sackett (Bagtech)
Contact: O. M Pandya, General Manager
ompandya@gmail.com
+234 80 37 02 05 21

FREEDOM FERTILIZERS COMPANY LTD

BLENDING — 2021

* Plant site: Kano
Capacity: 20 mtph – Bulk fertilizer blending line model BPHB (Qinhuangdao Automatic Control Equipment Company Ltd)
Contact: Ahmed Garba BICHI, Chairman/CEO
agbichi@yahoo.com, freedom.fertilizer@gmail.com
+234 80 53 94 27 95, +234 80 39 74 60 88

FUNTUA FERTILIZERS & CHEMICALS

BLENDING — 2003

Plant site: Katsina
Capacity: 28 mtph Blender (Denmark Technology)
Contact: Alhaji Hafis Mohammad Bashir, General Manager
hafmoh2000@yahoo.co.uk
+234 80 37 03 78 74

GOBARAU AGRO ALLIED LTD

BLENDING — 2020

Plant site: Katsina
Capacity: 90 mtph Yargus Blender
Contact: Engr. Fahad Dahiru, Managing Director
fahadmanga194@gmail.com
+234 80 66 22 22 49

GOLDEN FERTILIZER CO LTD – KADUNA

BLENDING — 2018

Plant site: Kaduna
Capacity: 30 mtph Sacket-Waconia (Bagtech) Blender
Contact: Engr. Olusegun I. Falade, General Manager
sfalade@fmnplc.com
+234 81 13 39 44 72

GOLDEN FERTILIZER CO LTD – LAGOS

BLENDING — 2019

Plant site: Lagos
Capacity: 100 mtph Sacket-Waconia (Bagtech) Blender
Contact: Engr. Olusegun I. Falade, General Manager
sfalade@fmnplc.com
+234 81 13 39 44 72

GOMBE FERTILIZER BLENDING PLANT

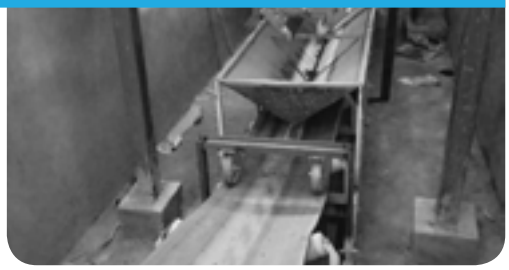
BLENDING — 2001

Plant site: Gombe
Capacity: 18 mtph Blender
Contact: Emmanuel Fumen, General Manager
fumenemma@yahoo.com
+234 80 65 32 21 83

GREEN PLANT AGRO SOLUTION LTD

BLENDING — 2021

* Plant site: Kano State
Capacity: 30 mtph Bulk Blending Fertilizer Line
Contact: Usman Bello Hamza, CEO
greenplantagro20@gmail.com
+234 80 26 14 70 98



GREENTIDE AGRO LTD

BLENDING — 2018

Plant site: Katsina
Capacity: 90 mtph Ranco Blender
Contact: Alh. Ibrahim Aliyu, Director
+234 81 87 66 27 17

GREENWELL TECHNOLOGIES LTD

BLENDING — 2010

Plant site: Akwa-Ibom
Capacity: 90 mtph Blending Plant
Contact: Johnny S. Udo, Managing Director
judo@greenwelltechnologies.com
+234 80 64 44 74 05

GUARANTEE FERTILIZER LTD

BLENDING — 2021

Plant site: Kano
Capacity: 35 mtph Blender
Contact: Alh. Adamu Umar
adamuumaru2299@gmail.com
+234 80 36 27 74 46

HAMDALA FERTILIZER CO

BLENDING — 2019

Plant site: Kano
Capacity: 120-200 mtph Blender
Contact: Alhaji Lawal Abbas Garba, Chairman
info@hamdalafertilizer.com
+234 80 55 88 63 59

J MARINE LOGISTICS

BLENDING — 2020

Plant site: Abuja
Capacity: 30 mtph Blender
Contact: Alh. Hassan Aliyyu
hassan.aliyyu@gmail.com
+234 80 36 16 96 56

JARGABA FERTILIZER CO

BLENDING — 2019

Plant site: Katsina
Capacity: 35 mtph Blender – Beidou Chinese
Contact: Abdulbasir Abubakar, Managing Director
+234 80 38 76 99 62

JIGAWA STATE FERT & CHEM CO

BLENDING — 2021

Plant site: Jigawa
Capacity: 120 mtph Blender
Contact: Alh. Badaru Abubakar
abbakarbadaru@gmail.com
+234 80 30 67 71 19

KAFFO MINES LTD

BLENDING — 1955

Plant site: Niger
Capacity: 30 mtph Blender
Contact: Kabiru Aminu Sale
kaffomines2@yahoo.com
+234 81 63 23 97 53, +234 81 53 40 49 50

KANO STATE INPUT SUPPLY CO

BLENDING — 1981

Plant site: Kano
Capacity: 60 mtph Green Tech (Denmark), Chinese, Tower Blending
Contact: Bala Inuwa, Managing Director & CEO
kascokano@gmail.com
+234 80 39 46 24 22

KWANDARE FERTILIZER BLENDING PLANT

BLENDING — 2020

Plant site: Nassarawa
Capacity: 17 mtph Blender
Contact: Nasiru Musa Tanko, General Manager
nasmtanko@gmail.com
+234 90 39 00 44 04

LINKSIDE ELHYATT LTD

BLENDING — 2020

Plant site: Kaduna
Capacity: 30 mtph Blender
Contact: Eng. Musa Hayatudeen
mhayatu@elhyatt.com
+234 80 33 11 78 67

LIONHEART FERT, CHEM & AGRIC PROCESSING CO

BLENDING — 2021

Plant site: Kano
Capacity: 20 mtph Blender
Contact: Alh. Laminu Sani
lionfertilizerchemicals@gmail.com
+234 80 54 40 44 92

MALAM ALU AGRO ALLIED CO

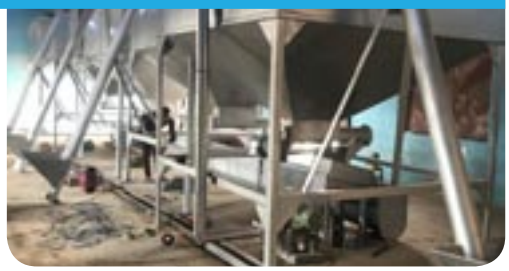
BLENDING — 2017

Plant site: Jigawa
Capacity: 40 mtph Blender – Beidou Chinese
Contact: Alh. Mansur Da'u Aliyu, General Manager
mansur.daliyu@malamalu.com
+234 80 37 03 21 10

MANHAJO FERTILIZER COMPANY LTD

BLENDING — 2022

* Plant site: Katsina State
Capacity: 30 mtph Blender – Semi-automated
Contact: Abubakar Yushau, Consultant
danrakafertilizer77@gmail.com
+234 80 30 45 25 30



MATRIX FERTILIZER LTD

BLENDING — 2018

Plant site: Kaduna
Capacity: 120 mtph Yargus Blender
Contact: Abdulkabir Adisa Aliu, Managing Director and CEO
abdulkabir@matrixgroup.ng.com
+234 80 57 18 45 81

MFB FERT & CHEM CO LTD

BLENDING — 2013

Plant site: Kaduna
Capacity: 90 mtph Ranco Blender
Contact: Mohammed Gulani Shuaibu, Managing Director
mohammedgshuaibu@yahoo.com
+234 80 34 26 26 40

MORRIS FERTILIZERS & CHEMICALS

BLENDING — 1988

Plant site: Niger
Capacity: 57 mtph for 2 bagging lines, A.J. Sackett (Bagtech)
Contact: Emmanuel Fom, General Manager
+234 80 33 14 69 23

NAMALALE FERT & CHEM CO LTD

BLENDING — 2017

Plant site: Kano
Capacity: 5 mtph Blender
Contact: Umar Shehu Musa, General Manger
+234 80 67 67 67 45

NORTHERN FERTILIZER COMPANY LTD

BLENDING — 2021

* Plant site: Jigawa
Capacity: 10 mtph Blender
Contact: Usman Yusuf, Managing Director
gccnigerialtd@gmail.com
+234 70 31 96 32 39

NOTORE CHEMICAL INDUSTRIES PLC

BLENDING — REVAMPED IN 2019

Plant site: Rivers
Capacity: 200 mtph Yargus Blender
Contact: Tijjani St. James, Group Head, Commercial
Tjjani.St.James@notore.com
+234 81 60 00 06 18

OCP AFRICA FERTILIZER NIGERIA LTD

BLENDING — 2021

Plant site: Kaduna
Capacity: 120 mtph AGI Yargus Blender
Contact: Oluwatobi Asana, Country Manager, OCP Nigeria
o.asana@ocpafrica.com
+234 90 62 07 97 52

PLANTMATE FERTILIZER LTD

BLENDING — 2021

Plant site: Kano
Capacity: 15 mtph Blender
Contact: Abubakar Sadiq Baba
plantmate.fertilizerltd@gmail.com
+234 81 63 23 97 53

PREMIUM AGROCHEMICALS LTD

BLENDING — 2019

Plant site: Lagos
Capacity: 70 mtph Bagtech Blender
Contact: Tapiwa Muchenwa, Chief Supervisor
+234 70 56 99 22 12

PRIMEGOLD FERTILIZERS

BLENDING — 2009

Plant site: Rivers
Capacity: 50 mtph NPK Blender
Contact: Felix Isimepkeni Okonti, Managing Director & CEO
felix@primegoldfertilizers.com
+234 80 33 00 80 36, +234 81 73 00 80 36

SANROT AGRO-ALLIED LTD

BLENDING — 2022

* Plant site: Osun
Capacity: 20 mtph Blender – Henan
Contact: Chief Rotimi OBEISUN, Chairman/CEO
sunshineoilandchemical@gmail.com
+234 80 33 24 08 25

SASISA FERTILIZER NIGERIA LTD

BLENDING — 1999

Plant site: Kano
Capacity: 15 mtph Blender
Contact: Dr. Surajo Muhammed, Chairman
sasisanigltd91@yahoo.com
+234 80 65 67 36 42

SAVANNAH FERTILIZER SERVICES LTD

BLENDING — 2019

Plant site: Niger
Capacity: 65 mtph Ranco Blender
Contact: Alh. Aliyu Mustapha, Executive Director
aliyumustapha3@yahoo.com
+234 80 36 08 17 97

SHENZHEN GLOBAL SERVICE

BLENDING — 2020

Plant site: Kano
Capacity: 30 mtph Blender
Contact: Alh. Abba Ahmed, Managing Director
abbaahmed92@gmail.com,
shenzhenglobalservices222@gmail.com
+234 80 34 40 05 06

SIDSAM FERTILIZER COMPANY

BLENDING — 2021

* Plant site: Zamfara State
Capacity: 10 mtph Blender
Contact: Maharazu Sambo, Managing Director
+234 80 32 07 78 19

SOLAR FERT & CHEM PRODUCT LTD

BLENDING — 2016

Plant site: Kano
Capacity: 7 mtph NPK Blender
Contact: Sanusi Mohammed, Managing Director & CEO
sfchemproduct@gmail.com
+234 80 37 03 95 73

SORA FERTILZER & CHEMICALS

BLENDING — 1985

Plant site: Benue
Capacity: 10 mtph Blender
Contact: Robert Orya, Managing Director & CEO
robertorya@yahoo.com
+234 80 93 74 05 55

SPACE AGE CONTINENTAL INVESTMENT LTD

BLENDING — 2020

Plant site: Nassarawa
Capacity: 40 mtph Layco
Contact: Alh. Rabiu I. Rabiu, Managing Director
karamirabiu@gmail.com
+234 80 55 55 11 11

SPRINGFIELD AGRO LTD

BLENDING — 2000

Plant site: Gombe
Capacity: 20 mtph NPK Blender
Contact: Mr. Tarun Das, Managing Director & CEO
tarun@afriventures.com
+234 70 12 99 99 99

SUPERPHOSPHATE FERT & CHEM

BLENDING — 1988

Plant site: Kaduna
Capacity: 150 mtph A.J. Sackett Gravity Blender
Contact: Danjuma Etuh, Managing Director
danjuma@sfcnig.com
+234 80 23 07 54 681

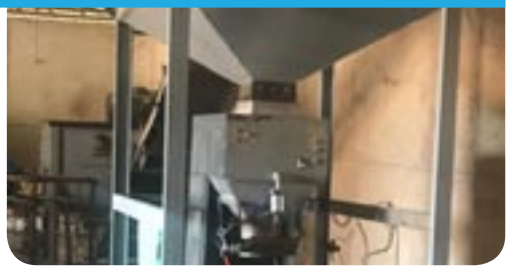
TAK AGRO & CHEMICALS

BLENDING — 2019

Plant site: Kogi
Capacity: 60 mtph A. J. Sackett Blender
Contact: Moses Ayin Akanet, Blending Plant Manager
ayinakanet@gmail.com
+234 80 29 12 28 85

TECBOOM FERTILIZER COMPANY LTD

BLENDING — 2022



* Plant site: Enugu
Capacity: 20 mtph Blender – Semi-automated
Contact: Mr. XU, Managing Director
tecboomltd@gmail.com
+234 80 34 93 62 70

VALIDIVAR FERT & CHEM LTD

BLENDING — 2021

Plant site: Delta
Capacity: 20 mtph Blender
Contact: Anthony Onah
validivarfertilizer@gmail.com
+234 80 32 01 45 06

WACOT LTD

BLENDING — 2003

Plant site: Edo (plant reactivated in 2017 after 14 years)
Capacity: 7 mtph Blender (China)
Contact: Pankaj Chawla, Head Agric Inputs
pankaj@clicktgi.net
+234 90 99 70 99 04, +234 70 64 01 64 49

WARAKA FERTILIZER CO LTD

BLENDING — 2019

Plant site: Kano
Capacity: 20 mtph Blender
Contact: Alh. Musa Biyu Garko
musabiyungarko@gmail.com
+234 80 96 21 72 78

WHITFIELD VENTURE LTD

BLENDING — 2022

* Plant site: Lagos
Capacity: 10 mtph Blender
Contact: Ankush Arora, General Manager
a.arora@wvlgroup.com
+234 80 97 76 44 11

ZAM AGRO-CHEMICALS & FERT CO LTD

BLENDING — 2019

Plant site: Gusau
Capacity: 120 mtph Yargus Blender
Contact: Engr. Kanti
abdulganiyu1963@gmail.com
+234 80 33 05 26 62

ZAMFARA STATE FERTILIZER BLENDING PLANT

BLENDING — 1998

Plant site: Gusau
Capacity: 35 mtph Blender
Contact: Mustapha Muhammadu, Managing Director
ankamustafa@yahoo.com, mustafaanka9@gmail.com
+234 80 35 89 63 70

ZARIA FERTILIZER & RICE MILL

BLENDING — 2019

(formerly American Tobacco)

Plant site: Kaduna
Capacity: 120 mtph Yargus Blender
Contact: Mohammed Maina, General Manager
maimoha@yahoo.com
+234 80 33 11 40 24, +234 80 99 28 00 98

SENEGAL

SEDAB

BLENDING — 2019

Plant site: Dakar
Capacity: 40 mtph Blender
Contact: Moulaye Kande, CEO
moulayekande59@yahoo.fr
+221 776 449 589

TOGO

CIAT

BLENDING — 2011

◆ *Compagnie des Intrants Agricoles du Togo*

Plant site: Lomé
Capacity: 120 mtph EMT Weighcont Blender
Contact: Desanti Gerard, Managing Director
desantigerard@yahoo.fr, desanti@ciat.tg
+228 90 04 64 24

FUTURE PROJECTS


Sangoye
Agtho Merchant & Co Ltd, New Blender 3
OCP Africa 2
New Blender 2 near Kano
Gao
Agadez
NIGER
Tahoua
CHAD
NIAMEY
Maradi
Zinder
Diffa
Moussoro
Birnin Kebbi
Sokoto
Katsina
Nguru
Dosso
Koupéla
Fada N'Gourma
Malanville
Kano
Potiskum
Maiduguri
N'DJAMENA
Cinkassé
Kandi
Zaria
Suleja
Gombe
Bauchi
Maroua
Bongor
Kaduna
Mango
Djougou
Parakou
Jos
Minna
Tamale
Sokodé
Ilorin
ABUJA
Doba
Tchaourou
Savalou
Moundou
Lokoja
Makurdi
NIGERIA
Ibadan
Okpella
Ngaoundéré
Cotonou
Lagos
Enugu
Kpong
LOMÉ
PORTO NOVO
Benin City
Tema
Calabar
CAMEROON
Elmina
Port of Tema
Port of Lomé
Port of Cotonou
Port of Lagos
Port Harcourt
Bertoua
Buea
Douala
MALABO
Edéa
YAOUNDÉ
Port of Port Harcourt
Port of Malabo
Port of Douala
Kribi
BIGHT OF BENIN
BIGHT OF BIAFRA
OCP Africa 1
Brass Fertilizer
New Blender 1 Rivers

FUTURE PROJECTS PROFILES

* NEW TO THIS EDITION

BURKINA FASO

BOBO DIOULASSO — **FASO FERT**

Project: Dolomite crushing equipment
Expected capacity: Unknown capacity
Expected completion: 2023-2024
Contact: **Pascal Le Moel**
General Director
fasofert.dg@gmail.com
+226 77 25 00 25

BOBO DIOULASSO — **TROPIC AGRO CHEM**

Project: Blender
Expected capacity: Unknown capacity
Expected completion: 2023-2024
Contact: **Al Hassane Sienou**
CEO
tropic_agrochem1@yahoo.fr
+226 70 20 61 58

CÔTE D'IVOIRE

YAMOUSSOUKRO — **IVOIRE FORMULATION**

Project: Weighcont Blender Line 5
Expected capacity: 120 mtph
Expected completion: 2023-2024
Contact: **Armand Konan**
CEO
armand.konan@agritecgroup.com
+225 07 07 11 06 96

ABIDJAN — **OCP CÔTE D'IVOIRE SA**

Project: 100 mtph Blender
Expected completion: 2023-2024
Contact: **Aziz Diallo**
Country Manager
aa.diallo@ocpafrica.com
+225 07 84 01 82 72

MALI

BOUREM — **SANGOYE**

Project: Crusher, Dryer and Washing Unit, Granulator (Phosphate)
Expected capacity: 100,000 mtpy
Expected completion: 2023-2024
Contact: **Moussa Diabaté**
CEO
moussapind@hotmail.fr
+223 66 75 30 14

NIGERIA

ABUJA (PLOT 859, IDU NDUSTRIAL LAYOUT) — **AGTHO MERCHANT & COMPANY LTD**

Project: Blender
Expected capacity: 95 mtph
Expected completion: 2023
Contact: **Boniface Elewodalu**
Managing Director and CEO
boniface@agthonasarafertilizer.com
+234 80 33 12 06 95, +234 81 82 82 70 22

BAYELSA — **BRASS FERTILIZER**

Project: Urea
Expected capacity: 1.3 million mtpy
Expected completion: Unknown
Contact: info@brassfertilizer.com

RIVERS — **NEW BLENDER 1**

Project: Layco-Pro Declining Weight Blend & Bag Plant
Expected capacity: 150 mtph
Expected completion: 2023
Contact: Company name to be disclosed upon completion

NEAR KANO — **NEW BLENDER 2**

Project: Layco-Pro Declining Weight Blend & Bag Plant
Expected capacity: 90 mtph
Expected completion: 2022
Contact: Company name to be disclosed upon completion

ABUJA — **NEW BLENDER 3**

Project: Bagtech Blender
Expected capacity: 75 mtph
Expected completion: 2023
Contact: Company name to be disclosed upon completion

OGUN — **OCP AFRICA 1**

Project: AGI Yargus Blender
Expected capacity: 120 mtph
Expected completion: 2023
Contact: **Caleb Usoh**
Country Manager, OCP Nigeria
c.usoh@ocpafrica.com
+234 70 31 78 11 15

SOKOTO — **OCP AFRICA 2**

Project: EMT Blender
Expected capacity: 120 mtph
Expected completion: 2023
Contact: **Caleb Usoh**
Country Manager, OCP Nigeria
c.usoh@ocpafrica.com
+234 70 31 78 11 15

SENEGAL

DAKAR — **AMAFRIQUE SUARL**

Project: Crusher, Dryer and Washing Unit, Granulator (Phosphate)
Expected capacity: 100 mtpd
Expected completion: 2023–2024
Contact: **Ndiaye Astou Dramé**
DCOI
a.drame@amafric.com
+221 775 711 904

DAKAR — **TSE**

Project: Blender
Expected capacity: Unknown capacity
Expected completion: Unknown
Contact: **Abdourahmane Bibi Ndjaye**
DC
bibi.tse@gmail.com
+221 773 000 247

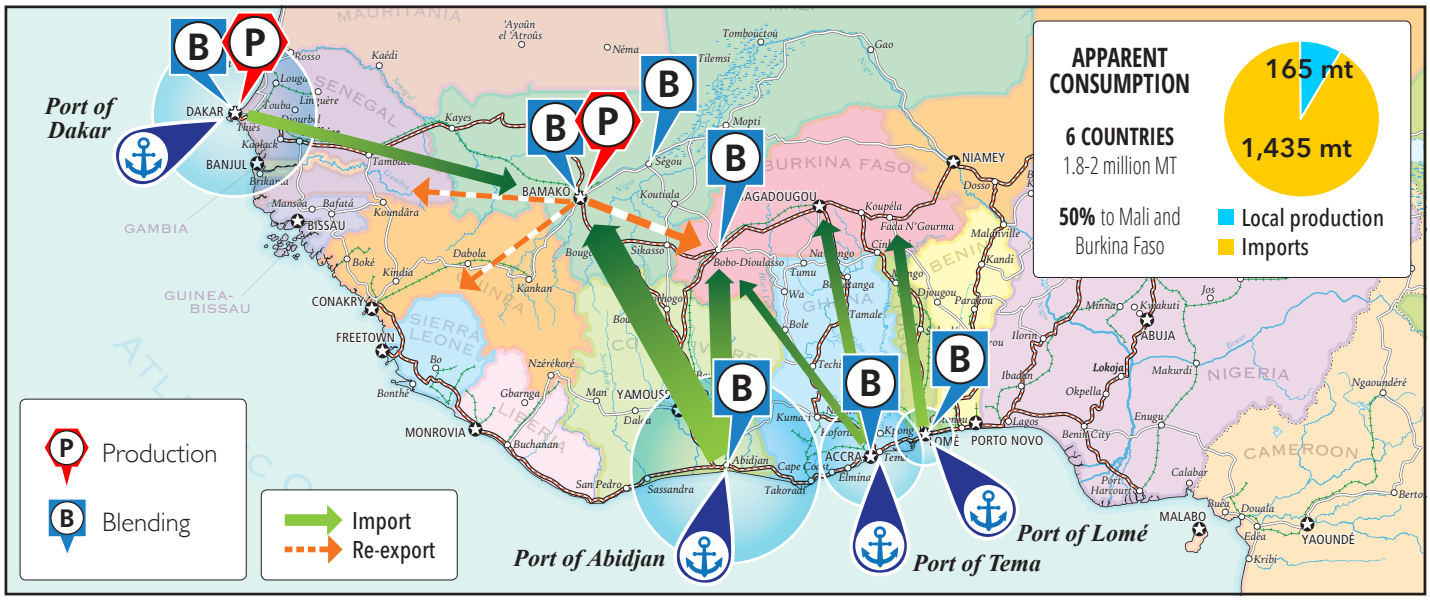
SIERRA LEONE

FREETOWN — **MANGARA AGRIBUSINESS COMPANY**

Project: Bulk Blender
Expected capacity: 60 mtph
Expected completion: 2023
Contact: **Sinkarie Sesay**
Managing Director
sinkarie.sesay@mangara-sl.com
+232 76 43 31 14, +232 76 15 87 09

4. LOGISTICS AND COSTS

WEST AFRICA TRADE CORRIDORS



Main fertilizer imports and re-export flows in West Africa (2019 figures in '000 tons) for the six countries surveyed.

Fertilizer logistics and especially road transport costs constitute an important component in the determination of fertilizer prices. That is why it is important for importers to know the different existing trade corridors in order to best manage the conveyance of their product from a given port to their customers in landlocked countries.

The six major ports in West Africa through which fertilizers are shipped to these landlocked ECOWAS zones are the ports of Dakar, Senegal; Abidjan, Côte d'Ivoire; Tema, Ghana; Lomé, Togo; Cotonou, Benin; and Lagos, Nigeria. All these ports can serve one or more of the three landlocked countries in the ECOWAS region: Mali, Burkina Faso and Niger. Mali and Burkina Faso are important consumers of fertilizers – together they use more than 450,000 metric tons (mt) annually. Niger however is still a low consumer of fertilizers, at less than 50,000 mt per year.

All of the North/South routes linking ports to landlocked countries are called trade corridors. The organization of road and rail networks sometimes allows landlocked countries to have multiple options for fertilizer transport.

DISTANCE

The choice of the corridor and port is often determined by geographical location (distance between the port and the supply destination) and quality of roads (Table 1).

PORT INFRASTRUCTURE

Characteristics of a port and its congestion status also affects the choice of corridor. Port infrastructure is generally assessed according to the characteristics in Table 2. Other factors affecting the choice of route include the pace and operational capacity of a port's offloading equipment and whether it has busy operating schedules at the projected date of product shipment.

In the end, the use of flatbed trucks of 35 mt (ECOWAS standard) remains the most developed means of transportation along these corridors, even if some countries such as Côte d'Ivoire, Burkina Faso, Senegal, Benin and Togo have railway tracks. It is important to note that renovation and construction work on a 3,000 km railway is ongoing to link Cotonou, Niamey, Ouagadougou, Abidjan and Lomé, and its completion should offer an additional transportation option.

Table 1. *Distances from ports to capital cities*

Port	Bamako	Ouagadougou	Niamey
Abidjan	1,184 km	1,176 km	1,629 km
Cotonou	2,036 km	1,015 km	1,056 km
Dakar	1,431 km	2,401 km	2,854 km
Lagos	1,990 km	1,060 km	1,171 km
Lomé	1,873 km	970 km	1,136 km
Tema	2,012 km	1,042 km	1,495 km

Table 2. *Port infrastructure characteristics*

Description	Abidjan	Dakar	Lomé	Tema
Storage area (m^2)	250,000	216,000	200,000	355,000
Bonded warehouse (m^2)	134,614	98,000	110,000	25,000
Max vessel draught (m)	8.2-9.45	8-11	11.5	8.7-10
Max bulk vessels (t)	30,000	30,000	60,000	30,000
Bulk unload. cap. (t/day)	3,000-5,000	1,500-2,000	n/a	3,900
Fert. imports in 2018 (t)	356,000	323,000	172,000*	248,000

** data for 2017*

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PORT OF ABIDJAN

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION

INFRASTRUCTURE

- **Dry bulk berths: Q9** Bulk fertilizer (main), **Q3** Bulk Minerals
- **2 berths usable for fertilizer**
- **Berth length: Q2** 775 m, **Q3** 1,525 m, **Q9** 155 m
- **Max simultaneous vessel capacity: 2**
- **Maximum vessel draught: Q2** 8.5–9.5 m, **Q3** 9.5 m, **Q9** 8.2 m
- **Access to mainland: Road** International road system. Weight limit 30 t per truck. **Barge** Access to logistic platform outside port area. **Rail** To Bouaké, Ferké. Ouagadougou, Burkina Faso. Project to Niger.
- **Competing ports/corridors:** Dakar–Bamako, Tema–Ouaga, Lome–Ouaga
- **Destination countries of transit goods: Mali** Bamako, Sikasso. **Burkina Faso** Bobo Dioulasso, Ouagadougou
- **Maximum bulk carrier: Q2** 30,000 t, **Q3** 30,000 t, **Q9** 10,000 t

CAPACITY

- **19 storage areas suitable for fertilizer** with a total capacity of **250,000 m²**
- **18 bonded warehouses** with a total capacity of **134,614 m²**
- **Planned development:** –
- **550,877 tons of fertilizer handled in last 5 years**
- **Optimal offloading rate per day: 3,000–5,000 t/day** x 2 quays

OPERATIONS

- **1% spillage** *(loss of weight during operations)*:
- **Congestion at sea: High**
- **Bulk carrier berthing time (days):** Min **0.7** – Max **9** – **Average 5.4**
- **Bulk carrier anchorage time (days):** Min **0.6** – Max **37** – **Average 3**
- **Peak months:** –
- **Road traffic exiting port: Medium** *(movement authorized only at night)*
- **Dry bulk handling system:** Mobile crane, conveyor belt. Bagging not allowed.
- **US $8/t stevedoring cost**
- **US $24/t average port charges for fertilizer imports**
- **Average number of rainy days: 124**
- **Main products/crops/clients:** General goods/main port.

- **Key operators and their contacts:**

Port of Abidjan (CIABJ)
+225 21 23 80 00
info@paa-ci.org
www.portabidjan.ci
Abidjan – Côte d'Ivoire

v1_9-2022

USAID FROM THE AMERICAN PEOPLE

This fact sheet was prepared by the Feed the Future Enhancing Growth through Regional Agricultural Input Systems (EnGRAIS) Project for West Africa, the successor to the USAID-funded West Africa Fertilizer Program (WAFP). It was made possible by the generous support of the American people through Feed the Future, the U.S. Government's Global Hunger and Food Security Initiative. The contents are the responsibility of IFDC, and do not necessarily reflect the views of Feed the Future or the United States Government.

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Developing Agriculture from the Ground Up

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The U.S. Government's Global Hunger & Food Security Initiative

PORT OF COTONOU

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION

INFRASTRUCTURE

- **Dry bulk berths: Q1-Q6**
- **6 berths usable for fertilizer**
- **Berth length: Q1-Q6** 200 m per quay
- **Max simultaneous vessel capacity: 6**
- **Maximum vessel draught: Q1-Q6** 10–12 m
- **Access to mainland: Road** To Burkina Faso and Niger. Weight limit 30 t per truck.
- **Competing ports/corridors:** Lagos–Niamey
- **Destination countries of transit goods: Burkina Faso** Ouagadougou. **Niger** Dosso, Niamey, Tillaberi, Tahoua.
- **Maximum bulk carrier: Handy size** 30,000 t **Handymax** 60,000 t

CAPACITY

- **Storage areas suitable for fertilizer: None** *(storage of fertilizer not allowed)*
- **1 bonded warehouse** with a maximum capacity of **67,447 m²**
- **Planned development:** –
- **281,792 tons of fertilizer handled in 2020**
- **Optimal offloading rate per day: 3,500 t/day**

OPERATIONS

- **1% spillage** *(loss of weight during operations)*
- **Congestion at sea: Low**
- **Bulk carrier berthing time (days):** Min **0** – Max **0** – Average **0**
- **Bulk carrier anchorage time (days):** Min **0** – Max **0** – Average **0** *(priority given to fertilizer vessels)*
- **Peak months:** –
- **Road traffic exiting port: Low**
- **Dry bulk handling system:** Mobile crane, mobile bagging station. Bulk in Bags out.
- **US $-/t stevedoring cost**
- **US $-/t average port charges for fertilizer imports**
- **Average number of rainy days: 101**
- **Main products/crops/clients:** RORO.

- **Key operators and their contacts:**

Port of Cotonou (BJCOO)
+229 2131 2891
contact@pac.bj
www.portcotonou.com
Boulevard of the Marina Litoral, BP 927
Cotonou – Benin

v1_9-2022

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FROM THE AMERICAN PEOPLE

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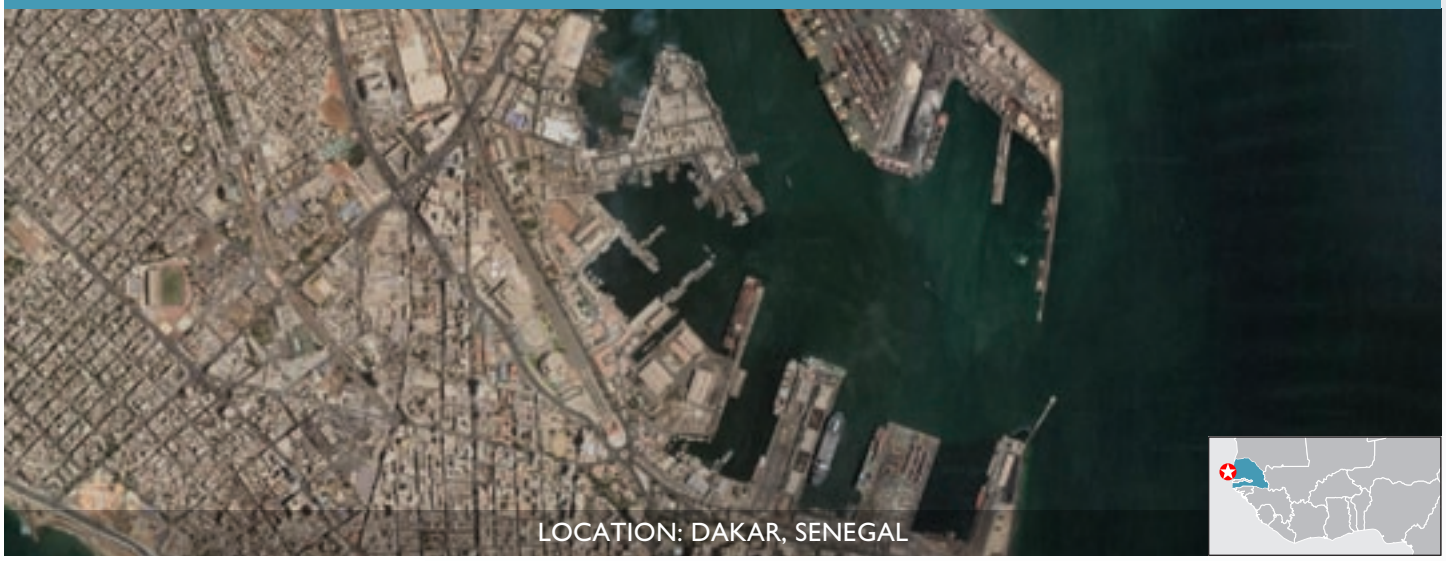
PORT OF DAKAR

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION



INFRASTRUCTURE

- **Dry bulk berths:**
  Q3 Dedicated to transit to Mali,
  Q5 Bulk phosphate ICS,
  Q8 Bulk mineral+fertilizer
- **3 berths usable for fertilizer**
- **Berth length: Q3** 645 m,
  Q5 360 m, **Q8** 700 m
- **Max simultaneous vessel capacity: 3**
- **Max vessel draught: Q1** 10.5 m,
  Q3 10 m, **Q4** 7 m, **Q5** 11 m,
  Q8 8-11 m, **Q10** 18 m
- **Access to mainland:**
  Road International road to Mali. Weight limit 30 t per truck.
  Rail To Dakar, Koulikoro-Mali (1,287 km). Projected to Niger. Not in service since 2018.
- **Competing ports/corridors:**
  Abidjan-Bamako, San Pedro-Bamako
- **Destination countries of transit goods: Mali** Bamako, Kayes, Sikasso. **Burkina Faso** Bobo Dioulasso.
- **Maximum bulk carrier:**
  Q3 30,000 t, **Q5** 30,000 t,
  Q8 30,000 t

CAPACITY

- **1 storage area suitable for fertilizer** with a total capacity of **216,000 m²**
- **1 bonded warehouse** with a total capacity of **98,000 m²**
- **Planned development:** –
- **425,077 tons of fertilizer handled in last 5 years**
- **Optimal offloading rate per day: 1,500–2,000 t/day** x 2 docks

OPERATIONS

- **1% spillage** *(loss of weight during operations)*:
- **Congestion at sea: Medium**
- **Bulk carrier berthing time (days):**
  Min **0.3** – Max **11** – Average **5.3**
- **Bulk carrier anchorage time (days):**
  Min **0.1** – Max **15** – Average **2.8**
- **Peak months:** –
- **Road traffic exiting port: Low**
- **Dry bulk handling system:**
  Mobile crane, mobile bagging station. Bulk in Bags out.
- **US $6.30/t stevedoring cost**
- **US $20/t average port charges for fertilizer imports**
- **Average number of rainy days: 48**
- **Main products/crops/clients:**
  General goods/main port.

- **Key operators and their contacts:**
  Port of Dakar (SNDKR)
  +221 849 4545
  pad@portdakar.sn
  www.portdakar.sn
  BP 3195 21 Boulevard de la Libération
  Dakar – Senegal

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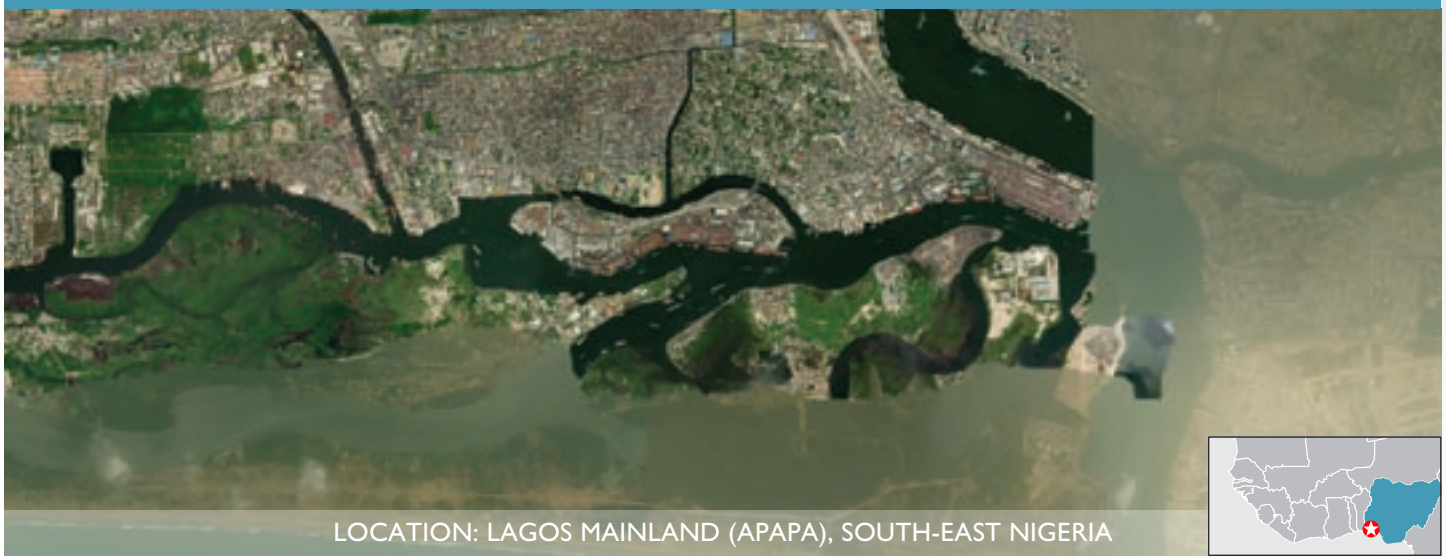
PORT OF LAGOS

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION



INFRASTRUCTURE

- **Dry bulk berths: Q1-5, Q19-20**
- **7 berths usable for fertilizer**
- **Berth length: Q1-5** 760 m, **Q19-20** 510 m
- **Max simultaneous vessel capacity: 7**
- **Maximum vessel draught:** 13.5 m
- **Access to mainland:**
  Road International road system. No weight limit.
  Barge Access to logistic platform outside port area.
  Rail To Kaduna and Kano; Project to Maradi in Niger.
- **Competing ports/corridors:** Cotonou–Niamey
- **Destination countries of transit goods: Benin** Cotonou. **Niger** Niamey. **Togo** Lomé.
- **Maximum bulk carrier:** 40,000 t

CAPACITY

- **3 storage areas suitable for fertilizer:** Bay, Warehouses A and B
- **No bonded warehouses**
- **Planned development:** –
- **118,993 t of fertilizer handled in 2020** and **212,916 t in 2021**
- **Optimal offloading rate per day: 2,440–4,488 mt/day**

OPERATIONS

- **1% spillage** *(loss of weight during operations)*:
- **Congestion at sea: Medium**
- **Bulk carrier berthing time (days):** Min **7** – Max **15** – Average **12**
- **Bulk carrier anchorage time (days):** Min **2** – Max **5** – Average **3**
- **Peak months:** –
- **Road traffic exiting port: Heavy** *(electronic calling system in place reduces traffic inside port)*
- **Dry bulk handling system:** Mobile crane, mobile bagging station. Bulk in Bags out.
- **US $10.49/t stevedoring cost**
- **US $19.65/t average port charges for fertilizer imports**
- **Average number of rainy days: 101**
- **Main products/crops/clients:** General goods/main port.

- **Key operators and their contacts:**
  Nigeria Port Authority (Lagos/Apapa NGAPP)
  +234 0 1463 7496
  lpcinfo@nigerianports.gov.ng
  info@nigerianports.gov.ng
  www.nigerianports.gov.ng
  26/28 Marina, Lagos – Nigeria

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PORT OF LOMÉ

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION

INFRASTRUCTURE

- **Dry bulk berths: Q1, Q4**
- **2 berths usable for fertilizer**
- **Berth length: Q1** 366.5 m, **Q4** 210 m
- **Max simultaneous vessel capacity: 2**
- **Maximum vessel draught: Q1** 9.5 m, **Q4** 11.5 m
- **Access to mainland: Road** To Burkina Faso. Weight limit 30 t per truck.
- **Competing ports/corridors:** Abidjan–Ouaga, Tema–Ouaga
- **Destination countries of transit goods: Burkina Faso** Bobo Dioulasso, Ouagadougou. **Niger** Niamey, Tillaberi.
- **Maximum bulk carrier: Q1** 30,000 t, **Q4** 60,000 t

CAPACITY

- **1 storage area suitable for fertilizer** with a total capacity of **200,000 m²**
- **1 bonded warehouse** with a total capacity of **110,000 m²**
- **Planned development:** –
- **121,275 tons of fertilizer handled in 2020**
- **Optimal offloading rate per day: 1,000 t/day**

OPERATIONS

- **1% spillage** *(loss of weight during operations)*:
- **Congestion at sea: Medium**
- **Bulk carrier berthing time (days):** Min **0.1** – Max **22.2** – Average **4.45**
- **Bulk carrier anchorage time (days):** Min **0.1** – Max **26.5** – Average **2.4**
- **Peak months:** –
- **Road traffic exiting port: Medium**
- **Dry bulk handling system:** No crane. Mobile bagging station. Bulk in Bags out.
- **US $5.20/t stevedoring cost**
- **US $17/t average port charges for fertilizer imports**
- **Average number of rainy days: 236**
- **Main products/crops/clients:** Transboarding and containers.

- **Key operators and their contacts:**

Port of Lomé (TGLFW)
+228 227 47 42
togoport@togoport.tg
www.togoport.tg
P.O. Box 1225, Lomé – Togo

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PORT OF ONNE

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION

INFRASTRUCTURE

- **Dry bulk berths:** Federal Ocean Terminal (FOT): General goods
- **1 berth usable for fertilizer**
- **Berth length:** 250 m
- **Max simultaneous vessel capacity: 1**
- **Maximum vessel draught:** 10.2 m
- **Access to mainland:** **Road** National road system. No weight limit.
- **Competing ports/corridors:** None.
- **Destination countries of transit goods:** Local only.
- **Maximum bulk carrier:** 42,000 t

CAPACITY

- **1 storage area suitable for fertilizer** with a total capacity of **12,000 m²**
- **1 bonded warehouse** with a total capacity of **12,000 m²**
- **Planned development:** –
- **341,256.4 tons of fertilizer handled in 2020** and **486,640.2 t in 2021**
- **Optimal offloading rate per day:** **4,000 mt/day** x 2 quays

OPERATIONS

- **1% spillage** *(loss of weight during operations)*:
- **Congestion at sea: Medium**
- **Bulk carrier berthing time (days):** Min **0** – Max **0** – Average **0**
- **Bulk carrier anchorage time (days):** Min **0** – Max **0** – Average **0**
- **Peak months:** –
- **Road traffic exiting port: Heavy** *(movement authorized only at night)*
- **Dry bulk handling system:** Mobile crane, 8 mobile bagging stations. Bulk in, Bags out.
- **US $10.49/t stevedoring cost**
- **US $19.65/t average port charges for fertilizer imports**
- **Average number of rainy days: 224**
- **Main products/crops/clients:** Oil product export.

- **Key operators and their contacts:**

Nigeria Port Authority
+234 0 1463 7496
onneinfo@nigerianports.gov.ng
info@nigerianports.gov.ng
www.nigerianports.gov.ng
26/28 Marina, Lagos – Nigeria

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PORT OF SAN PEDRO

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION

INFRASTRUCTURE

- **Dry bulk berths:** **South** and **West** Quays
- **2 berths usable for fertilizer**
- **Berth length: South** 155 m, **West** 581 m
- **Max simultaneous vessel capacity: 3**
- **Maximum vessel draught:** **South** 9 m, **West** 11-12 m
- **Access to mainland:** **Road** New international road to Mali. Weight limit 30 t per truck.
- **Competing ports/corridors:** Dakar–Bamako
- **Destination countries of transit goods: Mali** Bamako. **Guinea** Macenta, Nzérékoré. **Liberia** Harper.
- **Maximum bulk carrier:** **Handy size** 30,000 t **Handy max** 60,000 t

CAPACITY

- **3 storage areas suitable for fertilizer** with a total capacity of **13,800 m²**
- **1 bonded warehouse** with a total capacity of **10 ha** of paving stones under bond
- **Planned development:** –
- **40,257 tons of fertilizer handled in last 5 years**
- **Optimal offloading rate per day: 5,000 t/day**

OPERATIONS

- **1% spillage** *(loss of weight during operations)*
- **Congestion at sea: Low**
- **Bulk carrier berthing time (days):** Min **0** – Max **0** – Average **0**
- **Bulk carrier anchorage time (days):** **48** waiting time in the outer harbour
- **Peak months:** –
- **Road traffic exiting port: Low** *(movement authorized only at night)*
- **Dry bulk handling system:** Conveyor belt. Bulk truck loading station. Bagging not done.
- **US $8/t stevedoring cost**
- **US $24/t average port charges for fertilizer imports**
- **Average number of rainy days: 260**
- **Main products/crops/clients:** Cocoa export

- **Key operators and their contacts:**

Port of San Pedro (CISPY)
+225 34 717200
pasp@pasp.ci
www.sanpedro-portci.com
San Pedro – Côte d'Ivoire

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PORT OF TEMA

FERTILIZER PORT FACT SHEET FOR THE ECOWAS REGION

INFRASTRUCTURE

- **Dry bulk berths:** **Q2** Container and Break Bulk, **Q4** Bulk, **Q5** Valco-minerals
- **3 berths usable for fertilizer**
- **Berth length:** **Q2** 592 m, **Q4** 1,550 m, **Q5** 175 m
- **Max simultaneous vessel capacity:** **10**
- **Maximum vessel draught:** **Q2** 8.7–10 m, **Q4** 8–8.2 m, **Q5** 9.6 m
- **Access to mainland:** **Road** to Burkina Faso. No weight limit. **Rail** Tema–Mpakadan (100 km) under construction to reach Lake Volta. Projected to reach Ouagadougou.
- **Competing ports/corridors:** Abidjan–Ouaga, Lome–Ouaga
- **Destination countries of transit goods:** **Burkina Faso** Bobo Dioulasso, Ouagadougou.
- **Maximum bulk carrier:** **Q2** Handy size 30,000 t (Break Bulk), **Q4** Mini bulk carrier 10,000 t, **Q5** Handy size 30,000 t

CAPACITY

- **1 storage areas suitable for fertilizer** with a total capacity of **355,000 m²**
- **1 bonded warehouses** with a total capacity of **25,000 m²**
- **Planned development:** –
- **503,764 tons of fertilizer handled in 2020**
- **Optimal offloading rate per day:** **3,900 t/day**

OPERATIONS

- **1% spillage** *(loss of weight during operations)*
- **Congestion at sea:** **Low**
- **Bulk carrier berthing time (days):** Min **1** – Max **9** – Average **4.8**
- **Bulk carrier anchorage time (days):** Min **0.1** – Max **14.2** – Average **2**
- **Peak months:** –
- **Road traffic exiting port:** **Medium**
- **Dry bulk handling system:** Mobile crane, mobile bagging station. Bulk in Bags out.
- **US $5/t stevedoring cost**
- **US $17/t average port charges for fertilizer imports**
- **Average number of rainy days:** **54**
- **Main products/crops/clients:** General goods/main port.

- **Key operators and their contacts:**

Port of Tema (GHTEM)
+233 (0) 303 219 120
tema@ghanaports.gov.gh
www.ghanaports.gov.gh
P.O. Box 488, Tema – Ghana

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PORT OF ABIDJAN

IMPORT PROCEDURES FOR FERTILIZER

BEFORE SIGNING THE IMPORT CONTRACT

1.1 Fertilizer import contract (DGPSA) ..... *Mail: 300,000 F/3 yrs*
1.2 Annual import code (Min. Co.) ..... *Mail: 30,000 F/year*
1.3 Supplier quotation ..... *Online*
1.4 VAT2 exoneration (DGPSA) ..... *Mail: 100,000 F/FDI*
1.5 Import Prior Authorization (API) (DGPSA via GUCE) ..... *Online: 5,000 F/350 tons*
1.6 Import Declaration Form (FDI) (GUCE) ..... *Online: 500,000 F/FDI*

PRIOR TO SHIPMENT

2.1 Import contract signature ..... *In person, by broker or via bank*
2.2 Contract with maritime carrier+insurance ..... *In person or online*
2.3 Compliance check of the shipment by a certified controlling company with mandatory physical inspection of fertilizers – obtain a Certificate of Conformity (COC) ..... *Provider: Between 0.3% and 0.4% of FOB*

MARITIME TRANSPORT

3.1 Transmit COC to VOC ..... *Online: Free of charge*
3.2 Cargo tracking note (CTN) from the OIC ..... *Online: 90 EUR/BL (bulk)*
3.3 Obtain a Value Classification Final Report (RFCV) at GUCE ..... *Online: Free of charge*
3.4 Freight forwarder and port handling contracts ..... *Online or in person: negotiated rates*
3.5 Local insurance for unloaded goods ..... *Online or in person: 0.15% to 0.3% of CIF*

UNLOADING

4.1 Request to berth and approach by consignee, then berthing ..... *At the shipowner's expense*
4.2 Onboard handling (unloading) ..... *At the shipowner's expense(unless cargo contract with onboard delivery)*
4.3 Bill of lading (BL) exchange from consignee to the freight forwarder ..... *In person*
4.4 Land handling (transportation, bagging, storage, trucking, etc., in port) ..... *Cargo handler rates*

CLEARANCE OR TRANSIT

5.1 Direct import (CI customs clearance) Customs entry via SYDAM (Sydonia World) → Customs payment → Receipt Good to Remove (BAE) ..... *Online + in person - Customs fee + HAD*
5.2 Direct transit (clearance in Mali or BF) EX3000/T1 declaration (customs CI+Mali/BF) via SYDAM → Transit warehouse storage → RGF payment +installation GPS → BAE tag ..... *Online + in person - 500 F/tons (EMACI) +0.5% CIF +12,500 F/truck*

EX-PORT & DELIVERY

TO NATIONAL MARKET:
6.1 Port delivery: unpack and/or truck loading by the importer or its carrier in the port, exit with BAE ..... *In person: Negotiated transport cost*
6.2 Delivery to importer's warehouse: Shipping carrier (containers), freight forwarder, or land handler delivers to importer ..... *In person: Cost included in freight forwarding service*

TO HINTERLAND MARKET:
6.3 Delivery in Mali or BF: Freight forwarder manages transport to importer's warehouse and pays customs fees at land border ..... *In person: Cost included in freight forwarding service*

TRANSIT TIMES VIA ABIDJAN

BEFORE SIGNING THE IMPORT CONTRACT
Obtaining an importer code: 1 to 2 days
Obtaining approval: about 1 month, carried out before the import season
API and FDI: 2 to 5 days

PRIOR TO SHIPMENT
From contract signing to ship loading: 5 to 10 days

MARITIME TRANSPORT
Shipping time: depending on the country of origin, from 5 days (i.e., Morocco) to 30 days (i.e., the Black Sea or China)

UNLOADING
From arrival of the ship to unloading: 5 to 40 days, depending on dock congestion

EX-PORT & DELIVERY

TO NATIONAL MARKET:
Release for local consumption: 10 to 25 days from unloading to exit from the port

TO HINTERLAND MARKET:
Transit: 20 to 45 days from unloading to removal from the port, ***plus*** 4 to 10 days to exit from the port and delivery to Mali or Burkina Faso

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PORT OF DAKAR

IMPORT PROCEDURES FOR FERTILIZER

BEFORE SIGNING THE IMPORT CONTRACT

1.1 Fertilizer approval (ISRA) ..... *If formula not yet approved: File forms*
1.2 Importer card with the DCI - Min. Co..... *Mail: 41,500 F/year*
1.3 Supplier quotation ..... *Online*
1.4 Preliminary Import Declaration (DPI) on ORBUS..... *Online: 18,500 FCFA/DPI*

PRIOR TO SHIPMENT

2.1 Import contract signature ..... *In person, by broker or via bank*
2.2 Contract with maritime carrier+insurance..... *In person or online*
2.3 Verification of compliance at shipment by COTECNA and transmission of a Certificate of Compliance before shipping ..... *Service provider: between 0.3% and 0.4% of FOB*

MARITIME TRANSPORT

3.1 Transmission of the Certificate of Conformity on ORBUS..... *Online: Free of charge*
3.2 Cargo Tracking Slip (CTS) with COSEC..... *Online: 32,500 F/300t*
3.3 Establishment of a detailed note in GAINDE..... *Online: Free of charge*
3.4 Freight forwarder and port handling contracts ..... *Online or in person: negotiated rates*
3.5 Local insurance for unloaded goods ..... *Online or in person: 0.15% to 0.3% of CIF*

UNLOADING

4.1 Request to berth the vessel and consignee's procedures, then berthing..... *At the shipowner's expense*
4.2 Onboard handling (unloading) ..... *At the shipowner's expense (unless cargo contract with onboard delivery)*
4.3 Bill of lading (BL) exchange between consignee and freight forwarder..... *In person*
4.4 Land handling (transport, bagging, storage, loading trucks, etc., in the port)..... *Handling agent's rates*

CLEARANCE OR TRANSIT

5.1 Direct import (Senegal customs clearance) Customs declaration via GAINDE Customs payment → obtaining a Good to Collect (BAE) ..... *Online + in person - Customs fees + HAD*
5.2 Direct transit (customs clearance in Mali) S1 10 or TRIE/T1 (customs SN+Mali) via GAINDE and Sydonia (Mali) → Storage in transit warehouse → RGF payment or customs bond/GPS beacon installation → BAE..... *Online + in person - 500 F/truck+FGR 0.25% CIF+70,000 F/truck*

EX-PORT & DELIVERY

TO NATIONAL MARKET:
6.1 Delivery in port: unloading and/or loading trucks from the importer or his carrier in the port, exit with BAE ..... *In person: Negotiated transport cost*
6.2 Delivery to the importer's warehouse: the sea carrier (containers), freight forwarder, or land handler delivers to the importer ..... *In person: Cost included in services*

TO HINTERLAND MARKET:
6.3 Delivery to Mali: the freight forwarder manages the transport to the importer's warehouse and pays customs duties at the land border ..... *In person: Cost included in freight forwarding service*

TRANSIT TIMES VIA DAKAR

BEFORE SIGNING THE IMPORT CONTRACT
Obtaining an importer's card: about 1 week, before import season
API: 1 to 3 days

PRIOR TO SHIPMENT
From import contract signing to ship loading: 5 to 10 days

MARITIME TRANSPORT
Shipping time: depending on the country of origin, from 4 days (i.e., Morocco) to 30 days (i.e., the Black Sea or China)

UNLOADING
From arrival of the ship to unloading: 4.5 to 20 days, depending on dock congestion

EX-PORT & DELIVERY

TO NATIONAL MARKET:
Release for local consumption: 5 to 15 days from unloading to exit from the port

TO HINTERLAND MARKET:
Transit: 5 to 18 days from unloading to removal (exit) from the port, ***plus*** 4 to 12 days to exit from the port and delivery to Mali

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PORT OF LOMÉ

IMPORT PROCEDURES FOR FERTILIZER

BEFORE SIGNING THE IMPORT CONTRACT

1.1 Annual Importer Card (CCIT) ..... *In person: 15,000 or 38,500 FCFA/year*

1.2 Supplier quotation ..... *Online*

1.3 Pre-Declaration of Import (DPI) to Customs via SEGUCE ..... *Online: 5,000 F/350 tons*

PRIOR TO SHIPMENT

2.1 Import contract signature ..... *In person, by broker or via bank*

2.2 Contract with maritime carrier+insurance ..... *In person or online*

2.3 Conformity check before boarding by Bureau Veritas (BIVAC) and issuance of a Certificate of Conformity (ADV) ..... *Service Provider: 1% of FOB*

MARITIME TRANSPORT

3.1 Transmission of ADV via SEGUCE ..... *Online: Free of charge*

3.2 Issuance of e-cargo tracking slip (e-CTS) from CNCT ..... *Online: 25 or 100 EUR/BL*

3.3 Contracts with freight forwarder and port handler ..... *Online or in person: Negotiated rates*

3.4 Local insurance for goods ..... *Online or in person: 0.15% to 0.3% of CIF*

3.5 Transmission of transit notice via SEGUCE by consignee ..... *At the expense of the shipowner*

UNLOADING

4.1 Berthing by consignee ..... *At the shipowner's expense*

4.2 Onboard handling (unloading), issuance of VAQ in SEGUCE ..... *At the shipowner's expense*

4.3 Bill of lading (BL) exchange from consignee to freight forwarder; issuance of approval slip (BAD) in SEGUCE ..... *In person and via SEGUCE - HAD*

4.4 Land handling (transport, bagging, storage, truck loading, etc., in port ..... *Handling fees*

CLEARANCE OR TRANSIT

5.1 Direct import (Togo customs clearance) – Declaration by the forwarder via Syndonia → Obtain BAED → Generation of a DFU in SEGUCE → Payment of the DFU ..... *Online + in person - Customs fee + HAD*

5.2 Direct transit (BF customs clearance) – EX3000/T1 declaration (customs Togo+BF) via SEGUCE → Transit warehouse storage → RGF payment → BSTR+CTS payment → GPS slip or escort installation → BAS ..... *Online + in person - 500 F/tons (EMACI) +0.5% CIF +12,500 F/truck*

EX-PORT & DELIVERY

TO NATIONAL MARKET:

6.1 Designation of carrier for port exit → Obtain Good to Load Carrier (BACT) → Obtain Good to Exit (BAS) → Import delivery ..... *In person: Negotiated transport cost*

TO HINTERLAND MARKET:

6.3 Delivery to Mali: the freight forwarder manages the transport to the importer's warehouse and pays customs duties at the land border ..... *In person: Cost included in freight forwarding service*

TRANSIT TIMES VIA LOMÉ

BEFORE SIGNING THE IMPORT CONTRACT

Obtaining an importer card: about 1 week before the import season

DPI: Immediate, only declarative

PRIOR TO SHIPMENT

From contract signing to ship loading: 5 to 10 days

MARITIME TRANSPORT

Shipping time: depending on the country of origin, from 6 days (i.e., Morocco) to 30 days (i.e., the Black Sea or China)

UNLOADING

From arrival of the ship to unloading: 3 to 38 days, depending on traffic congestion

EX-PORT & DELIVERY

TO NATIONAL MARKET:

Release for local consumption: 3 to 5 days from unloading to exit from the port

TO HINTERLAND MARKET:

Transit: 5 to 8 days from unloading to removal from the port (port exit), ***plus*** 3 to 9 days to exit from the port and delivery or Burkina Faso

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PORT OF TEMA

IMPORT PROCEDURES FOR FERTILIZER

BEFORE SIGNING THE IMPORT CONTRACT

1.1 Creation of the company and obtaining a TIN (Taxpayer Identification Number) from the GIPC ..... *File in person: 1,050 to 16,800 GHS*

1.2 Obtain a fertilizer import permit from PFRD (MOFA), valid for 6 months ..... *File in person: 3,000 GHS/3 years*

1.3 Supplier quotation ..... *Online*

1.4 Obtain UCR (Unique Consignment Reference) on GCNet eMDA ..... *Online: Free of charge*

PRIOR TO SHIPMENT

2.1 Import contract signature ..... *In person, by broker or via bank*

2.2 Contract with maritime carrier+insurance ..... *In person or online*

2.3 Import declaration (eIDF) on GCNet eMDA ..... *Online: Free of charge*

MARITIME TRANSPORT

3.1 Contract with freight forwarder and port handler ..... *Online or in person: Negotiated rates*

3.2 Local insurance for unloaded goods ..... *Online or in person: 0.15% to 0.3% of CIF*

3.3 Transmission of a forecast of the ship's stopover via GCMS by the consignee ..... *At the expense of the shipowner*

UNLOADING

4.1 Berthing by consignee ..... *At the shipowner's expense*

4.2 Onboard handling (unloading) ..... *At the shipowner's expense (except in special cases)*

4.3 Exchange of bill of lading (BL) from consignee to freight forwarder ..... *Physically - HAD*

4.4 Land handling (transportation, bagging, storage, trucking loading, etc., in port) ..... *Cargo handler rates*

4.5 Verification of compliance by a GSA8-approved company ..... *In person: 15 GHS/ton*

CLEARANCE OR TRANSIT

5.1 Direct import (Ghana customs clearance) – Declaration of value (CCVR) by the forwarder or importer in GCNet → Payment of port and customs fees via GCNet → Obtain authorization for customs clearance ..... *Online + in person - port fees + customs fee + HAD*

5.2 Direct transit (BF customs clearance) – EX3000/T1 declaration (GH+BF customs) via GCNet → Transit warehouse storage → RGF payment to SIC → CBC12 payment → GPS beacon installation by CEPS → Port exit ..... *Online + in person - 0.92 $/t + 0.5% CIF+7.5 $/truck+45 $/truck*

EX-PORT & DELIVERY

TO NATIONAL MARKET:

6.1 Designation of carrier for port exit → Request exit authorization from GPHA → Exit authorization → Import delivery ..... *In person: Negotiated transport cost*

TO HINTERLAND MARKET:

6.3 **Delivery to Burkina Faso:** the freight forwarder manages the transport to the importer's warehouse and pays customs duties at the land border ..... *In person: Cost included in freight forwarding service*

TRANSIT TIMES VIA TEMA

BEFORE SIGNING THE IMPORT CONTRACT

Issuance of fertilizer import license: about 1 month before the import season

UCR: Immediate, only declarative

PRIOR TO SHIPMENT

From contract signing to ship loading: 5 to 10 days

MARITIME TRANSPORT

Shipping time: depending on the country of origin, from 6 days (i.e., Morocco) to 30 days (i.e., the Black Sea or China)

UNLOADING

From arrival of the ship to unloading: 3 to 15 days, depending on traffic congestion

EX-PORT & DELIVERY

TO NATIONAL MARKET:

Release for local consumption: 3 to 10 days from unloading to exit from the port

TO HINTERLAND MARKET:

Transit: 5 to 10 days from unloading to removal from the port (port exit), ***plus*** 2 to 8 days to exit from the port and delivery to Mali or Burkina Faso

USAID DU PEUPLE AMERICAIN

West African Fertilizer Association
Association Ouest-Africaine de l'Engrais

IFDC
Developing Agriculture from the Ground Up

THE FERTILIZER JOURNEY IN WEST AFRICA

July 2021 data

Manufacturer/Trader → Importer/Blender → Distributor → Wholesaler → Retailer → Farmer

MARKETING FERTILIZER TO THE COASTAL COUNTRIES

FERTILIZER PRODUCTS

45% Straight products (urea, DAP, KCl, etc.)
180 to 700 USD/t

30% Blending ingredients (TSP, MAP, SoA, fillers, etc.)
100 to 400 USD/t

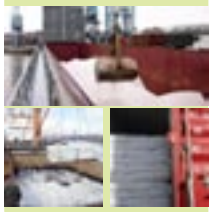
25% NPK compounds (NPK + S +/- micronutrients)
200 to 500 USD/t

SHIPPING

80% Bulk
20 to 40 USD/t

10% Break Bulk (50 kg bags or big bags)
25 to 45 USD/t

10% Containers (50 kg bags or big bags)
35 to 55 USD/t



UNLOADING

40% Bulk to dump truck
14 to 17 USD/t

40% BiBo Bulk In/Bag Out
28 to 32 USD/t

10% Bags to trailer truck/ train
18 to 21 USD/t

10% Containers ex-port to trucks
15 to 18 USD/t

PROCESSING & STORAGE

by importers and/or blenders

50% Blending +bagging
25 to 70 USD/t

40% Bagging
10 to 50 USD/t

5% Direct sales
2 to 5 USD/t

5% Direct imports
5 to 20 USD/t

GROUND TRANSPORT

deliveries to

5 to 75% Institutional markets/ subsidie
15 to 45 USD/t

5 to 60% Structured private market
15 to 45 USD/t

15 to 60% Open market
15 to 45 USD/t

SALES & DISTRIBUTION

5 to 35% Sales to large farms
Wholesale prices

5 to 10% Sales to cooperatives & farmers' groups
5 to 15 USD/t

5 to 30% Sales to distributors
15 to 30 USD/t

5 to 30% Retail sales to small & medium farmers
Retail prices:
375 to 600 USD/t

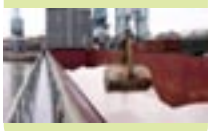
MARKETING FERTILIZER TO THE HINTERLAND (MALI, BURKINA FASO)

SHIPPING

75% Buik
20 to 40 USD/t

15% Break Bulk (50 kg bags or big bags)
25 to 45 USD/t

10% Container (50 kg bags or big bags)
35 to 55 USD/t



UNLOADING

60% BiBo Bulk In/Bag Out
28 to 32 USD/t

25% Bulk to dump truck
14 to 45 USD/t

15% Bags to trailer truck/ train
18 to 21 USD/t

5% Containers ex-port to trucks
15 to 18 USD/t

TRANSIT

70% Direct transit (land transport by forwarder)
60 to 100 USD/t

30% Indirect transit (hinterland importers buy from port importers)
65 to 105 USD/t

PROCESSING & STORAGE

by Importers and/or Blenders

55% Blending + bagging
20 to 50 USD/t

30% Bagging
5 to 40 USD/t

10% Direct sales
2 to 5 USD/t

5% Direct imports
5 to 20 USD/t

GROUND TRANSPORT

deliveries to

5 to 90% Institutional markets/ subsidie
15 to 45 USD/t

0 to 80% Structured private market
15 to 45 USD/t

10 to 45% Open market
15 to 45 USD/t

SALES & DISTRIBUTION

5% Sales to large farms
Wholesale prices

5% Sales to cooperatives & farmers' groups
5 to 15 USD/t

5 to 15% Sales to distributors
15 to 30 USD/t

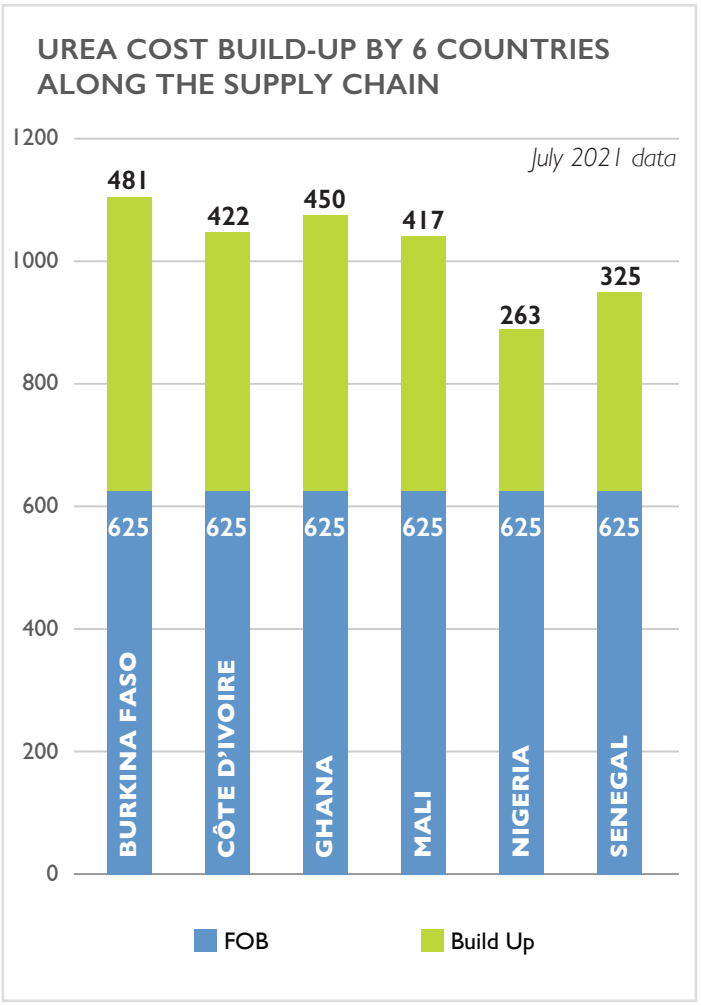
5 to 15% Retail sales to small & medium farmers
Retail prices:
475 to 600 USD/t

FERTILIZER COST ANALYSIS IN WEST AFRICA – THE CASE OF UREA

Navigating through 2022, urea pricing across eight West African countries revealed a complex interplay of local and global dynamics. Nigeria, the region's only urea producer, saw prices comparable to non-producing nations. Where the average of prices in those countries was at $1,030 with a high $1,065 in Burkina and a low of $979 in Senegal, Nigeria prices averaged around to $890 per ton. Consistent subsidized prices in Burkina Faso, Mali, and Togo highlighted the significant impact of government interventions. Indeed, the cost of subsidized urea was even lower than the FOB cost. This surely put an enormous strain on the government purse and casts doubt on the sustainability of the subsidy.

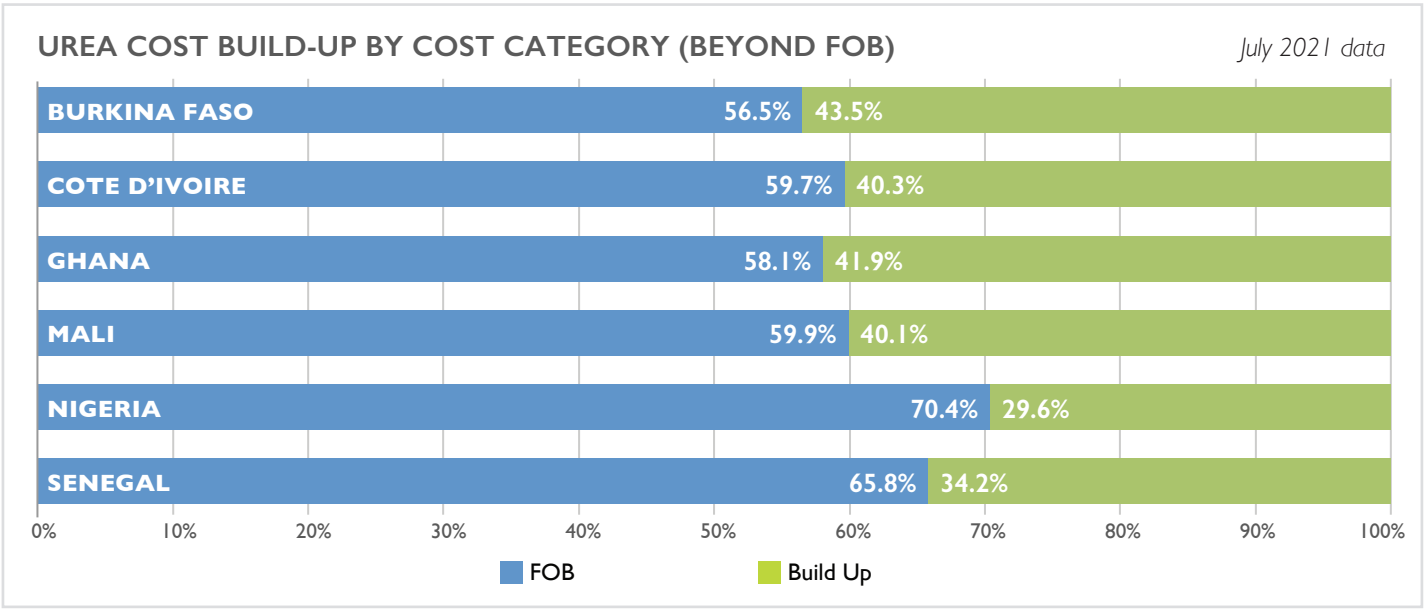
Global events in 2022, including lingering COVID-19 supply chain disruptions and the Russo-Ukrainian conflict, greatly impacted urea pricing. With Russia as a major fertilizer supplier, the conflict saw FOB prices fluctuate from a high of $858 to a low of $476. This was the major contributor to the price increased this year and is a renewed reminder that the region need to depend a bit more on its local production.

The model used also allows us to breaks down the costs by category in each of these countries (transport costs, port costs, duties and taxes, storage costs, financial costs, and operational costs). On average, the FOB price represents nearly 60% of the final cost of urea delivered to wholesale warehouses in the fertilizer consumption areas. While logistics costs (sea and land transport, handling) account for about 20% of costs, operational costs (gross margins, salaries, taxes, incidentals, on-site handling, etc.) are limited to about 12%. Financial costs, duties and taxes are estimated at around 7% of the total cost, with significant variations from one country to another.



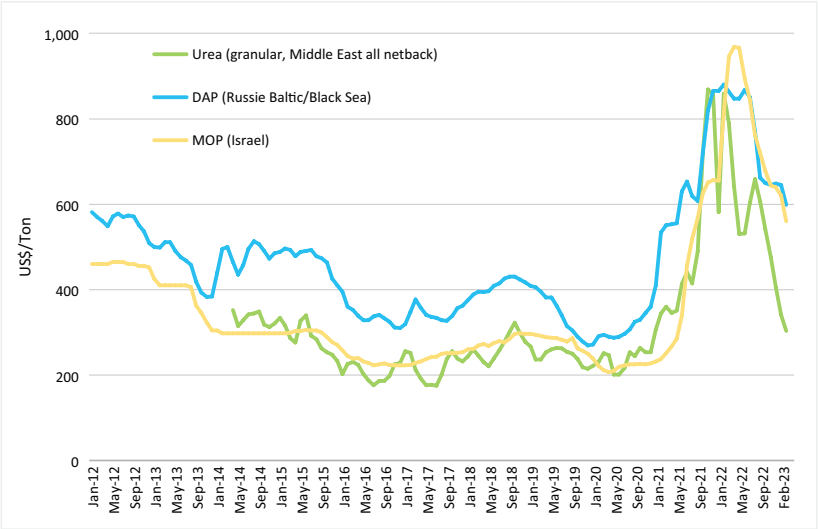
Assumptions used:

- *Average FOB price for the month of July 2021 of granulated urea from Nigeria or Baltic.*
- *Transport costs to the main consumption areas for each crop/country (e.g. Kaduna for urea in Nigeria, Tamale in Ghana).*
- *Other costs (taxes, transport costs, bagging and blending costs, interest rates, etc.) adjusted to July 2021.*

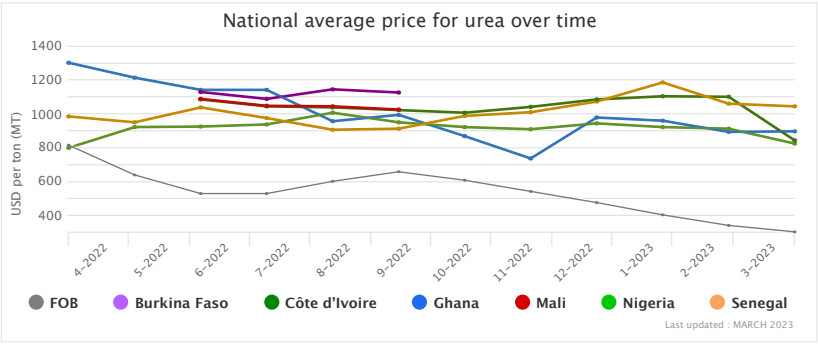


FERTILIZER PRICES AND MARKET NEWS

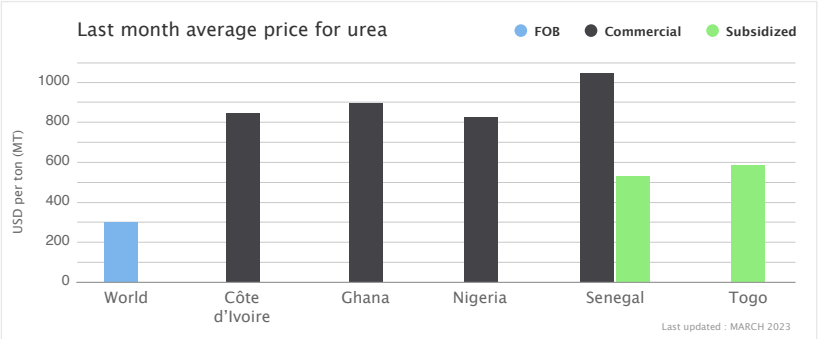
MONITOR INTERNATIONAL PRICES OF FERTILIZERS



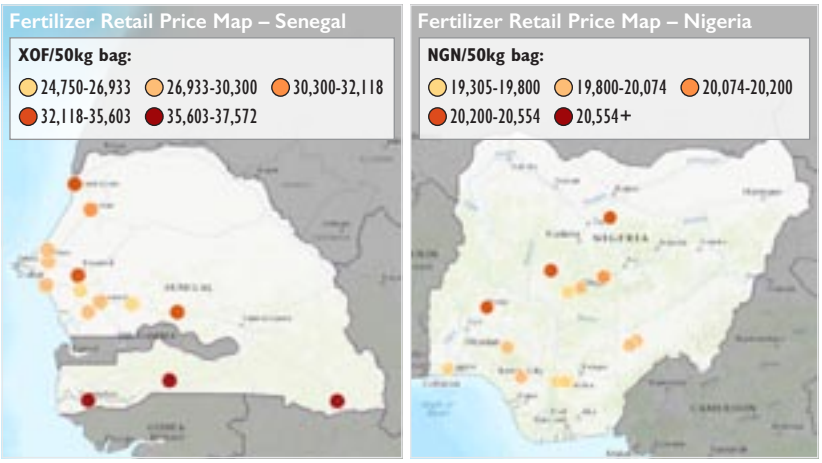
COMPARE WORLD AND RETAIL PRICES



MONITOR COMMERCIAL AND SUBSIDIZED PRICES ACROSS COUNTRIES



MONITOR COMMERCIAL AND SUBSIDIZED PRICES ACROSS COUNTRIES



AfricaFertilizer
Data-Driven Decisions for African Food Systems

GET YOUR FREE MONTHLY REVIEW OF INTERNATIONAL AND LOCAL MARKET PRICES

Since 2009, AfricaFertilizer price reporting encourages competition and market transparency, and facilitates analysis for business decisions. All information and data are free to use and to share.

argus

In partnership with Argus Media, AfricaFertilizer monitors, on a monthly basis, international FOB prices and market analysis for 10 of the most used fertilizer grades and ingredients imported in West Africa. This includes urea, SoA, DAP, TSP, and MOP which are used to blend locally crop- and soil-specific NPK formulas.

wafa
West African Fertilizer Association
Association Ouest-Africaine de l'Engrais

In West Africa, AfricaFertilizer and WAFA are partnering since 2019 to report every month local retail prices and market conditions from nearly 250 agro-dealers shops across 8 countries (Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, Niger, Togo, and Senegal). Commercial and subsidized prices of fertilizers are reported in maps, graphs, and tables, in local currency per bag and USD per ton.

AfricaFertilizer

Since 2016, AFO's monthly information and analysis are disseminated to over 5,000 professionals around the globe through the FertiNews, which is available in both English and French on most common media support platforms (web, mobile, social media).

INTERNATIONAL – MONTHLY AVERAGE PRICE (FOB, $/TON)

Product	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-23	Jan-23	Feb-23	Mar-23
Urea (prilled bulk fob Black Sea)	698	554	692	693	549	460	475	503	610	566	505	433	388	307	263
Nitrogen: Urea (granular, Middle East-all), fob bulk	651	581	858	789	641	530	531	603	659	607	542	476	404	341	303
Urea (granular bulk fob Nigeria)	656	537	929	820	680	591	574	634	706	619	549	495	428	344	322
Ammonia (fob North Africa)	1,120	1,116	1,278	1,419	1,181	965	986	1,076	1,115	1,139	1,051	966	909	719	455
DAP (bulk fob Morocco)	905	903	1,132	1,236	1,164	1,083	986	938	867	781	750	732	714	674	637
Phosphates: DAP (Baltic/Black Sea), fob bulk	864	865	881	863	848	848	867	850	771	662	650	645	648	645	599
DAP (bulk fob Saudi Arabia) [KSA]	893	900	1,057	1,116	1,057	969	940	880	784	724	730	712	674	642	601
Phosphates: MAP (Morocco), fob bulk	833	858	1,172	1,249	1,154	1,088	1,012	913	838	746	688	698	694	674	642
TSP (bulk fob Morocco)	732	714	945	1,034	968	933	893	811	724	601	559	552	545	511	442
Phosphate rock (69% BPL bulk fob north Africa)	158	158	158	174	240	240	240	310	310	310	310	310	258	258	258
Potash: standard MOP (bulk fob Jordan)	651	650	809	940	961	958	886	840	756	713	678	643	638	620	559
Potash: granular MOP bulk fob Baltic/Black Sea	688	625	837	923	942	946	881	846	762	689	622	536	544	532	403
Potash: SOP (standard, NW Europe) € Fob bulk	750	775	823	1,098	1,108	1,108	1,091	1,125	1,075	950	950	947	911	863	760
NPK 15-15-15 (fob Morocco)	653	655	715	755	790	825	819	800	783	753	746	717	684	541	618

NATIONAL – MONTHLY AVERAGE PRICE (COMMERCIAL)

Product	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
BURKINA FASO – XOF/50 kg bag															
Urea	32,000	32,000	32,000	32,000	32,000	35,000	35,000	37,025	37,025	35,000	30,000	29,000	29,000	26,000	26,000
NPK 15-15-15	32,000	32,000	32,000	32,000	32,000	35,000	35,000	36,850	36,850	32,000	30,000	30,000	30,000	30,000	29,000
COTE D'IVOIRE – XOF/50 kg bag															
Urea	30,000	30,000	30,000	30,000	30,000	33,636	33,636	33,636	33,636	33,636	33,636	33,636	33,636	33,636	25,909
PK 0-23-19 +6.5 S +5 MgO +10 CaO	25,000	25,000	25,000	25,000	25,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	25,000
NPK 15-15-15	25,000	25,000	25,000	25,000	25,000	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	25,250
MALI – XOF/50 kg bag															
Urea	27,850	27,850	27,850	27,850	27,850	33,750	33,750	33,750	33,750	33,750	33,750	33,750	29,000	29,000	29,000
NPK 15-15-15	25,170	25,170	25,170	25,170	25,170	32,500	32,500	32,500	32,500	32,500	32,500	32,500	30,000	30,000	30,000
SENEGAL – XOF/50 kg bag															
Urea	22,560	23,580	28,540	29,750	29,560	32,210	31,430	29,280	30,020	33,030	32,570	33,250	36,180	32,360	32,110
NPK 15-15-15	15,330	17,560	17,750	17,080	17,780	28,000	27,200	26,360	25,920	26,530	27,460	28,630.00	30,000.00	29,710.00	27,070.00
NPK 10-10-20	18,700	17,400	17,630	18,210	19,910	24,610	25,400	25,450	26,370	21,240	26,620	25,560	27,500	24,500	25,430
GHANA – GHS/50 kg bag															
Urea	320	450	440	490	460	452	465	443	498	511	526	538	547	554	556
NPK 23-10-5	363	350	-	420	400	398	392	403	405	418	426	428	458	463	461
NPK 20-10-10	220	315	350	-	-	-	390	390	395	397	397	400	400	409	463
NIGERIA – NGN/50 kg bag															
Urea	15,860	16,140	16,460	16,560	19,110	19,220	19,500	21140	20,300	20,080	20,080	25,960	20,950	26,000	19,010
NPK 15-15-15	14,020	15,900	16,670	24,420	25,290	25,750	25,680	25580	25,580	25,530	25,510	23,890	26,000	26,330	26,380
NPK 20-10-10	11,630	14,390	15,310	22,400	23,100	23,570	23,500	23450	23,350	23,320	23,240	21,070	23,980	24,120	24,120

Source: AfricaFertilizer

5. AGRONOMY IN WEST AFRICA

AGRONOMY IN WEST AFRICA

THE FERTILIZER AND SEED RECOMMENDATIONS MAP FOR WEST AFRICA (FeSeRWAM): NEW DIGITAL SOLUTIONS TO INCREASE AGRICULTURAL PRODUCTIVITY ACROSS WEST AFRICA

Launched by IFDC and CORAF in September 2020, **FeSeRWAM** is an interactive, online GIS-based platform built to provide access to smart, reliable technical advice and customized agricultural inputs information to farmers. More than **600 agro-input packages** (AIP) are developed for roughly 21 crops and 578 varieties, and over 68 fertilizer grades across 15 countries in West Africa. The FeSeRWAM development process lasted from October 2018 to July 2020. It was a **collective effort involving more than 350 individuals** from various national and regional organizations and private and public stakeholders, as well as individual consultants and national experts. FeSeRWAM was updated in fiscal year 2021 to include new features and functionalities to improve the user interface and experience. Capacity-building for national organizations will allow them to take over the periodic updates.

All AIP are free to use and to download as PDF booklets or export to CSV or Excel files. They include information on improved seed, appropriate fertilizer blends, and good agricultural practices (GAP) for different crops and agro-ecological zones (AEZ).

AIP QUICK REFERENCE BY COUNTRY

Countries	AIPs	Including these Crops (total of 26 different crops)
Benin	51	Cassava, cotton, eggplant, maize, groundnut, pepper, pineapple, rice, sorghum, soybean, tomato
Burkina Faso	30	Cotton, cowpea, maize, millet, rice, sesame, sorghum
Chad	11	Cotton, cowpea, maize, millet, groundnut, sorghum
Côte d'Ivoire	63	Cassava, cocoa, coffee, cotton, maize, millet, rice, sorghum
Gambia	14	Cassava, cowpea, maize, millet, groundnut, rice, sorghum
Ghana	72	Cassava, cowpea, maize, millet, groundnut, rice, sorghum, soybean
Guinea	1	Rice
Guinea-Bissau	11	Cowpea, maize, groundnut, rice, sorghum
Liberia	2	Cassava
Mali	36	Cotton, cowpea, maize, millet, groundnut, rice, sorghum, wheat
Niger	31	Cowpea, maize, millet, groundnut, rice, sorghum
Nigeria	67	Cassava, cocoa, coffee, cotton, cowpea, maize, millet, oil palm, groundnut, Irish potato, rice, sorghum, soybean, yam
Senegal	133	Cotton, cowpea, maize, millet, groundnut, rice, sorghum, tomato, pepper, okra, onion, eggplant
Sierra Leone	6	Cassava, cowpea, maize, groundnut, sweet potato, rice
Togo	53	Cashew, cassava, coffee, cotton, cowpea, maize, millet, groundnut, rice, sorghum

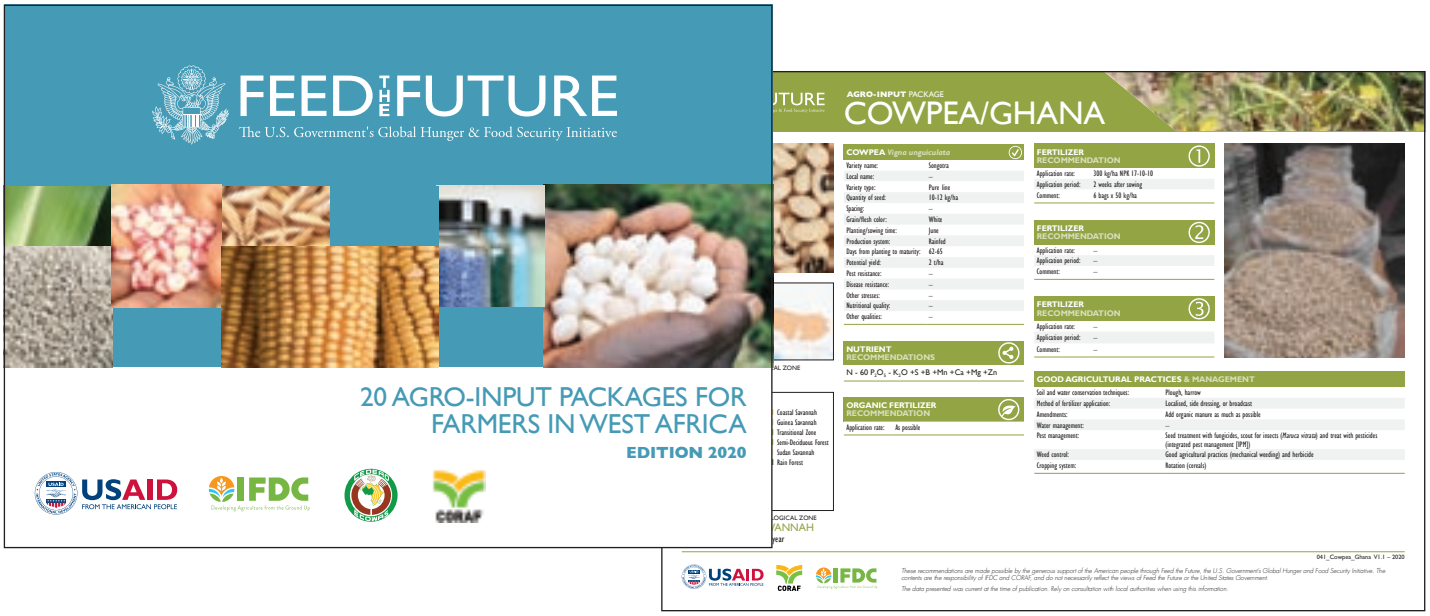
OUR PARTNERS

- **Regional economic communities:** ECOWAS, UEMOA, CILSS
- **Regional organizations and associations:** ROPPA, WAFA, AFSTA, ASIWA, PR-PICA
- **Technical and financial partners** such as international research centers, universities, National Agricultural Research Systems (NARS), Ministries of Agriculture, AGRA, APNI, FAO, and NGOs.
- **Private fertilizer and seed sector** producers, importers, and distributors.

Figure 1. *The website homepage for feserwam.org.*

Figure 2. *View of regional agro-ecological zones.*

Figure 3. *AEZ view for an individual country.*



FeSeRWAM SEARCH AND FILTER CONTROLS

The latest update of the platform was conducted during fiscal year 2021 to include new features and functionalities to improve user interface and experience.

SEARCH THE DATA BY THE CRITERIA YOU WANT	
AGRO-ECOLOGICAL ZONES (AEZ)	• Regional • National
LOCATION	• Countries • Towns
PLANTS	• Crops • Varieties • Local names • Planting • Potential yield • Main charateristics • Resistance to various stresses
FERTILIZERS	• Nutrient recommendations • Fertilizer types and grades • Application rates and timing
CROP MANAGEMENT	• Soil preparation • Water • Weeds • Pests • Crop residue • Organic manure • Mineral and organic amendments

AND USE IT YOUR WAY:	
Inputs retailers/sellers	Sell appropriate seed and fertilizers to farmers
Agro dealers and agricultural extension workers	Access and download AIPs for specific locations, as backstopping and training material for local farmers
Fertilizer blenders	Use appropriate raw materials to blend effective, site-specific fertilizers for sale to local farmers
Seed companies and seed producers	Identify appropriate highly-productive seed according to location to grow your business
Agriculture researchers	Adapt and develop packages for specific crops and AEZs based on your own countries and aligned with the region agro-ecologies
Policy makers and subsidy program administrators	Develop smarter subsidy programs by providing data on existing input packages across the region

IFDC WWW.FESERWAM.ORG CORAF

The data presented were current at the time of publication. Local authorities should be consulted when using this information.

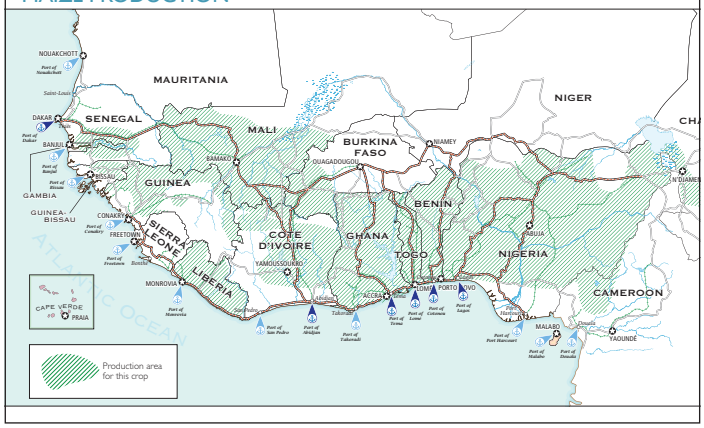
MAIZE

92 AIP

14 COUNTRIES

14 GRADES

MAIZE PRODUCTION



FERTILIZER RECOMMENDATIONS FOR MAIZE

COUNTRY	AEZ	NUTRIENT RECOMMENDATION
BENIN	**SUB-HUMID**	**70 N – 30 P_2O_5 – 30 K_2O**
① **NPK 15-15-15** 200 kg/ha. Apply at sowing or 15 days after sowing.		
② **Urea** 100 kg/ha. Apply half at sowing or 15 days after sowing; half just before flowering.		
BURKINA FASO	**SUB-HUMID**	**88 N – 69 P_2O_5 – 45.5 K_2O**
① **NPK 14-23-14** 300 kg/ha. Apply at land preparation.		
② **Urea** 100 kg/ha.		
CÔTE D'IVOIRE	**HUMID**	**91.5 N – 22.5 P_2O_5 – 22.5 K_2O**
① **NPK 15-15-15** 150 kg/ha. Apply at sowing or 2 weeks after sowing.		
② **Urea** 150 kg/ha. Apply 30-35 days after sowing.		
GAMBIA	**SUB-HUMID**	**70 N – 20 P_2O_5 – 20 K_2O**
① **NPK 15-15-15** 150 kg/ha.		
② **Urea** 100 kg/ha.		
GHANA	**HUMID**	**90 N – 60 P_2O_5 – 60 K_2O +0.5 Zn**
① **NPK 15-20-20 +0.7Zn** 300 kg/ha.		
② **Urea** 100 kg/ha.		
GUINEA	**HUMID**	**100 N – 40 P_2O_5 – 40 K_2O**
① **NPK 17-17-17** 300 kg/ha. Apply at land preparation.		
② **Urea** 200 kg/ha. Apply 3 bags during vegetation stage and 1 bag during climbing stage.		
MALI	**SUB-HUMID**	**83 N – 18 P_2O_5 – 18 K_2O +6S +1B**
① **NPK 14-18-18 +6S +1B** 100 kg/ha. Apply at emergence.		
② **Urea** 150 kg/ha. Apply 50 kg at emergence, then 100 kg at ridging.		
NIGERIA	**SEMI-ARID**	**150 N – 60 P_2O_5 – 60 K_2O** (high potential)
① **NPK 20-10-10** 750 kg/ha.		
② **N/A**		
SENEGAL	**SEMI-ARID**	**122 N – 30 P_2O_5 – 30 K_2O**
① **NPK 15-15-15** 200 kg/ha. Apply at sowing or 15 days after sowing.		
② **Urea** 200 kg/ha. Apply 1.6 bags at 27 days after sowing, 1.6 bags at 41 days after sowing.		
SIERRA LEONE	**HUMID**	**90 N – 30 P_2O_5 – 30 K_2O**
① **NPK 15-15-15** 200 kg/ha.		
② **Urea** 130 kg/ha.		
TOGO	**HUMID**	**76 N – 30 P_2O_5 – 30 K_2O**
① **NPK 15-15-15** 200 kg/ha.		
② **Urea** 100 kg/ha.		

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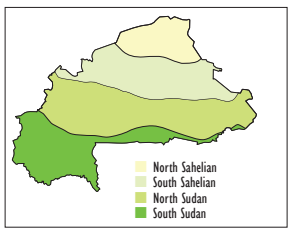
AGRO-INPUT PACKAGE

MAIZE/BURKINA FASO

WEST AFRICA AGRO-ECOLOGICAL ZONE
SUB-HUMID



COUNTRY-SPECIFIC AGRO-ECOLOGICAL ZONE
SUDANO-SAHELIAN (KAMBOISE, SARIA, OUGADOGOU, KAYA)
Isohyet range 900-1000 mm/year

MAIZE *Zea mays*

Variety name:	Espoir
Local name:	Espoir
Variety type:	OPV
Quantity of seed:	20 kg/ha (when using a mechanical seeder, 12-15 kg manual seeding)
Spacing:	0.80 m x 0.30 m
Grain/flesh color:	Yellow
Planting/sowing time:	15 July–15 August (unimodal)
Production system:	Rainfed (can be produced under irrigation)
Days from planting to maturity:	95-110
Potential yield:	6.5 t/ha
Pest resistance:	Yes
Disease resistance:	Maize streak virus (MSV)
Other stresses:	–
Nutritional quality:	–
Other qualities:	–

NUTRIENT RECOMMENDATIONS

88 N - 69 P_2O_5 - 45.5 K_2O +S +B +Mn +Ca +Mg +Zn

ORGANIC FERTILIZER RECOMMENDATION

Application rate: When available, add one or more of the following: organic manure, compost, biofortifiers, biostimulants, innoculants; 5 t/ha each year

FERTILIZER RECOMMENDATION ①

Application rate:	300 NPK 14-23-14
Application period:	At sowing (micro-dose)
Comment:	6 bags x 50 kg/ha

FERTILIZER RECOMMENDATION ②

Application rate:	67 kg/ha Urea
Application period:	2/3 at 25 days after sowing (DAS)
Comment:	1.3 bag x 50 kg/ha

FERTILIZER RECOMMENDATION ③

Application rate:	33 kg/ha Urea
Application period:	1/3 at 40 DAS
Comment:	0.6 bag x 50 kg/ha

GOOD AGRICULTURAL PRACTICES & MANAGEMENT

Soil and water conservation techniques:	Plough and harrow, +/- ridging across slopes, and in addition: Zaï holes, stone lines, mulching, grass strips, bunding, and minimum/zero tillage are recommended
Method of fertilizer application:	Punch, side placement, and cover
Amendments:	Add organic manure when available
Water management:	Bunding, tie-ridging, drainage
Pest management:	Scout for fall army worm (FAW) and apply integrated pest management (IPM)
Weed control:	Good agricultural practices (mechanical weeding) and herbicide (Glyphosate and Gramazone)
Cropping system:	Rotation (legumes, cotton)

043_Maize_Burkina Faso V1.1 – 2020

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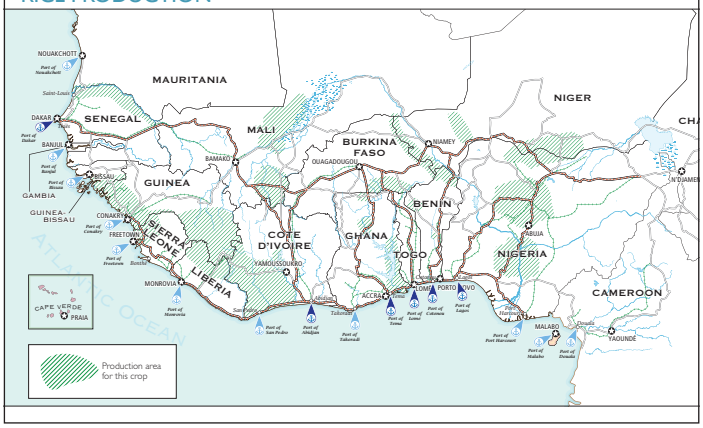
RICE

170 AIP

14 COUNTRIES

18 GRADES

RICE PRODUCTION



FERTILIZER RECOMMENDATIONS FOR RICE

COUNTRY	AEZ	NUTRIENT RECOMMENDATION
BENIN	**SEMI-ARID**	**14 N – 23 P_2O_5 – 13 K_2O**
1 **NPK 15-15-15** 200 kg/ha. Apply at sowing.		
2 **Urea** 75 kg/ha. Apply 50 days after sowing/transplanting.		
BURKINA FASO	**SEMI-ARID**	**120 N – 46 P_2O_5 – 28 K_2O**
1 **NPK 14-23-14** 200 kg/ha. Apply during soil preparation.		
2 **Urea** 200 kg/ha.		
GAMBIA	**SUB-HUMID**	**70 N – 20 P_2O_5 – 20 K_2O**
1 **NPK 15-15-15** 150 kg/ha.		
2 **Urea** 100 kg/ha.		
GHANA	**SEMI-ARID**	**100 N – 40 P_2O_5 – 40 K_2O +1.7 Zn**
1 **NPK 15-20-20+0.7Zn** 200 kg/ha.		
2 **Urea** 130 kg/ha.		
GUINEA	**HUMID**	**100 N – 40 P_2O_5 – 40 K_2O**
1 **NPK 17-17-17** 250 kg/ha. Apply at land preparation.		
2 **Urea** 150 kg/ha. Apply at start of tillering. Covering manure. 1st fraction.		
MALI	**SEMI-ARID**	**80 N – 34 P_2O_5 – 34 K_2O**
1 **NPK 16-26-12+5S+0.3Zn** 200 kg/ha. Apply at tillering (7-15 days after transplanting).		
2 **Urea** 113 kg/ha. Apply in 2 passes: half at tillering and half at panicle initiation.		
NIGER	**SEMI-ARID**	**132 N – 90 P_2O_5 – 60 K_2O**
1 **NPK 15-15-15** 400 kg/ha. Apply 1st at restarting, 2nd at tillering, and 3rd at flowering.		
2 **Urea** 250 kg/ha. Apply at tillering and climbing.		
NIGERIA	**HUMID**	**80 N – 30 P_2O_5 – 30 K_2O**
1 **NPK 20-10-10** 250 kg/ha.		
2 **Urea** 65 kg/ha.		
SENEGAL	**SUB-HUMID**	**91.5 N – 22.5 P_2O_5 – 22.5 K_2O**
1 **NPK 15-15-15** 150 kg/ha. Apply at start up.		
2 **Urea** 150 kg/ha. Apply in 2 passes: half at tillering and half at panicle initiation.		
SIERRA LEONE	**HUMID**	**60 N – 40 P_2O_5 – 40 K_2O**
1 **NPK 15-15-15** 200 kg/ha. Basal broadcast P; topdress N+K 4-6 weeks after seeding.		
2 **Urea** 100 kg/ha.		
TOGO	**HUMID**	**46 N – 23 P_2O_5 – 23 K_2O**
1 **NPK 15-15-15** 150 kg/ha. Application time depends on installation mode.		
2 **Urea** 50 kg/ha.		

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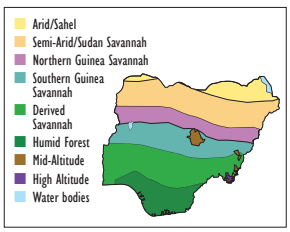
AGRO-INPUT PACKAGE

RICE/NIGERIA

WEST AFRICA AGRO-ECOLOGICAL ZONE

HUMID



COUNTRY-SPECIFIC AGRO-ECOLOGICAL ZONE

FOREST TRANSITION/DERIVED SAVANNAH

Isohyet range >800 mm/year

RICE *Oryza sativa*

Variety name:	FARO 52 (synonym WITA 4)
Local name:	–
Variety type:	Hybrid
Quantity of seed:	20 kg transplanting; 40 kg direct seeding
Spacing:	Transplant 1-2 seedlings 20 cm x 20 cm or transplant/plant 20 cm x 20 cm for upland; 21-28 days-old seedling or grain 4-6 seeds per hill
Grain/flesh color:	White
Planting/sowing time:	25 April–30 June
Production system:	Rainfed lowland
Days from planting to maturity:	125-130
Potential yield:	7 t/ha
Pest resistance:	–
Disease resistance:	–
Other stresses:	Lodging, Fe toxicity, and drought
Nutritional quality:	–
Other qualities:	–

NUTRIENT RECOMMENDATIONS

100 N - 50 P_2O_5 - 40 K_2O +S +B +Mn +Ca +Mg +Zn

ORGANIC FERTILIZER RECOMMENDATION

Application rate: When possible

FERTILIZER RECOMMENDATION 1

Application rate:	250 kg/ha NPK 20-10-10
Application period:	At planting or 2-3 weeks after planting (WAP)
Comment:	5 bags x 50 kg/ha

FERTILIZER RECOMMENDATION 2

Application rate:	250 kg/ha NPK 20-10-10
Application period:	Side dress 4-6 WAP
Comment:	5 bags x 50 kg/ha

FERTILIZER RECOMMENDATION 3

Application rate:	109 kg/ha Urea
Application period:	At planting or 2-3 WAP and side dress the same quantity 5-6 WAP
Comment:	–

GOOD AGRICULTURAL PRACTICES & MANAGEMENT

Soil and water conservation techniques:	Plough, harrow, puddling and leveling
Method of fertilizer application:	Punch and side placement (direct seeding), broadcasting, urea deep placement (UDP)
Amendments:	Add organic manure when necessary
Water management:	Basin, alternate wetting and drying, drainage
Pest management:	Scout for insects and apply pesticide (integrated pest management [IPM])
Weed control:	Good agricultural practices (mechanical weeding) and herbicide
Cropping system:	Rotation (sweet potato, potato, vegetables)

055_Rice_Nigeria V1.1 – 2020

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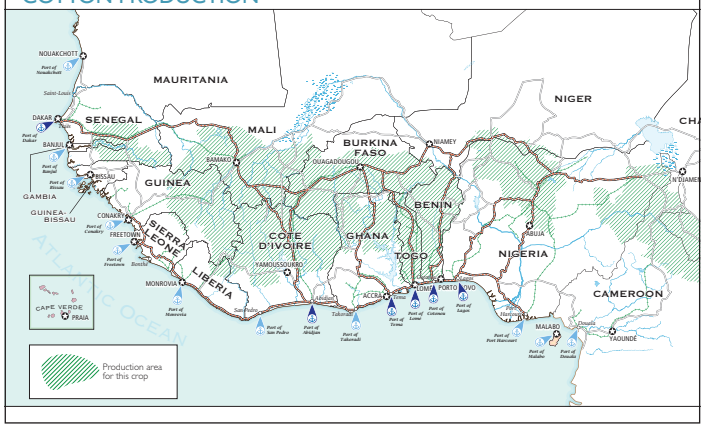
22 AIP

8 COUNTRIES

10 GRADES

COTTON PRODUCTION



FERTILIZER RECOMMENDATIONS FOR COTTON

COUNTRY	AEZ	NUTRIENT RECOMMENDATION
BENIN	SEMI-ARID	51 N – 36 P_2O_5 – 36 K_2O +12S +3B
1 **NPK 14-23-14 +5S +1B** 150 kg/ha. Apply 15 days after at sowing.		
2 **Urea** 50 kg/ha. Apply 40 days after sowing.		
BURKINA FASO	SEMI-ARID	44 N – 34.5 P_2O_5 – 21 K_2O +9S +1.5B
1 **NPK 14-23-14 +6S +1B** 150 kg/ha.		
2 **Urea** 50 kg/ha. Apply 40 days after sprouting.		
CHAD	SEMI-ARID	50 N – 20 P_2O_5 – 20 K_2O
1 **NPK 19-12-19 +5S +1.2B** 150 kg/ha. Apply 15-20 days after sowing.		
2 **Urea** 50 kg/ha. Apply 45-50 days after emergence.		
CÔTE D'IVOIRE	SUB-HUMID	53 N – 30 P_2O_5 – 30 K_2O +12S +3B
1 **NPK 15-15-15 +6S +1B** 200 kg/ha. Apply 15-20 days after sowing.		
2 **Urea** 50 kg/ha. Apply 40 days after sowing.		
MALI	SEMI-ARID	51 N – 36 P_2O_5 – 36 K_2O +12S +3B
1 **NPK 14-18-18 +6S +1B** 200 kg/ha. Apply 15-20 days after sowing.		
2 **Urea** 50 kg/ha. Apply 41 days after planting.		
MALI	SEMI-ARID	76 N – 30 P_2O_5 – 30 K_2O +10S +2B +5Ca +5Mg +0Zn
1 **NPK 15-15-15 +5S +1B +2.5CaO +2.5MgO** 200 kg/ha. 15-20 days after sowing.		
2 **Urea** 100 kg/ha. Apply 30-40 days after sowing.		
NIGERIA	SEMI-ARID	60 N – 25 P_2O_5 – 20 K_2O +0.75Bo
1 **Urea** 130 kg/ha.		
2 **SSP (boronated)** 140 kg/ha. Apply 3 weeks after planting.		
NIGERIA	SUB-HUMID	60 N – 25 P_2O_5 – 20 K_2O +0.75Bo
1 **NPK 20-10-10** 150 kg/ha.		
2 **Urea** 65 kg/ha. Apply 8 weeks after planting.		
SENEGAL	SEMI-ARID	51 N – 46 P_2O_5 – 28 K_2O +10S +2B
1 **NPK 14-23-14 +5S +1B** 150-200 kg/ha. Apply 15-20 days after sowing.		
2 **Urea** 50 kg/ha. Apply 40 days after sowing.		
TOGO	HUMID	44 N – 26 P_2O_5 – 22 K_2O
1 **NPK 22-13-11 +5S +0.75B +4MgO** 200 kg/ha.		
2 **N/A**		
TOGO	SEMI-ARID	41 N – 30 P_2O_5 – 27 K_2O
1 **NPK 12-20-18 +5S +1B** 150 kg/ha.		
2 **Urea** 50 kg/ha. Apply 40 days after sowing.		

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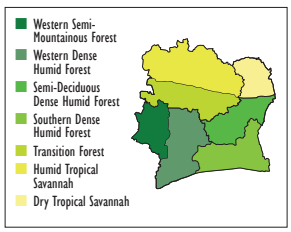
AGRO-INPUT PACKAGE

COTTON/COTE D'IVOIRE

WEST AFRICA AGRO-ECOLOGICAL ZONE

SUB-HUMID



COUNTRY-SPECIFIC AGRO-ECOLOGICAL ZONE

DRY TROPICAL SAVANNAH (BOUNA, BONDOUKOU, BASSIAN, TANDA)

Isohyet range 800-1000 mm/year (monomodal)

COTTON *Gossypium hirsutum*

Variety name:	W766 C
Local name:	–
Variety type:	OPV
Quantity of seed:	20 kg/ha (delinted) et 50 kg/ha (with fiber)
Spacing:	–
Grain/flesh color:	Brown (delinted) and gray (with fiber)
Planting/sowing time:	20 Mai–20 July
Production system:	Rainfed
Days from planting to maturity:	100-120 (early to late sowing)
Potential yield:	Cottonseed (2.5-3 t/ha) and fiber yield (44%)
Pest resistance:	6 insecticide treatments necessary
Disease resistance:	Seed fungicide treatments
Other stresses:	Drought and flood
Nutritional quality:	Seed rich in oil (18-24% oil)
Other qualities:	Animal feed (oilcake), fiber quality (length, micron, strength, et grade)

NUTRIENT RECOMMENDATIONS

53 N - 360 P_2O_5 - 30 K_2O +12 S +3 B

(plan for K in seed production)

ORGANIC FERTILIZER RECOMMENDATION

Application rate: 5-6 t/ha – manure or compost (every 2-3 years)

FERTILIZER RECOMMENDATION 1

Application rate:	200 kg/ha (NPKSB 15-15-15+6S+1B)
Application period:	15-20 days after sowing (DAS)
Comment:	4 bags x 50 kg/ha

FERTILIZER RECOMMENDATION 2

Application rate:	50 kg/ha (Urea 46%)
Application period:	40 DAS
Comment:	1 bag x 50 kg/ha

FERTILIZER RECOMMENDATION 3

Application rate:	50 kg/ha (KCl 60%)
Application period:	15-20 DAS
Comment:	1 bag x 50 kg/ha (seed production) mixed with NPK

GOOD AGRICULTURAL PRACTICES & MANAGEMENT

Soil and water conservation techniques:	Mulching, grass cover, minimum/zero tillage, and ridging (depending on the type and uses of the land, and rainfall patterns)
Method of fertilizer application:	Side dressing or in hill – NPK (side dressing) and urea incorporated into the soil (of hill)
Amendments:	Manure, compost, harvest residues (according to availability and affordability)
Water management:	No – cotton doesn't like excess water
Pest management:	At least 8 insecticide treatments; for early sowing increase the number of treatments
Weed control:	Weeding and herbicide treatments (total, pre- and post-emergence); weeding and treatment as needed
Cropping system:	Cotton/cereals rotations, crop/livestock integration (an unavoidable necessity in cotton production) including recycling harvest residues and livestock pens

058_Cotton_Côte d'Ivoire V1.1 – 2020

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6. QUALITY CONTROL REGULATORY SYSTEMS AND SUBSIDY POLICIES

QUALITY CONTROL REGULATORY SYSTEMS AND SUBSIDY POLICIES

With technical support from IFDC, the ECOWAS and UEMOA Commissions embarked, starting in 2010, on the development of a regional legal framework that harmonizes national regulations governing fertilizer trade and quality control. This resulted in the adoption of the **Regulation C/REG.13/12/12 relating to fertilizer quality control** in the ECOWAS region in December 2012 for effective implementation and enforcement by all national governments, and adoption in 2016 of 4 implementing regulations.

The status of implementation to date, illustrated in the matrix below, stands as:

- 15 countries have published the main ECOWAS regulation in their national gazettes
- 12 national advisory (technical) committees/councils in charge of advising the Ministers of Agriculture on policies and regulations for development of fertilizer manufacture, inspection, sampling, analysis, and marketing have been established/reinforced.

This 2023 Edition of the WAFBIG also provides the first register of 31 soil and fertilizer testing laboratories in operation in selected West African countries, including those designated by the Ministries of Agriculture for fertilizer analysis to support regional and national regulatory frameworks.

Participants at a stepdown training for fertilizer quality inspectors in Ebonyi, Nigeria learn proper bag sampling technique using a Missouri "D" tube and sealable collection receptacle.

STATUS OF IMPLEMENTATION OF REGULATION C/REG.13/12/12

Relating to fertilizer quality control in the ECOWAS region by country – as of December 31, 2022

Measures to be taken by ECOWAS/UEMOA/CILSS Member States	Benin	Burkina Faso	Cape Verde	Chad	Côte d'Ivoire	Ghana	Guinea	Guinea Bissau	Liberia	Mali	Mauritania	Niger	Nigeria	Senegal	Sierra Leone	The Gambia	Togo	%
Publication in Member States' Official Gazette	Y_5	Y_5	Y_5	Y_5	Y_5	Y_5	Y_5	Y_5	Y_5	Y_5	N	Y_5	N	Y_5	Y_5	Y_5	Y_5	88
Development/review and adoption of national fertilizer supporting regulations aligned to harmonized ECOWAS Regulation for:																		
A. Establishing National fertilizer regulatory body	Y_5	Y_5	Y_5	Y_1	Y_5	Y_5	Y_5	Y_4	Y_4	Y_5	N	Y_5	Y_5	Y_3	Y_5	Y_2	Y_5	81
B. Designating a fertilizer testing laboratory	Y_5	Y_5	N	Y_5	Y_5	Y_5	Y_5	N	Y_1	Y_5	N	Y_5	Y_5	Y_5	Y_1	Y_1	Y_5	68
C. Establishing a National Fertilizer Committee	Y_5	Y_5	Y_2	Y_5	Y_2	Y_5	Y_3	Y_4	Y_4	Y_5	N	Y_5	Y_5	Y_5	Y_4	Y_2	Y_5	78
D. Determining conditions and modalities for licensing of fertilizer businesses	Y_5	Y_5	Y_1	Y_1	Y_2	Y_5	Y_3	N	Y_3	Y_5	N	Y_5	Y_5	Y_3	Y_4	Y_2	Y_5	64
E. Appointing fertilizer inspectors and other competent authorities	Y_4	Y_5	Y_2	N	Y_1	Y_5	Y_5	N	Y_1	Y_5	N	Y_5	Y_5	Y_1	Y_1	Y_1	Y_5	56
F. Fixing fee amounts for acquiring & renewing a license, for fertilizer inspection & analysis	Y_3	Y_5	Y_1	Y_1	Y_2	Y_5	Y_3	N	Y_1	Y_5	N	Y_5	Y_5	Y_3	Y_1	Y_1	Y_5	54
G. Levying penalties for violation of provisions	Y_5	Y_4	Y_4	N	Y_2	Y_5	Y_3	Y_4	Y_1	Y_5	N	Y_4	Y_4	Y_3	Y_4	Y_1	Y_3	61
Development/adaptation of administrative forms/procedures manuals for:																		
• Registration of fertilizer businesses	Y_5	Y_5	Y_4	N	Y_5	Y_5	Y_3	N	Y_1	Y_5	N	Y_5	Y_5	N	Y_1	Y_1	Y_5	59
• Inspection of fertilizer products and bag weight	Y_3	Y_5	N	N	N	Y_5	Y_3	N	Y_3	Y_5	N	Y_5	Y_5	Y_3	Y_1	Y_1	Y_5	52
• Fertilizer analytical reporting	Y_5	Y_5	N	N	Y_5	Y_5	Y_1	N	Y_3	Y_5	N	Y_5	Y_5	Y_5	Y_1	Y_1	Y_5	60
Strengthening of capacities on:																		
• Human resources[1]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	100
• Capital resources[2]	Y	Y	Y	N	N	Y	Y	N	N	Y	N	Y	Y	Y	Y	N	Y	65
• Financial resources[3]	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	82
Overall progress by country (%):	91	94	47	33	62	92	72	31	50	100	2	98	90	67	57	34	97	

N: ***No actions or measures*** *have been taken by the competent authorities at national level.*

$Y_{\#}$: ***Yes, provisions or actions*** *have been taken by national authorities to align national fertilizer legislations (law and supporting regulations) to ECOWAS Regulations, and at Stage '#' in the process of adoption: (1) analyzed, (2) drafted and presented for public/stakeholder consultation, (3) presented for legislation, (4) passed/approved, and (5) passed for which implementation has begun.*

[1] *Received at least one training on fertilizer quality control techniques.*

[2] *Infrastructure and equipment investments.*

[3] *General national budget, donors' funds, revenues generated from government oversight (registration and inspection fees), etc.*

Economic Community of West African States

OVERVIEW OF ECOWAS LEGAL FRAMEWORK

FOR FERTILIZER TRADE AND QUALITY CONTROL IN WEST AFRICA

The West Africa legal framework for fertilizer trade and quality control comprises of a set of five instruments:

1. Regulation C/REG.13/12/12 relating to fertilizer quality control in the ECOWAS Region.
2. Implementing Regulation ECW/PEC/IR/02/03/16 relating to the labeling and tolerance limits of fertilizers traded in the ECOWAS Region.
3. Implementing Regulation ECW/PEC/IR/05/12/16 relating to the roles, organization and functioning of the West African Committee for Fertilizer Control.
4. Implementing Regulation ECW/PEC/IR/06/12/16 relating to fertilizer analysis manual in the ECOWAS Region.
5. Implementing Regulation ECW/PEC/IR/07/12/16 relating to fertilizer inspection manual in the ECOWAS Region.

The purpose of this legal framework is to:

- Safeguard the interests of the farmers against nutrient deficiencies, adulteration, misleading claims, and short weight bag.
- Safeguard the interests of fertilizer enterprises and contribute to the creation of an enabling environment for private investment in the fertilizer industry.
- Protect the West Africa natural environment and its population against the potential dangers associated with inappropriate fertilizer use.
- Facilitate inter- and intra-States trade in fertilizers, through the implementation of principles and rules mutually agreed at the regional level to dismantle trade barriers.

In terms of scope, the Regional Fertilizer Regulation applies to all fertilizer-related activities, especially those pertaining to the licensing of agro-dealers, as well as the storage and sale of fertilizers locally manufactured or imported into the Member States.

The Regional Fertilizer Regulation establishes an implementation body denominated the West African Committee for Fertilizer Control (WACoFeC) with the mandate to facilitate, on behalf of the ECOWAS Commission, the implementation of the Regional Fertilizer Regulation by Member States, working closely with national bodies in charge of fertilizer control. Its organization and functioning are spelled out in a specific Implementing Regulation (listed above as No. 3) and its operational budget is provided for by the ECOWAS Commission.

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The Regional Fertilizer Regulation also establishes two implementation instruments (manuals) detailing the modalities and procedures for fertilizer inspection and analysis in the Member States. However, it attributes the responsibility for quality control to each Member State through qualified inspectors and designated laboratories.

Other key provisions of the Regional Fertilizer Regulation include:

- Minimum labeling requirements.
- Maximum tolerance limits for nutrient content deficiencies and bag weight shortages.
- Maximum allowable limits of heavy metals in fertilizer products.
- Mandatory licensing for agro-dealers (issued by each country under conditions and modalities they each determine, valid for 3 years renewable) – The conditions for operating as a manufacturer or an importer of fertilizer in each of the Member States shall be governed by the regulations in force in the Member State concerned.
- Specification for fertilizer warehouse and storage conditions.
- Requirement for prior notification for importation of fertilizers.
- Right to appeal for manufacturers, importers and distributors.
- Sanctions defined by each Member State for violations stated in the Regulation.

At the core of the West Africa legal framework for fertilizer control is the principle of "truth in labeling" which holds that whatever a seller claims he/she is selling, he/she must guarantee it. It is therefore essential that label claims on fertilizer packaging be truthful. Consequently, some specific requirements are set to define what one can claim and it is not necessary to register fertilizer products.

Legal implications: As stated in the ECOWAS Revised Treaty, the Regional Fertilizer Regulation has a general application (i.e., applies to all); it is binding on all and in all its elements, and is directly, immediately and simultaneously applicable in all countries. In other words, once adopted, it is an integral part of national legislations and no ratification or domestication is needed at the national level. However, each Member State shall adopt complementary supporting regulations prescribed by the Regulation and may adopt other regulations in areas not legislated at the regional level.

For further information about the ECOWAS Fertilizer Regulation, please contact:

Mr. Alain Sy TRAORE
Director, Agriculture & Rural Development
ECOWAS Commission
Email : atraore@ecowas.int

Economic Community of West African States

ECOWAS TOLERANCE LIMITS

FOR PLANT NUTRIENTS, HEAVY METALS AND BAG WEIGHT

(Ref. Implementing Regulation ECW/PEC/IR/02/03/16)

Tolerance means the permitted deviation of measured values of a nutrient content or bag weight below the values claimed on the label, or the maximum allowable heavy metal limits in a fertilizer. The tolerance limits for nutrient contents, heavy metals and bag weight are as follows:

ALLOWABLE VARIATIONS IN PLANT NUTRIENT CONTENTS

1. The maximum acceptable deviation of the measured values of primary nutrient contents below the values claimed on the label shall be the value as follows:

TYPE OF FERTILIZER	TOLERANCE
Single nutrient fertilizers:	
• With up to 20% nutrient content	Maximum 0.3 units
• With more than 20% nutrient content	Maximum 0.5 units
Complex fertilizers and NPK **blends**	Maximum 1.1 units for individual nutrients and maximum 2.5% for all nutrients combined

The total deviation for all nutrients combined is calculated from the addition of deviations for nutrients with contents lower than the label specification; compensation from nutrients with content higher than specified to balance deficiency of another nutrient is not allowed.

2. The maximum acceptable deviation of the measured value of a **secondary or micro nutrient content** below the values claimed on the label shall be as follows:

NUTRIENTS		TOLERANCE
SECONDARY NUTRIENTS	Calcium (Ca) Sulfur (S) Magnesium (Mg)	0.2 unit +5% of guarantee
MICRONUTRIENTS	Boron (B)	0.003 unit +15% of guarantee
	Cobalt (Co) Molybdenum (Mo)	0.0001 unit +30% of guarantee
	Chlorine (Cl) Copper (Cu) Iron (Fe) Manganese (Mn) Sodium (Na) Zinc (Zn)	0.005 unit +10% of guarantee

The maximum allowable variation when calculated in accordance with the above shall be 1 unit (1%).

MAXIMUM ALLOWABLE HEAVY METAL LIMITS

1. The maximum allowable heavy metal limits in fertilizer products shall be determined based on the following:

HEAVY METAL	MULTIPLIER		TOLERANCE
	ppm per 1% P_2O_5	*ppm per 1% micronutrients*	*milligrams per kilogram of biosolids or compost products – dry weight basis*
Arsenic (As)	13	112	75
Cadmium (Cd)	10	83	85
Cobalt (Co)	136	2,228*	–
Copper (Cu)	–	–	4,300
Lead (Pb)	61	463	840
Mercury (Hg)	1	6	57
Molybdenum (Mo)	42	300*	75
Nickel (Ni)	250	1,900	420
Selenium (Se)	26	180	100
Zinc (Zn)	420	2,900*	7,500

** Should be used only when the percentage of that particular micronutrient is not specified or guaranteed in the fertilizer label.*

2. For a fertilizer product with P_2O_5 guarantee and no micronutrient guarantee:

   For each heavy metal, its maximum allowable concentration (ppm) in that product shall be determined by multiplying the percent guaranteed P_2O_5 of the product by the appropriate factor of that heavy metal in column 2 in the above table (paragraph 1).

   However, if the percent guaranteed P_2O_5 of the product is less than 6.0, then the multiplier to be utilized shall be 6.0.

3. For a fertilizer product with micronutrients guarantee and no P_2O_5 guarantee:

   For each heavy metal, its maximum allowable concentration (ppm) in that product shall be determined by multiplying the sum of the guaranteed percentages of all micronutrients in the product by the appropriate factor of that heavy metal in column 3 in the above table presented in paragraph 1.

   However, if the sum of the guaranteed percentages of all micronutrients in the product is less than 1.0 then the multiplier to be utilized shall be 1.0.

4. For a fertilizer product with both micronutrients and P_2O_5 guarantee:

   For each heavy metal, carry out separately the computation outlined in above paragraphs 2) and 3) and the maximum allowable concentration (ppm) of the heavy metal under consideration shall be the higher of the two resulting values.

5. For a biosolid or compost product, its maximum allowable concentration of each heavy metal shall be the appropriate value of that heavy metal in column 4 of the above table presented in paragraph 1.

MAXIMUM ALLOWABLE VARIATION FOR BAG WEIGHT

The maximum acceptable variation of measured bag weight below the value claimed on the label shall be 500 g per 50 kg bag (1%).

MINIMUM PERCENTAGES OF NUTRIENT CONTENTS CLAIMABLE

1. For Nitrogen (N), Phosphorus (P_2O_5) or Potassium (K_2O), the minimum percentage of nutrient contents that may be guaranteed shall be 1.0.

2. The minimum percentages of nutrient contents, other than nitrogen, phosphorus and potassium that may be guaranteed shall be as follows:

ORDER OF DECLARATION	NUTRIENT	MINIMUM PERCENT CLAIMABLE
1	Calcium (Ca)	1.0000
2	Sulfur (S)	1.0000
3	Magnesium (Mg)	0.5000
4	Boron (B)	0.0200
5	Chlorine (Cl)	0.1000
6	Cobalt (Co)	0.0005
7	Copper (Cu)	0.0500
8	Iron (Fe)	0.1000
9	Manganese (Mn)	0.0500
10	Molybdenum (Mo)	0.0005
11	Sodium (Na)	0.1000
12	Zinc (Zn)	0.0500

3. Any of the secondary nutrients and micronutrients listed in paragraph 2 above that are guaranteed shall appear in the order listed and shall immediately follow guarantees for the primary nutrients of nitrogen, phosphorus and potassium if present.

For further information about the ECOWAS Fertilizer Regulation, please contact:

Mr. Alain Sy TRAORE – Director, Agriculture & Rural Development
ECOWAS Commission – Email: atraore@ecowas.int

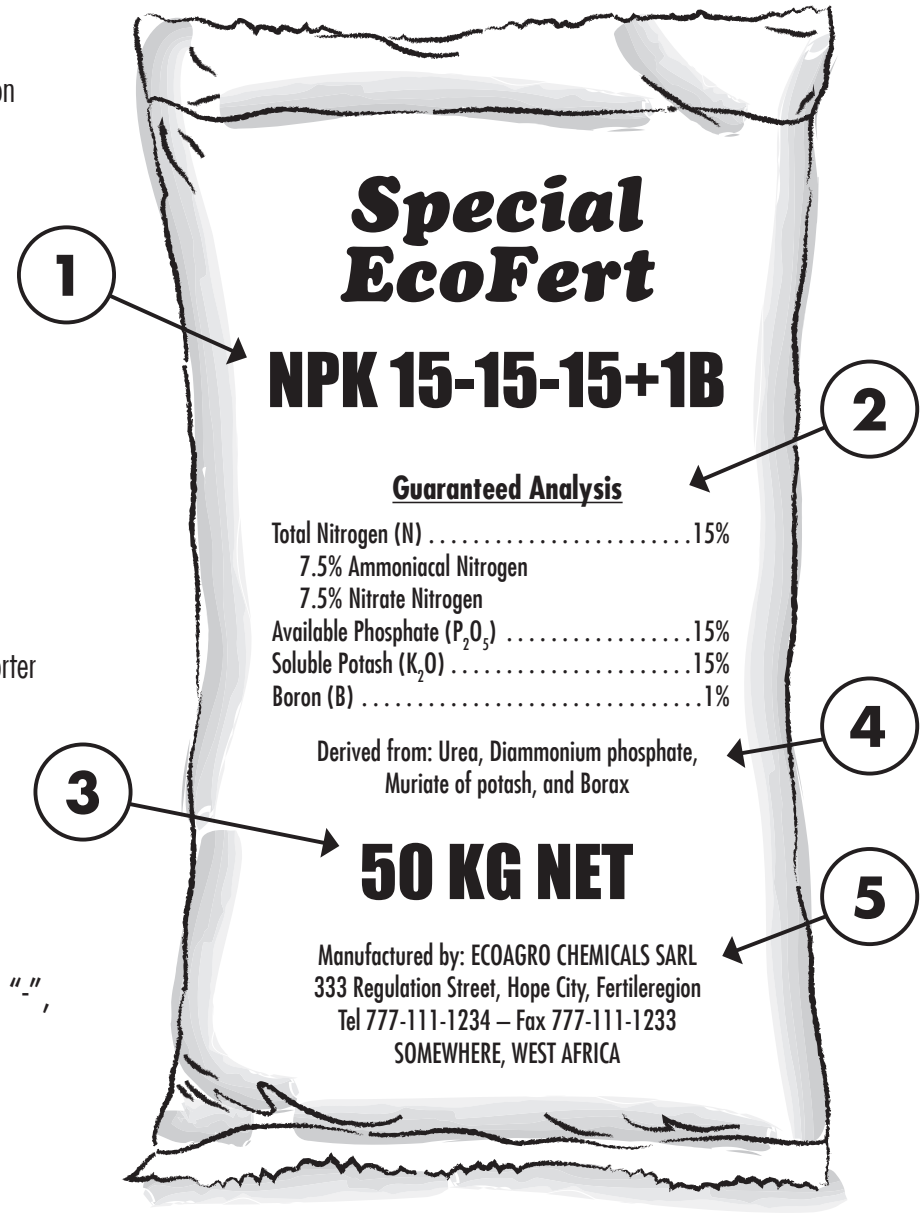
YOUR CLAIM IS A WARRANTY!

ECOWAS FERTILIZER LABELING

Economic Community
of West African States

(Ref. Implementing Regulation ECW/PEC/IR/02/03/16)

The label illustrated here is not a standard. It's a model that simply shows the minimum information required on fertilizer labels, as prescribed by an ECOWAS Implementing Regulation on labeling.



THE BIG FIVE

Five required components must appear on a fertilizer label:

1. Grade
2. Guaranteed analysis
3. Net weight
4. Sources of nutrients
5. Name and address of the manufacturer, importer or re-packing agent

GRADE

Grade is a shorthand representation of the guarantees for Total Nitrogen (N), Available Phosphate (P_2O_5) and Soluble Potash (K_2O) with each guarantee separated by a hyphen, "-", e.g., 15-15-15. The grade shall be in whole numbers and in the same terms, order, and percentages as in the guaranteed analysis.

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IFDC Developing Agriculture from the Ground Up

GUARANTEED ANALYSIS

The **Guaranteed Analysis** states the minimum percentage of all plant nutrients claimed on the label in a specific order and format. The format is as follows:

Guaranteed analysis

Total Nitrogen (N) ..... ____%,
____% Ammoniacal Nitrogen
____% Nitrate Nitrogen
____% Water-insoluble Nitrogen
____% Urea Nitrogen
____% Other recognized and determinable forms of N
Available Phosphate (P_2O_5) ..... ____%
Soluble Potash (K_2O) ..... ____%
Calcium (Ca) ..... ____%
Sulfur (S) ..... ____%
Magnesium (Mg) ..... ____%
Boron (B) ..... ____%
Chlorine (Cl) ..... ____%
Cobalt (Co) ..... ____%
Copper (Cu) ..... ____%
Iron (Fe) ..... ____%
Manganese (Mn) ..... ____%
Molybdenum (Mo) ..... ____%
Sodium (Na) ..... ____%
Zinc (Zn) ..... ____%

Guarantees or claims for the above listed plant nutrients are the only ones which will be accepted in West Africa and they must be in the order listed except when a nutrient is broken down into chemical forms, such as for N, then the breakdown forms may be in any order. If a nutrient is claimed, then it shall be listed in the Guaranteed Analysis. Zero guarantees are not allowed except in the chemical form breakdown where they may be used if needed for clarity.

NET WEIGHT

All fertilizers (bag, bulk or liquid) must be sold with specification of the net weight, which may be expressed in metric units.

SOURCES OF NUTRIENTS

Sources of nutrients, when shown on the label, shall be listed below the completed Guaranteed Analysis statement.

NAME AND ADDRESS OF MANUFACTURER OR RE-PACKING AGENT

The name and address of the registered/licensed manufacturer or re-packing agent responsible for the guarantees on the label shall be listed on the label.

ADDITIONAL NOTES

1. For packaged products, this label shall either (a) appear on the front or back of the package and occupy at least one-third of a side of the package, or (b) be printed on a tag with minimum dimensions of 8 cm by 12 cm and attached to the package. For bulk products, this same label in written or printed form shall accompany delivery and be supplied to the purchaser at time of delivery, and be accessible for inspection purposes.
2. The component order is not fixed as long as all are present in a readable and conspicuous place on the label.
3. There may be additional labeling requirements; therefore, it is always advisable to consult with the appropriate national body for fertilizer control in your country for review of a draft label prior to printing.
4. The minimum percentages of primary nutrients (N, P_2O_5, K_2O) claimable shall be 1.0. The minimum percentages of secondary and micro nutrients claimable are specified in an Implementing Regulation on fertilizer labeling.

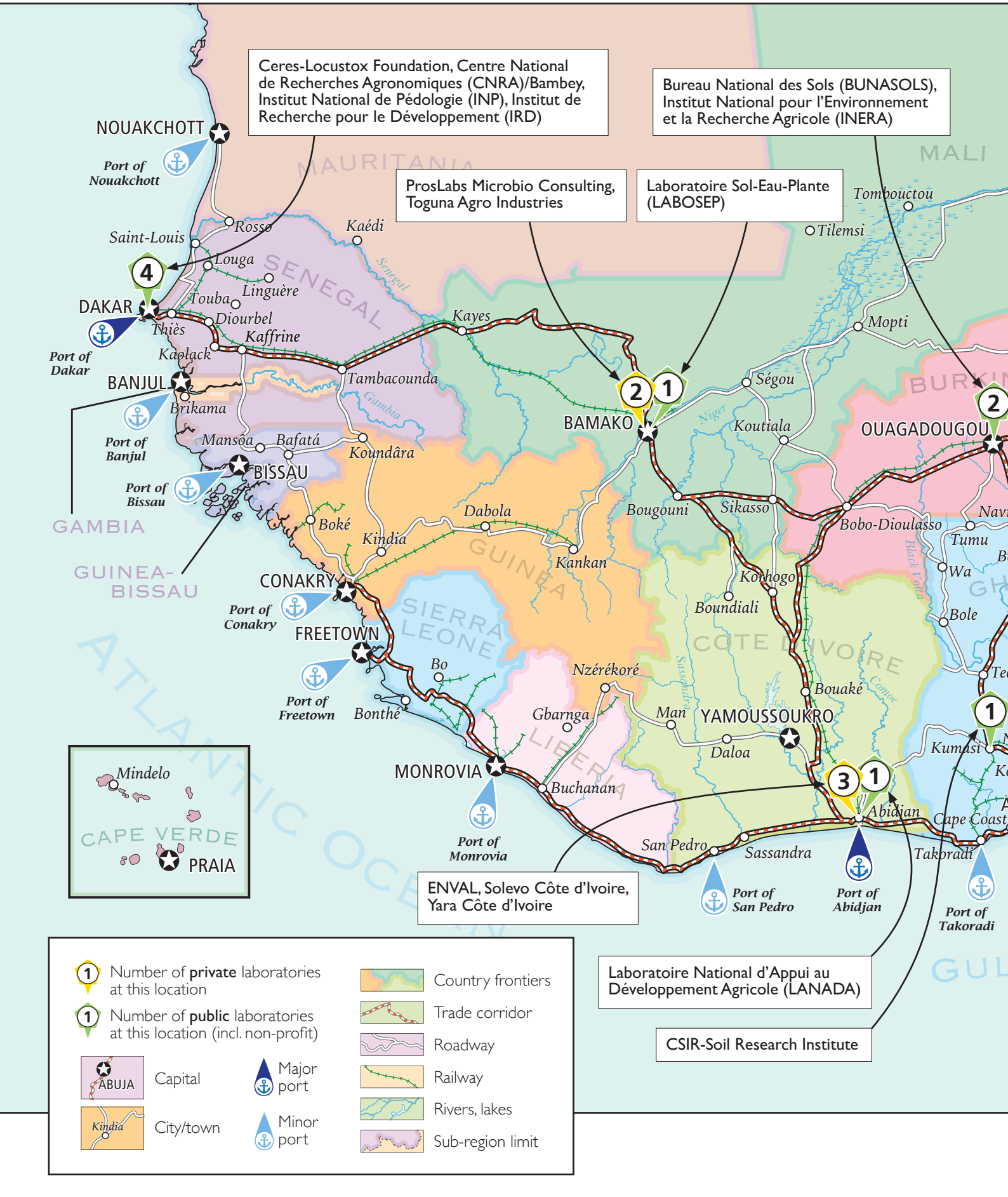
Label means (1) any legend, word, mark, symbol, or design applied or attached to, included in, belonging to, or accompanying any fertilizer, supplement, or container; or (2) any advertisements, brochures, posters, television, radio, or internet announcements used in promoting the sale of fertilizer.

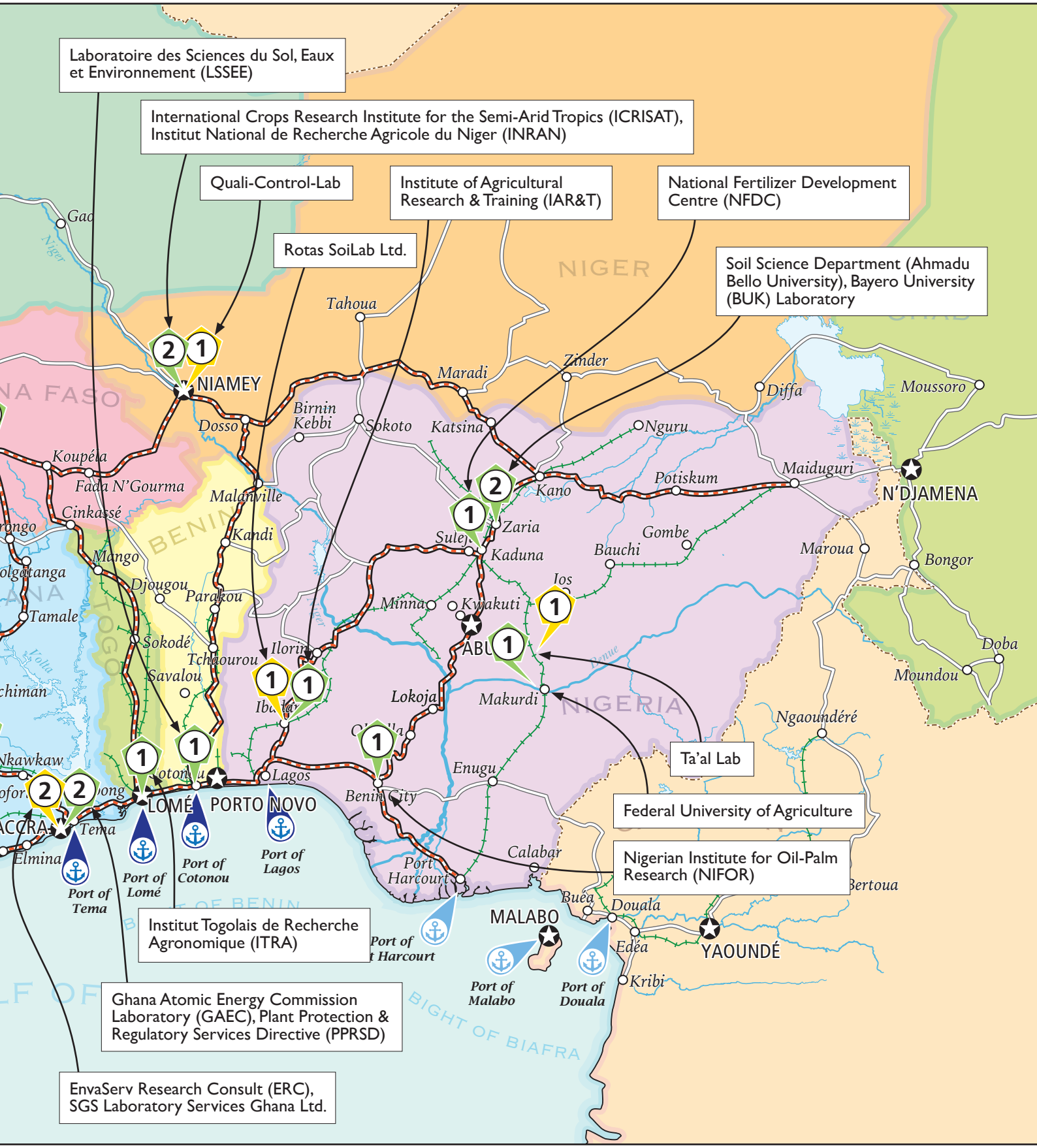
For further information about the ECOWAS Fertilizer Regulation, please contact:

Mr. Alain Sy TRAORE
Director, Agriculture & Rural Development
ECOWAS Commission
Email: atraore@ecowas.int

YOUR CLAIM IS A WARRANTY!

SOIL TESTING AND FERTILIZER QUALITY CONTROL LABS




Laboratoire des Sciences du Sol, Eaux et Environnement (LSSEE)
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Institut National de Recherche Agricole du Niger (INRAN)
Quali-Control-Lab
Institute of Agricultural Research & Training (IAR&T)
National Fertilizer Development Centre (NFDC)
Rotas SoiLab Ltd.
Soil Science Department (Ahmadu Bello University), Bayero University (BUK) Laboratory
Ta'al Lab
Federal University of Agriculture
Nigerian Institute for Oil-Palm Research (NIFOR)
Institut Togolais de Recherche Agronomique (ITRA)
Ghana Atomic Energy Commission Laboratory (GAEC), Plant Protection & Regulatory Services Directive (PPRSD)
EnvaServ Research Consult (ERC), SGS Laboratory Services Ghana Ltd.
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Maradi
Zinder
Diffa
Moussoro
Dosso
Birnin Kebbi
Sokoto
Katsina
Nguru
Koupéla
Fada N'Gourma
Malanville
Kano
Potiskum
Maiduguri
Cinkassé
Kandi
Zaria
Gombe
Mango
Kaduna
Bauchi
Maroua
Bongor
Djougou
Parakou
Ilorin
Ios
Minna
Kwakuti
Tamale
Sokodé
Tchaourou
Savalou
Lokoja
Makurdi
Doba
Moundou
Ngaoundéré
Lagos
Enugu
Benin City
Calabar
Port Harcourt
Buea
Douala
Edéa
Kribi
Bertoua
Elmina
Tema
Port of Tema
Port of Lomé
Port of Cotonou
Port of Lagos
Port of Malabo
Port of Douala
BIGHT OF BIAFRA

LABORATORY TESTING CAPABILITIES

LABORATORY CENSUS BY CAPABILITY TYPE:

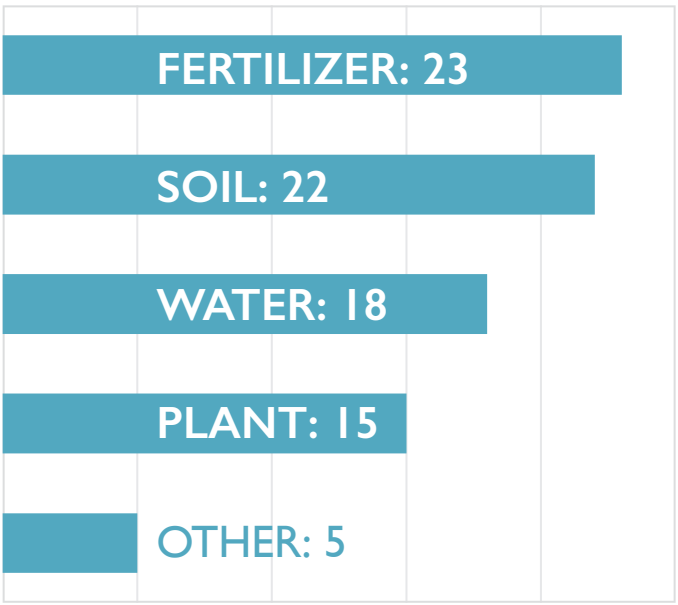



Photo: IFDC

LABORATORY PROFILES

* NEW TO THIS EDITION

BENIN

COTONOU — **LABORATOIRE DES SCIENCES DU SOL, EAUX ET ENVIRONNEMENT (LSSEE) [INSTITUT NATIONAL DE RECHERCHE AGRICOLE DU BENIN (INRAB)]**

Specialties: Soil, Water, Plant, Fertilizer, Environment
Type: Public
Accreditation: MoA-designated
Contact: **Cossi Tiburce Brice Oussou**, Laboratory Manager
briticoss@yahoo.fr; sp.inrab@inrab.org
+229 97 22 22 37, +229 64 28 37 02

BURKINA FASO

OUAGADOUGOU — **BUREAU NATIONAL DES SOLS (BUNASOLS)**

Specialties: Soil, Plant, Water, Fertilizer
Type: Public
Accreditation: MoA-designated
Contact: **Dr. Mamadou TRAORE**, Director General
tramadalbeba@yahoo.fr
+226 70 27 04 00, +226 76 38 29 90

OUAGADOUGOU — **INSITUT NATIONAL POUR L'ENVIRONNEMENT ET LA RECHERCHE AGRICOLE (INERA)**

Specialties: Soil, Plant, Water, Fertilizer
Type: Public
Contact: **Dr Hamidou TRAORE**, Director General
hamitraore8@yahoo.com
+226 70 25 80 60

CÔTE D'IVOIRE

ABIDJAN — **ENVAL**

Specialties: Soil, Water, Fertilizer, Pesticide
Type: Private
Contact: **Mr. Bakary COULIBALY**, Director General
cbakary@enval-group.com
+225 07 08 40 57 47

ABIDJAN — **LABORATOIRE NATIONAL D'APPUI AU DÉVELOPEMENT AGRICOLE (LANADA)**

Specialties: Soil, Plant, Water, Fertilizer, Pesticide/Ecotoxicology
Type: Public
Accreditation: MoA-designated
Contact: **Dr. Amatcha-Lepry Charlotte**, Director General
+225 07 58 97 09 18, +225 27 20 22 58 38
+225 27 20 22 58 43


ENVASERVE – ACCRA

VRIDI **SOLEVO CÔTE D'IVOIRE**

Specialties: Fertilizer (N, P, K only)
Type: Private
Accreditation No outsourced services
Contact: **Mr. Marc Desenfans**, Director General
marc.desenfans@solevogroup.com

VRIDI **YARA CÔTE D'IVOIRE**

Specialties: Fertilizer
Type: Private
Accreditation: (IFA certification)
Contact: **Mr. Kanigui Yeo**, Director General
kanigui.yeo@yara.com
+225 05 55 27 27 27

GHANA

KWADASO **CSIR-SOIL RESEARCH INSTITUTE**

Specialties: Soil, Plant
Type: Public
Contact: **Dr. Francis Marthy Tetteh**,
Principal Research Scientist
fmarthy2002@yahoo.co.uk, sri.info@csir.org.gh
+233 244 622 124, +233 322 050 353/4

ACCRA **ENVASERV RESEARCH CONSULT (ERC)**

Specialties: Soil, Water, Fertilizer, Microbiology, Food
Type: Private
Accreditation: PPRSD-contracted
Contact: **Dr. Emmanuel Lamptey**, Director
elamptey@envaservconsult.com
+233 302 92 5173, +233 244 831 455

ACCRA **GHANA ATOMIC ENERGY COMMISSION (GAEC)**

Specialties: Soil, Water, Fertilizer
Type: Public
Accreditation: PPRSD-contracted
Contact: **Prof. Benjamin Jabez Botwe Nyarko**,
Director General
official.nnri@gaecgh.or
+233 21 40 12 72g

POKUASE **PLANT PROTECTION AND REGULATORY SERVICES DIRECTORATE (PPRSD)**

Specialties: Fertilizer (N, P, K only)
Type: Public
Accreditation: MoA-designated
Contact: **Dr. Eric Bentsil Quaye**, Director
bequaye18@yahoo.co.uk
+233 303 977 526

TEMA **SGS LABORATORY SERVICES GHANA LTD.**

Specialties: Soil, Water, Fertilizer, Microbiology, Food
Type: Private
Accreditation: PPRSD-contracted
Contact: **Berko-Asamoah Boateng**,
Operations Manager, Envi. W/A LabNet
berko-asamoah.boateng@sgs.com
+233 244 335 643

MALI

BAMAKO **LABORATOIRE SOL-EAU-PLANTE (LABOSEP) [INSTITUT D'ECONOMIE RURALE (IER)]**

Specialties: Soil, Plant, Water, Fertilizer
Type: Public
Accreditation: MoA-designated
Contact: **Dr. Cheick Hamalla Diakité**
cheikhamallafr@yahoo.fr
+223 76 36 54 84, +223 44 38 49 17
+223 20 24 23 71

KATI **PROSLABS MICROBIO CONSULTING**

Specialties: Soil, Plant, Water, Fertilizer
Type: Private
Contact: **Issiaka BA**, Lab Manager
kanicamara@proslabs.com
+223 70 37 91 38

BAMAKO **TOGUNA AGRO INDUSTRIES**

Specialties: Fertilizer
Type: Private
Accreditation: Member of WAFA, no outsourced services
Contact: **Dourou Djiguiba**, Plant Manager
douro@groupetoguna.com
+223 66 97 06 59

NIGER

NIAMEY **INSTITUT NATIONAL DE RECHERCHE AGRICOLE DU NIGER (INRAN)**

Specialties: Soil, Water, Plant, Fertilizer
Type: Public
Accreditation: MoA-designated
Contact: **Mr. Maidagi Mamane**, Laboratory Manager
+227 90 52 32 27, +227 96 13 49 04,
+227 20 72 53 89

NIAMEY **INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS (ICRISAT)**

Specialties: Soil, Water, Plant, Fertilizer
Type: International non-profit organization
Contact: **Dr. Vincent Bado**, Principal Scientist
V.Bado@cgiar.org
+227 88 02 92 60

NIAMEY **QUALI-CONTROL-LAB**

Specialties: Soil, Water, Plant, Fertilizer
Type: Private
Contact: **Mr. Amadou ILLO**
+227 96 59 22 25, +227 20 35 00 59

NIGERIA

KANO * **BAYERO UNIVERSITY (BUK) LABORATORY**

Specialties: Soil, Fertilizer
Type: Public
Accreditation: FISS-designated
Contact: **Yakubu Shittu Saidu**
yakubushittusaidu@gmail.com
+234 81 60 10 75 10

MAKURDI ✱ **FEDERAL UNIVERSITY OF AGRICULTURE**

Specialties: Soil, Fertilizer
Type: Public
Accreditation: FISS-designated
Contact: **Nasir Usman Tanko**, General Manager
ntsaku225@gmail.com

IBADAN **INSTITUTE OF AGRICULTURAL RESEARCH AND TRAINING (IAR&T)**

Specialties: Soil, Fertilizer
Type: Public
Accreditation: MoA-designated
Contact: **Prof. Veronica Adeoti Obatolu**, Executive Director
info@iart.gov.ng, contact@iart.gov.ng

KADUNA **NATIONAL FERTILIZER DEVELOPMENT CENTRE (NFDC)**

Specialties: Fertilizer
Type: Public
Accreditation: MoA-designated national reference laboratory
Contact: **Shehu Salihu Usman**, Assistant Director
salihushehu643@gmail.com
+234 80 23 66 95 64

BENIN CITY ✱ **NIGERIAN INSTITUTE FOR OIL-PALM RESEARCH (NIFOR)**

Specialties: Soil, Plant, Fertilizer
Type: Public
Accreditation: FISS-designated
Contact: **Dr. Celestin E. Ikuenobe**, Executive Director
ceeikuenobe@yahoo.com
+234 80 35 52 15 17, +234 80 34 73 27 39

IBADAN **ROTAS SOILAB LTD.**

Specialties: Soil, Water, Plant, Fertilizer
Type: Private
Accreditation: MoA-designated
Contact: –
rotaslab@gmail.com
+234 812 945 3057, +234 802 999 5273

ZARIA **SOIL SCIENCE DEPARTMENT, AHMADU BELLO UNIVERSITY**

Specialties: Soil, Fertilizer
Type: Public
Accreditation: MoA-designated
Contact: **Ilu Ibrahim**, Head of Soil Laboratory
iluibrahim6419@gmail.com
+234 80 36 57 48 81, +234 80 29 88 32 04

LAFIA, NASARAWA ✱ **TA'AL LAB**

Specialties: Fertilizer
Type: Private
Accreditation: FISS-designated
Contact: **Nasir Usman Tanko**, General Manager
ntsaku225@gmail.com


IAR&T – IBADAN


ISRA – DAKAR

SENEGAL

DAKAR (BAMBEY) **CENTRE NATIONAL DE RECHERCHES AGRONOMIQUES (CNRA)/BAMBEY [INSTITUT SENEGALAIS DE RECHERCHES AGRICOLES (ISRA)]**

Specialties: Soil, Water, Plant
Type: Public
Accreditation: Research Institute
Contact: **Dr. Momar Tall Seck**, Director General
+221 338 591 725

MBAO **CERES-LOCUSTOX FOUNDATION**

Specialties: Soil, Water, Plant, Fertilizer, Pesticide/toxicology
Type: Public
Accreditation: MoA-designated
Contact: **Dr. Papa Sam GUEYE**, General Administrator
direction.cereslocustox@agriculture.gouv.sn,
cereslocustox@orange.sn
+221 338 344 294

DAKAR **INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT (IRD)**

Specialties: Soil, Microbiology
Type: Public
Contact: **Mme Isabelle Henry**, Representative
senegal@ird.fr
+221 338 493 535

DAKAR **INSTITUT NATIONAL DE PEDOLOGIE (INP)**

Specialties: Soil, Water, Plant
Type: Public
Accreditation: Ministry of Agriculture
Contact: **Mr. Mamadou Amadou SOW**, Director General
pedologie@inp.sn
+221 33 832 65 65

TOGO

LOMÉ **INSTITUT TOGOLAIS DE RECHERCHE AGRONOMIQUE (ITRA)**

Specialties: Soil, Water, Plant, Fertilizer
Type: Public
Accreditation: Research Institute MoA-designated
Contact: **Mrs. Ekpetsi Oyaboualou BOUKA-GOTO**,
Laboratories Manager
got_chant@yahoo.fr
+228 90 07 26 80

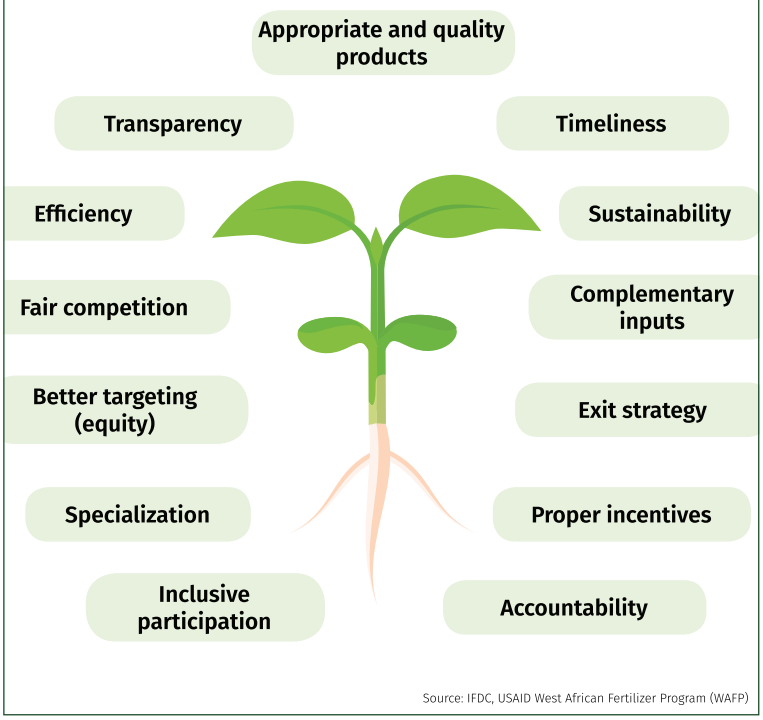
SMART FERTILIZER SUBSIDY GUIDELINES

In the past decade, several governments in West Africa have increased the use of agricultural input subsidy programs within the framework of their policies and strategies to improve agricultural productivity, and food and nutrition security. Several factors inherent to these subsidy programs impede their performance and do not optimize the significant public resources invested.

The Regional Fertilizer Subsidy Program Guide (RFSPG) was designed to encourage the harmonization and increase the performance of agricultural input subsidy programs in ECOWAS Member States, by proposing thirteen "smart" guiding principles. These are, among others, targeting and reaching proper beneficiaries, transparency in the contracting process, devising an exit strategy, private sector participation and/or applying reasonable subsidy rates. The detailed 13 principles and associated actions are presented in the flyer on page 90.

Several ECOWAS Member States have been applying the proposed principles to reform current subsidy programs, with direct or indirect support from IFDC. The table below shows the application of guiding principles by 6 countries, as monitored by EnGRAIS as of December 31, 2022.

13 key principles for smart subsidy programs



Source: IFDC, USAID West African Fertilizer Program (WAFP)

2023 SUBSIDY PRINCIPLES MATRIX

Final results from study on application of guiding principles by countries to reform their fertilizer subsidy programs as of December 31, 2022.*

Principle	Principles being used by ECOWAS Member States for improved or smart subsidy programs	Burkina Faso	Ghana	Mali	Niger	Senegal	Togo
1	Inclusive participation	✓	✓	✓	PART	PART	✓
2	Specialization	✓	PART	✓	PART	✓	✓
3	Fair competition	✓	PART	✓	✓	✓	✓
4	Efficiency	PART	PART	PART	PART	PART	PART
5	Targeting	✓	✓	PART	PART	PART	✓
6	Transparency	✓	PART	PART	PART	PART	✓
7	Timeliness	PART	PART	PART	PART	PART	PART
8	Appropriate and quality products	✓	✓	PART	PART	PART	PART
9	Proper incentives	PART	PART				PART
10	Complementary inputs	✓	✓	✓	✓	PART	
11	Exit strategy	PART		PART	PART	PART	✓
12	Sustainability	PART	PART	PART	PART	PART	✓
13	Accountability	✓	PART	✓	✓	PART	✓
	Overall Progress by Member State (number of fully applied principles)	8	4	5	3	2	8

✓ *Yes, actions have been taken by national governments to reform national fertilizer subsidy programs using at least one of the proposed 13 guiding principles. The green checkmark shows the principle being **fully** applied by the given country, which means that **all** proposed actions under it have been implemented.*

PART *This indicates countries that have **partially** used the corresponding principle.*

(blank) *No action has been taken by a given country to apply the corresponding principle.*

** Nigeria and Togo are no longer implementing a subsidy.*

Source: Study on 2021 data (or 2019 for Togo) compiled by EnGRAIS (2022)

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The U.S. Government's Global Hunger & Food Security Initiative

KEY PRINCIPLES FOR SMART FERTILIZER SUBSIDY PROGRAMS

2020 EDITION

USAID
FROM THE AMERICAN PEOPLE

IFDC
Developing Agriculture from the Ground Up

KEY PRINCIPLES FOR SMART FERTILIZER SUBSIDY PROGRAMS

Most West African countries have been implementing fertilizer subsidy programs for many years, but no credible evidence exists to show that these programs have brought about significant or sustained changes leading to the attainment of their set objectives. Fertilizer use levels in West Africa, estimated around 12 kg of nutrient per hectare, remain far below the 50kg/ha objective of the 2006 Abuja Declaration set for 2015. Growth in crop productivity yields and production has been sluggish. Food insecurity and poverty still affect millions of people, especially in rural areas. National fertilizer subsidy programs are very diverse across countries and, above all, costly in terms of scarce public resources used to implement high subsidy rates (40-50%), which almost coincide with the share of in-country costs of the total costs of procuring fertilizers from source to the domestic end users (IFDC, 2016).

Photo by the PARSEN project

Retailers verifying the authenticity of vouchers (Niger).

The Economic Community of West African States (ECOWAS) has expressed concern about the poor performance of fertilizer subsidy programs in the region and stated the need, in its new Regional Agricultural Investment Program for Food Security and Nutrition (RAIPFSN, 2016 – 2020), to harmonize input subsidy policies across Member States in an attempt to improve their effectiveness. One of its main technical partners, the International Fertilizer Development Center (IFDC), has echoed this call and has conducted activities under its USAID-funded West Africa Fertilizer Program (WAFP, which ended on July 31, 2017) to review current fertilizer subsidy programs and make recommendations for their improvement.

The review exercise resulted in the development of 13 key principles and 36 associated actions that provide tested, mutually agreed, and validated guidelines to countries across the ECOWAS region for designing and implementing "smart" fertilizer subsidy programs. This guide will almost certainly be applicable to other agricultural inputs and its effective use is expected to bring about significant changes in fertilizer use, crop yields, and agricultural growth, hence contributing to improve food security and reduced poverty across West Africa.

Each principle has one or more proposed actions to fulfil its goal. Below are the 13 guiding principles, each followed by proposed actions on how to apply them.

This publication was made possible by the generous support of the American people through Feed the Future, the U.S. Government's Global Hunger and Food Security Initiative. The contents are the responsibility of IFDC, and do not necessarily reflect the views of Feed the Future or the United States Government.

PRINCIPLES & ACTIONS

1. INCLUSIVE PARTICIPATION

Promote private sector development and participation.

1. Involve key stakeholders during the design of subsidy programs (public-private partnership).
2. Consult with all major actors or stakeholders during implementation to document challenges that arise and their potential solutions as the process evolves.
3. Promote private sector participation by making it easy to register[1] as a business and building their capacity.

Photo by Mr. Malick Niang (ETG/WAFA)

Offloading of bulk fertilizers in Abidjan port (Côte d'Ivoire).

2. SPECIALIZATION

Roles of all participating actors should be defined and assigned on the basis of specialization and comparative advantage to achieve complementary and exploit potential synergies.

4. Focus Government interventions on the sovereign roles of the State related to creating an enabling environment, setting relevant policy and regulatory frameworks, and coordinating program implementation.
5. Establish regular consultation forums with countries with common land borders to avoid adverse effects resulting from subsidy program implementation (e.g. subsidized fertilizer sold across borders for profit due to differences in prices resulting from different subsidy rates).
6. Leave production, importation and distribution of fertilizers to the private sector.

3. FAIR COMPETITION

Promote competition between private suppliers in order to drive down costs of delivering subsidized fertilizer and increase quality of services provided to farmers.

7. Establish fair, objective and transparent selection system (tender).
8. Eliminate any barriers to entry into market by new fertilizer businesses.
9. Design a tender selection process that incentivizes the development of West Africa suppliers (subregional, national and local) in a sustainable manner.

Photo by CAGIA

AgriPME electronic wallet system (Togo).

[1] *In application of Article 1 (defining fertilizer 'distributor' and 'licensing') and Articles 11, 12, 13 and 14 (relative to functions of fertilizer producer, importer and distributor) of ECOWAS Regulation C/REG.13/12/12.*

4. EFFICIENCY

Use economic efficiency (cost reduction, profitability, economies of scale, etc.) as the basis for fertilizer promotion efforts.

10. Favor market-based solutions that do not undermine incentives and initiatives for private investment.

11. Encourage linking delivery of subsidized fertilizers with the more efficient fertilizer and other input delivery systems associated with cash crops (cotton, cocoa, oil palm, coffee, etc.), so that (i) cash crop producers also receive fertilizer/inputs for their food crops and do not use those intended for cash crops, and (ii) other nearby subsidy beneficiaries receive fertilizers at the lowest cost, ensuring higher productivity for all crops

12. Establish results/performance-based and annually assessed multi-year contracts with selected suppliers to ensure timely fertilizer production, importation and distribution at affordable costs.

Photo by MoFA (Crop Services Directorate)

Farmers waiting to register and buy PFJ subsidized fertilizers at an agro dealer's shop in Damongo (Ghana).

5. TARGETING

Improve targeting by using an inclusive mechanism/approach involving village communities, local administration and authorities, farmer organizations, including those of women, that ensures right beneficiaries (producers, geographic areas, and crops) are properly identified and effectively reached.

13. Give priority to/target farmers not using fertilizers currently but having the potential to increase their production and incomes if they do use them, the most vulnerable producers and crop value chains that have high potential to contribute to growth or food security goals. Reliable agricultural census data may be necessary to ensure and facilitate accurate targeting.

14. Avoid/minimize displacement of commercial sales (crowding out) by subsidized fertilizers that distort fertilizer markets. Avoid areas with already well established and functioning commercial private sector channels for fertilizer.

15. Avoid providing subsidy to areas with proven low fertilizer response rates.

16. Use voucher systems and other ICT tools to reach proper targets through private sector participation.

Photo by the PARSEN project

Beneficiaries paying for the non-subsidized portion of the fertilizer price (Niger).

6. TRANSPARENCY

Ensure transparency in overall targeting and distribution system.

17. Monitor field distribution of subsidized product with the involvement of village communities, local administration, representatives of target farmers: compared to the current mainly manual systems, many new ICT-based ones can more easily and better track field delivery of products to targeted producers, if properly implemented and adapted.

7. TIMELINESS

Rigorously plan and implement program early enough to avoid delays in timely delivery of subsidized fertilizers at affordable costs, to reduce uncertainty and unpredictability with subsidy programs.

18. Plan ahead the full program based on the crop calendar, and not on, as is often the case, political considerations, and respect and enforce deadlines from program design to implementation. The early adoption of natural budget, including that of agriculture, is a favorable step.

19. Publish information on subsidy timing, amounts of fertilizers, and subsidy rates to be adopted well ahead of the season; publish delivery dates and time in advance of the season.

20. Clearly state and announce tender process and rules early enough, especially announcement of subsidy program details well before planting time.

8. APPROPRIATE & QUALITY PRODUCTS

The formulations and quality of subsidized fertilizer should meet requirements established by the relevant research recommendations and regional fertilizer regulations, respectively.

21. Ensure that the most updated fertilizer recommendations by crop and agro-ecological zone exist for areas where the program will operate and that the existing fertilizer private sector can produce/procure appropriate formulations before tendering for fertilizers to be furnished by the program. Support for the development of soil fertility[2] and fertilizer recommendation[3] maps is necessary to determine these formulations.

22. Put in place conditions for adopting and enforcing ECOWAS fertilizer regulations so that subsidized fertilizers meet quality (types, formations, weight, labelling, etc.) specifications.

23. Encourage balanced nutrition including micronutrients as reflected in the products that are imported and/or blended for subsidy.

9. PROPER INCENTIVES

Favor market-based measures that do not undermine incentives to private sector investments. For example, delayed payment to suppliers affects i) private sector investment in markets, ii) farmer participation in fertilizer markets and hence iii) yields and area planted.

24. Consider options, including guarantee funds, to avoid late payment to importers/distributors of the subsidized portions of the fertilizer prices.

25. Establish an "escrow" account where funds are set aside before the season strictly to be used to pay importers and distributors in a timely manner; these funds should be protected from withdrawal other than for the intended purpose.

Photo by the PARSEN project

Example of a fertilizer voucher used in the pilot program.

26. Use IT to better track allocated fertilizer to ensure it goes to intended beneficiaries, for real time verification, reconciliation and reporting of sales by distributors so that payment can be made on time to suppliers.

[2] *cf. ongoing initiatives in some countries in the region with AGRA, OCP, etc.*

[3] *For example, the fertilizer recommendations in West Africa map or FeRWAM (IFDC WAFP).*

10. COMPLEMENTARY INPUTS

Promote fertilizer product as part of a wider strategy that includes complementary inputs (and strengthening of markets).

27. Associate fertilizer with appropriate complementary inputs (seeds, equipment, irrigation, integrated soil fertility management [ISFM], etc.) in a package to be promoted, along with provision of proper information and training.

11. EXIT STRATEGY

Devise a clear exit strategy to limit the duration of public fertilizer subsidy interventions.

28. Embed clear time and objective-bound exit strategy that gradually moves the program from current to future beneficiaries (producers, areas, crops) in real need for subsidy until the program is completely phased out, since public funds are limited and have competing needs.

Photo by Mr. Moussa Dionou (IFDC)

Loading of fertilizers from an agro dealer's warehouse (Burkina Faso).

12. SUSTAINABILITY

To emphasize sustainability of gains in input use and crop yields as the goal when designing the program, tie it to other public investments to support current beneficiaries and product suppliers.

29. Link program to public investments that:

- Ensure access to other yield-enhancing inputs and research and advisory services that maximize the efficiency and profitability of fertilizer use;
- Encourage saving schemes, and remove barriers to access finances/loans by input dealers; and
- Improve physical infrastructure (irrigation, transport, storage, processing, and marketing) that increases the profitability of fertilizer distribution and use and adds value to farm produce.

30. Fund program with domestic resources to improve efficiency and encourage phasing out and eliminating unneeded subsidy programs.

31. Encourage increased participation of private sector in subsidy programs to strengthen and ensure sustainability of input procurement and delivery systems.

32. Ensure that government provides regulatory and quality control oversight.

33. Encourage development/strengthening of regional (ECOWAS) market for both produce and inputs.

13. ACCOUNTABILITY

Impacts of the use of public resources in subsidy program should be objectively and rigorously studied and established.

34. Establish regularly updated farmer/crop databases from reliable agricultural censuses and continuous farm surveys.

35. Monitor program for reliable and accessible data on the basis of specific indicator variables.

36. Conduct evaluations of entire program after each season to gather lessons learned for improvement; possibly establish an independent technical committee involving the public and private sector and the civil society to carry out the impact assessment studies. This will assess performance/impacts against measurable benchmarks (productivity, adoption, private sector involvement, efficiency, etc.). M&E or cost-benefit analysis will reveal the true costs of subsidy and deter over-invoicing on procurement, transport etc. This exercise may lead to encourage private sector participation especially if public funds are limited or constrained.

CONTACT

For further information, please contact:

Mr. Alain Sy TRAORE
Director, Agriculture & Rural Development
ECOWAS Commission

Email: atraore@ecowas.int

FeedtheFuture.gov

This publication on the Regional Fertilizer Subsidy Program Guide was prepared by the Feed the Future Enhancing Growth through Regional Agricultural Input Systems (EnGRAIS) Project for West Africa, the successor to the WAFP, and the Senegal Dundël Suuf Project.

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IFDC Developing Agriculture from the Ground Up

7. PARTNERS

IFDC
Developing Agriculture from the Ground Up

HEALTHY SOILS – PROFITABLE FARMERS

DEVELOP BETTER TECHNOLOGIES

Working with national, regional, and international partners, IFDC will develop, test, and adapt technologies that improve soil health and plant nutrition for smallholder systems:

- ✓ More efficient and improved fertilizers.
- ✓ Integrated soil management strategies.
- ✓ Mitigation of environmental impact.
- ✓ Technologies to improve degraded soils.

CATALYZE FARM PRODUCTIVITY

IFDC will assess the performance of emerging technologies under smallholder conditions to increase farm productivity, profitability, and sustainability:

- ✓ Incorporate 4R nutrient stewardship.
- ✓ Evaluate environmental impact of improved practices.
- ✓ Women and youth engagement.
- ✓ Scale and sustain adoption of improved technologies.
- ✓ On-farm research to test viability of new technologies.
- ✓ Extend fertilizer recommendations to farmers.
- ✓ Demonstrate best available technologies.

OUR REACH

BANGLADESH | BENIN | BURKINA FASO
BURUNDI | CABO VERDE | CHAD
CÔTE D'IVOIRE | EGYPT | ETHIOPIA
GAMBIA | GHANA | GUINEA | GUINEA-BISSAU
INDIA | KENYA | LIBERIA | MALI | MAURITANIA
MOZAMBIQUE | NEPAL | NIGER
NIGERIA | SENEGAL | SIERRA LEONE
SOUTH SUDAN | TOGO | UGANDA

VISION

Healthier soils and plants for a food-secure and environmentally sustainable world.

MISSION

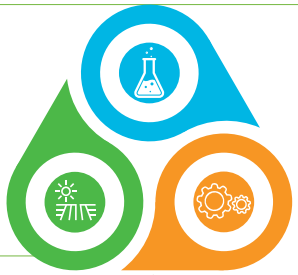
Bring together innovative research, market expertise, and strategic public and private sector partners to identify and scale sustainable solutions for soil and plant nutrition that benefit farmers, entrepreneurs, and the environment.

IFDC is a not-for-profit Public International Organization created in 1974, with its headquarters located in Muscle Shoals, Alabama, USA.

IN WEST AFRICA, IFDC BRIDGES THE GAP BETWEEN

ENGINEERING & LAB SERVICES

LAB & ANALYTICS
- Research & product development
- Analytical laboratories
- Crop modeling and GIS



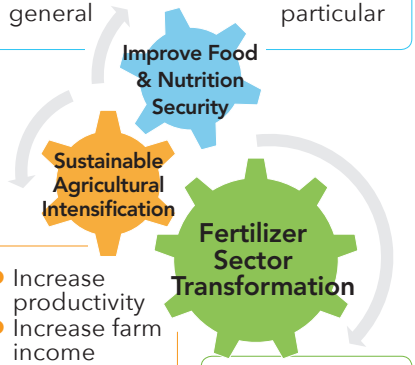
FIELD
- Greenhouses
- Field trials
- Soil SMaRT approach

ENGINEERING & PILOT PLANT
- Continuous granulation pilot plants
- Technical assistance and training
- Physical property testing

APPLIED RESEARCH & INSTITUTIONAL PARTNERSHIPS

FERARI
FERTILIZER RESEARCH & RESPONSIBLE IMPLEMENTATION

- Sub-Sahara Africa in general
- Ghana in particular



- Increase productivity
- Increase farm income
- Develop fertilizer and food value chain

- By developing crop and soil-specific fertilizers
- Outreach to smallholder farmers

Site-specific fertilization is key:
- Evidence of need for NP(K) + micronutrients
- Improves yield and nutritional content
- Enhances systems resilience

WWW.IFDC.ORG
GENERAL@IFDC.ORG

OCP
MOHAMMED VI POLYTECHNIC UNIVERSITY

– RESTORED ECOSYSTEMS

STRENGTHEN MARKETS

IFDC functions as an intermediary to connect farmers to input/output markets, and vice versa, ensuring scalability of improved technologies, increased production of commodities in demand, and trust among partners:

- ✓ Scaling assessment to develop inclusive markets.
- ✓ Develop agribusiness clusters.
- ✓ Strengthen capacity of agribusiness clusters.

ENABLE IMPACT

IFDC is committed to providing technical support and training to help countries invest in soil fertility and plant health and equipping partners to identify, develop, and implement key agricultural system changes:

- ✓ Achieve increased investment in soil fertility and plant health.
- ✓ Strengthen capacity to implement policies and regulations.
- ✓ Improve technical capacity of public and private sector partners.
- ✓ Share new knowledge and data.

RESEARCH, FARMS, & MARKETS TO ACHIEVE IMPACT AT SCALE

FERTILIZER MARKETS

FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

ENHANCING GROWTH THROUGH REGIONAL AGRICULTURAL INPUT SYSTEMS (EnGRAIS) PROJECT FOR WEST AFRICA

EnGRAIS

wafa
West African Fertilizer Association
Association Ouest-Africaine de l'Engrais

- Private sector investment
- Finance & logistics
- Product stewardship

- Balanced fertilizers
- Agro-input packages
- UDP, microdose

CORAF

FEDERAL ECOWAS

- Fertilizer policies
- Regulatory systems
- Smart subsidies

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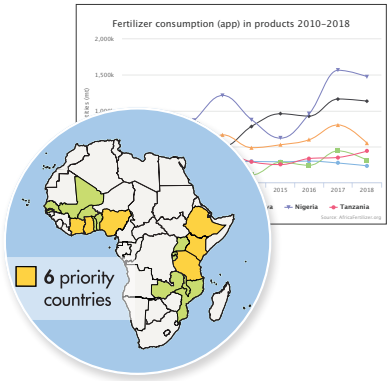
FERTILIZER MARKET DATA

AfricaFertilizer
Data-Driven Decisions for African Food Systems

- Fertilizer statistics
- Fertilizer use by crop
- Cost build ups
- Fertilizer market assessments

- Fertilizer plant register
- Fertilizer dashboards
- FertiNews reaching 3,600 subscribers



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INTERNATIONAL FERTILIZER ASSOCIATION

wafa
West African Fertilizer Association
Association Ouest-Africaine de l'Engrais

DEVELOPMENT GATEWAY
Solutions that empower

OUTPUT MARKETS & SMALLHOLDER FARMERS

2SCALE
A decade of promoting inclusive agribusiness in Africa
10 YEARS

- Improve access to nutritious food for BoP consumers
- Improve livelihoods of smallholder farmers
- Develop inclusive business strategies with local SMEs
- Scale up public-private partnerships
- Promote climate-smart agricultural practices

Ministry of Foreign Affairs of the Netherlands

BoP INNOVATION CENTER
DEVELOP ▸ LEARN ▸ ACCELERATE

SNV

AfricaFertilizer

Data-Driven Decisions for African Food Systems

TO FEED OUR PEOPLE WE MUST FIRST FEED OUR SOIL

AfricaFertilizer is an initiative whose objective is to provide clear, relevant and opportune data and market information on fertilizers in the SSA region, with an aim to support the implementation of continental, regional and national agricultural and more specifically fertilizer policies and regulations, and promote the growth and development of competitive markets, to the benefit of both the public and private sector, and fertilizer stakeholders globally.

The AfricaFertilizer initiative was conceptualized in 2009 by the International Fertilizer Development Center (IFDC). It has been implementing activities across the Sub-Saharan African region with support and funding from the International Fertilizer Association (IFA), the Africa Fertilizer and Agribusiness Partnership (AFAP), and a partnership with the Food and Agriculture Organization of the United Nation (FAO) through its CountrySTAT program.

AfricaFertilizer relies on and interacts with major international databases such as FAOSTAT, IFADATA, the World Bank, fertilizer intelligence agencies and several regional and national agro-input market information systems and public institutions as a source for secondary data and market information.

IFDC · wafa · DEVELOPMENT GATEWAY · FAO · AFRICAN UNION · argus

Key Services and Publications

- Annual fertilizer production, trade and consumption by product and nutrient
- Fertilizer Use by Crop studies
- Register of Fertilizer Manufacturing and Processing Plants
- Annual country fertilizer statistics overviews and factsheets
- *FertiNews*, a free monthly newsletter reaching 4,500+ subscribers globally
- Free-to-use data and information available from our website and social media

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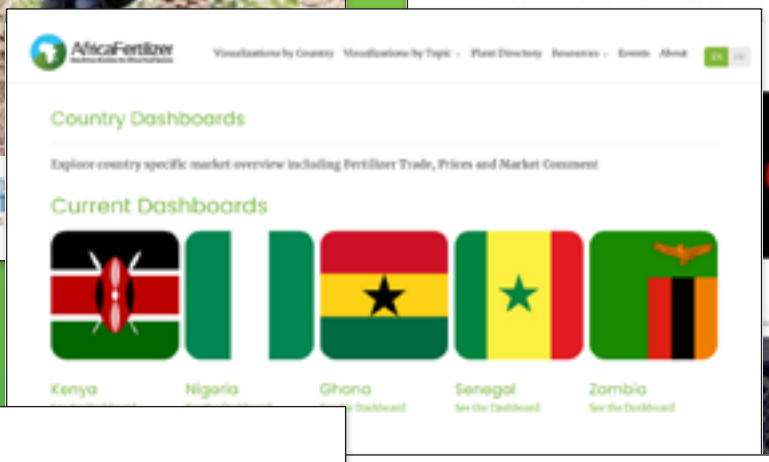
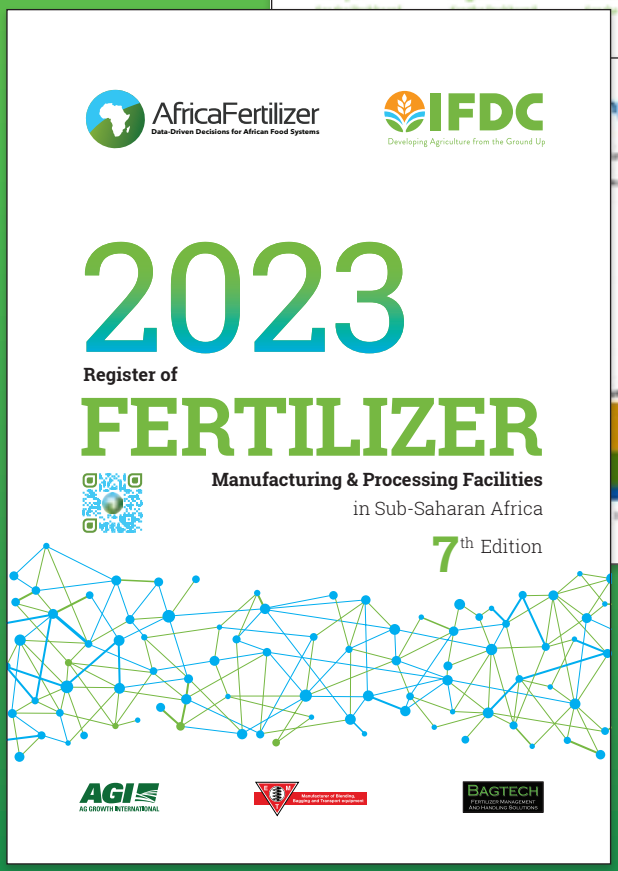
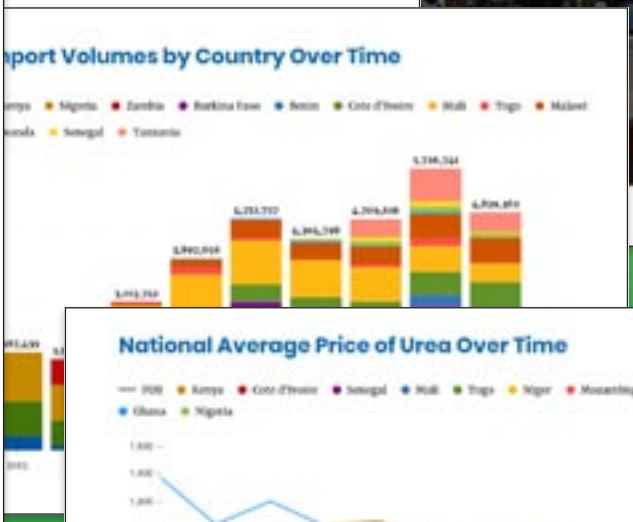
Data-Driven Decisions for African Food Systems




AFRICAFERTILIZER OFFERS CURRENT MARKET DATA







West African Fertilizer Association
Association Ouest Africaine de l'Engrais

The West African fertilizer industry - united and committed to a wealthy West Africa through sustainable agriculture

Vision

A wealthy West Africa through sustainable agriculture

Mission

To be the fertilizer industry platform for a common voice and action to promote sustainable crop nutrition in West Africa

SINCE 2016

72 MEMBER COMPANIES → **11 COUNTRIES JOINED** → **ACCOUNTING FOR OVER 1 BILLION US$ MARKET**

WAFA is a private sector initiative established in 2016 to address the challenges of the fertilizer industry in West Africa. The association represents all the ECOWAS countries. The member companies are combining resources to find sustainable solutions to the market challenges and promote best practices in fertilizer production and use in order to optimize the region's potential for crop production and food security.

Today, the association has over 70 member companies in 11 different countries.

WAFA IS A NON-PROFIT ASSOCIATION REGISTERED IN MALI
UNDER NO 00015/MATDRE-DGAT BAMAKO

wafafertilizer.org
contact@wafafertilizer.org
wafafertilizer.org
wafa_fertilizer

7 OBJECTIVES TO BUILD A RELIABLE MARKET THAT GUARANTEES SUSTAINABLE ACCESS TO QUALITY AND AFFORDABLE FERTILIZER TO WEST AFRICAN FARMERS

FINANCE
Improving access to finance along the fertilizer supply chain

STEWARDSHIP
Promoting fertilizer stewardship of key players and farmers to improve consumption and effective use of fertilizers

TRADE
Advocating for regional integration in the ECOWAS region for increased trade

DIALOGUE
Promoting dialogue among private and public stakeholders on crop nutrition and related matters

AVAILABILITY
Improving fertilizer availability down to the last mile

QUALITY
Improving fertilizer quality through self-regulation, promotion of best practices and enforcement of ECOWAS regulations

INFORMATION
Promoting information sharing and improving information dissemination on fertilizer

OUR PARTNERS

IFDC
Developing Agriculture from the Ground Up

ECOWAS

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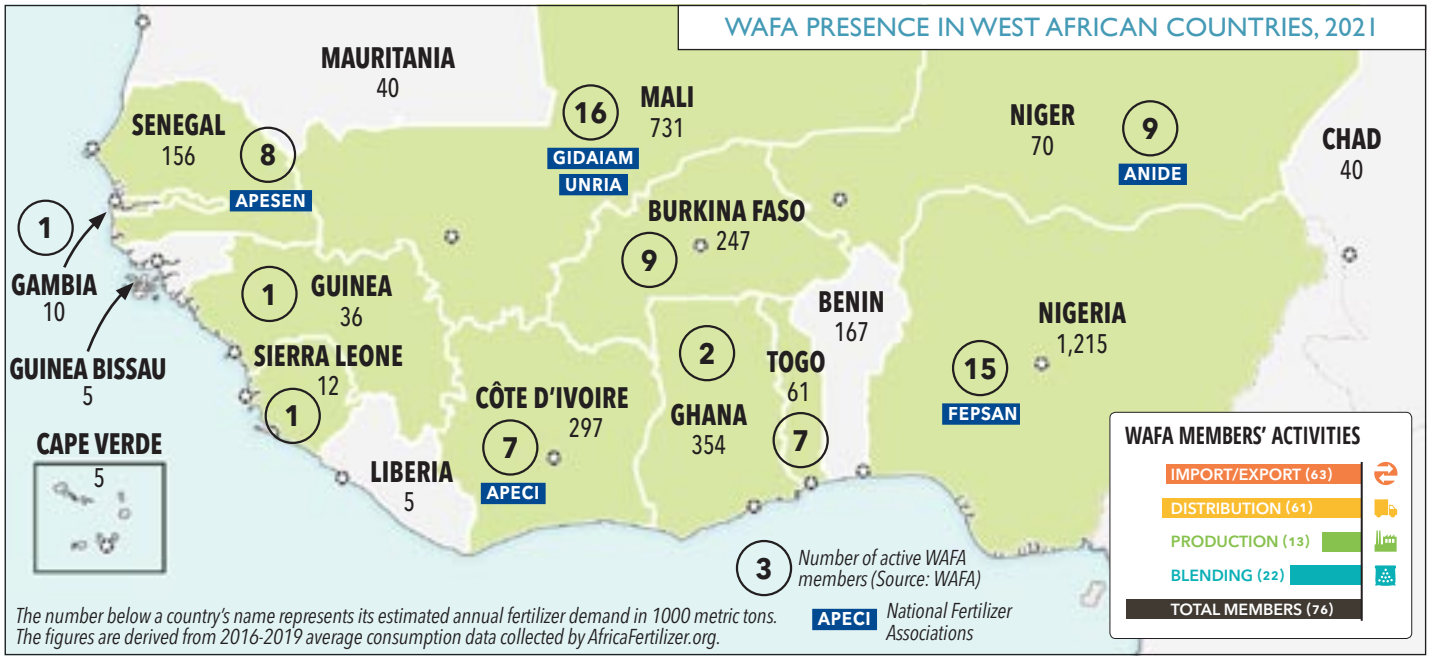
INTERNATIONAL FERTILIZER ASSOCIATION

afap

argus

AfricaFertilizer
Data-Driven Decisions for African Food Systems

WAFA MEMBERS DIRECTORY



BURKINA FASO

- CAFCOD INDUSTRIES
- CIPAM
- ETW AGRI INVEST
- FASOFERT
- GLOBUS INTERNATIONAL
- IFCA
- SOCIETE D'EXPLOITATION DES PHOSPHATES DU BURKINA FASO (SEPB)
- SOPAM/FERTAFRICA
- TROPIC AGRO CHEM

CÔTE D'IVOIRE

- AGRITRADE
- AGRO WEST AFRICA
- EXPORT TRADING GROUP (ETG)
- OCP AFRICA
- OLAM
- SEAP-CI
- YARA

GAMBIA

- INNOVATIVE TECHNOLOGY SOLUTIONS GLOBAL

GHANA

- AMG
- OMNIFERT

GUINEA

- EKAP GUINÉE

MALI

- ALFAROUK
- ARC EN CIEL
- CARRIÈRES ET CHAUX DU MALI SA (CCM-SA)
- DOUCOURÉ PARTENAIRE AGRO (DPA)
- ÉLÉPHANT VERT
- GNOUMANI SA
- GREAT QUEST FERTILIZER
- PARTENAIRE AGRICOLE
- SANGOYE SA
- SOCIÉTÉ AFRICAINE DE DISTRIBUTION (SAD)
- SOCIÉTÉ AG MOHAMED HOULOULOU
- SODIFA
- SOGEFERT
- SOMADECO
- SOPROTRILAD
- TOGUNA AGRO INDUSTRIES

NIGER

- AGRIMAIF
- AGRO NIGER CONSULT
- BARHAMA-NEA SARL
- ETS AOM
- FERME SEMENCIÈRE AINOMA
- NIGER INTRANTS SARL
- SOAPAM
- SOFIIA
- VETO SERVICE

NIGERIA

- ALBABELLO TRADING COMPANY LTD
- ALBARKA FERTILISER BLENDING CHEMICAL CO.
- ALELAWA FERTILIZER CHEMICAL COMP LTD
- AR-RAHIM SYNERGY
- DANGOTE FERTILIZER
- FERTILIZER FILLER
- GOLDEN FERTILIZER
- INTRIO SYNERGY
- KANO AGRICULTURAL SUPPLY COMPANY
- KAURA SUPPLIES & MARKETING COMPANY
- MBS MERCHANTS
- NOTORE
- UNITED FERTILIZER COMPANY LTD
- ZAMFARA STATE FERTILIZER COMPANY
- ZARA ENERGY RESOURCES

SENEGAL

- AGROPHYTEX
- AMAFRIQUE
- ASPRODEB
- FERMAGRO
- INDORAMA
- SEDAB
- TRANSFERT AFRICA SA
- TSE AFRIQUE

SIERRA LEONE

- MANGARA AGRIBUSINESS COMPANY

TOGO

- BIOCHEM
- ELISÉE COTRANE
- FREDO VANOS
- GROUPE DEC
- INTERTRADE
- MAGNIFIC'ORSE
- STD

Mr. Innocent Okuku of WAFA with informational banners explaining the organization's goals.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