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The ECOWAS fertilizer policy stresses the need to stimulate fertilizer supply and demand in the region. The USAID West Africa Fertilizer Program (USAID WAFP) furthers this goal through empowering private sector businesses operating in the region, by professionalizing and promoting sustainable business development models. This requires facilitating reliable access to accurate regional fertilizer market information and increasing dialogue between stakeholders for an improved business environment. To accomplish these objectives, the program will focus on the following:

- Expand private sector access to key, up-to-date information on fertilizer blending, distribution, packaging, labelling technology and marketing
- Adapt alternative financing models for use with fertilizer and disseminated to key stakeholders in agriculture
- Increase private sector adoption of regional standards for fertilizer labelling in selected countries
- Increase supplier and user access to regular fertilizer market and trade information
- Organize West Africa fertilizer fora and facilitate the creation of the West African Fertilizer Association (WAFA), and assist its sustainable development.

The program and its partners WAFA and AfricaFertilizer.org will address all the ECOWAS member states. However, the target countries are Nigeria, Burkina Faso, Cote d'Ivoire, Ghana, Mali, and Senegal – six countries that together consume more than 80 percent of the fertilizer used in West Africa.

The West Africa Fertilizer Business Information Map (WAFBIM) is a publication developed by USAID WAFP to present a regional overview of the fertilizer business environment. Its purpose is to furnish existing and prospective private sector players with the requisite fertilizer business and market information to guide and inform the industry’s decision-making. WAFBIM focuses on major business areas such as an overview of fertilizer production and blending facilities in West Africa, planned future fertilizer production and regional fertilizer labeling and packaging standards, ECOWAS fertilizer regulations and the fertilizer supply chain in West Africa. WAFBIM is updated and published regularly in close collaboration with the West Africa Fertilizer Association (WAFA) who contributes and validates existing, current and new information.
OVERVIEW
This is a register of the 6 fertilizer production, 1 micro-nutrient production and 24 blending facilities known to be operational in West Africa through the end of 2016.

For the purpose of this register, the fertilizer plants are segmented into two categories:

- **Production**: Those which undertake mining and/or some type of chemical reaction to produce fertilizer. Typically these are large specific product plants such as urea, ammonium nitrate, DAP and other NPK complex, etc.

- **Blending**: Those which mix macro- and micro-nutrient products to obtain a final product ready to use.

The register also lists micro-nutrient producers, and includes a section on proposed projects either under construction or likely to be operational within the next 5 years.

The fertilizer industry details were collected through a registration survey jointly undertaken by the USAID West Africa Fertilizer Program (USAID WAFP), West Africa Fertilizer Association (WAFA) and AfricaFertilizer.org (AFO). The details were obtained in 3 main ways: directly from the listed companies by use of questionnaires, from company websites and secondary data from various fertilizer-oriented institutions.

**Note**: Capacities listed are nominal and not operational capacities.

Information on all plants listed in this register can be found on the AfricaFertilizer.org official website: http://www.africafertilizer.org/

PRODUCTION
There are 7 fertilizer production plants in West Africa for nitrogen-based and phosphate-based fertilizers. Also included is a plant producing micro-nutrients.

**NITROGEN**
Notore Chemicals Industries Limited and Indorama Eleme Fertilizers & Chemicals Ltd, both in Rivers State, Nigeria, are currently the only plants producing urea and ammonia in West Africa.

**PHOSPHATES**
Several phosphate mines in West Africa extract phosphate rock but process the phosphate at a different level. Industries Chimiques du Sénégal (ICS)/Indorama process phosphate rock to phosphoric acid and uses that in their plant in Mbao to produce DAP, TSP.

Toguna Mining Production grinds and granulates the natural phosphate of Tilemsi for regional West Africa 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) in Matam.

**POTASH**
There are no current manufacturers of potash in West Africa. There are 2 potash deposits that have been identified and are being considered for development.
### PRODUCTION – NITROGEN

<table>
<thead>
<tr>
<th>Country</th>
<th>Plant Site</th>
<th>Company</th>
<th>Product</th>
<th>Year of Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>Onne, Rivers State</td>
<td>Notore Chemical Industries Plc</td>
<td>Urea</td>
<td>1988</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Rivers State</td>
<td>Indorama Eleme Fertilizers &amp; Chemicals Ltd</td>
<td>Urea</td>
<td>2013</td>
</tr>
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</table>

### PRODUCTION – SOIL SUPPLEMENTS AND MICRO-NUTRIENTS

<table>
<thead>
<tr>
<th>Country</th>
<th>Plant Site</th>
<th>Company</th>
<th>Product</th>
<th>Year of Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>Kaduna South</td>
<td>Cybernetics Nigeria Ltd</td>
<td>Micronutrients</td>
<td>1985</td>
</tr>
</tbody>
</table>

### PRODUCTION – PHOSPHATES

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>Plant Site</th>
<th>Company</th>
<th>Product</th>
<th>Year of Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mali</td>
<td>Tilemsi</td>
<td>Toguna Agro Industries</td>
<td>Phosphate Rock</td>
<td>2007</td>
</tr>
<tr>
<td>2</td>
<td>Senegal</td>
<td>Dakar</td>
<td>Industries Chimiques du Sénégal (ICS)</td>
<td>Phosphate Rock, Phosphoric Acid, DAP, SSP/TSP</td>
<td>1976</td>
</tr>
<tr>
<td>3</td>
<td>Senegal</td>
<td>Matam</td>
<td>Société d’Études et de Réalisation des Phosphates (SERPM)</td>
<td>Phosphate Rock</td>
<td>2007</td>
</tr>
<tr>
<td>4</td>
<td>Togo</td>
<td>Kpémé</td>
<td>Société Nouvelle des Phosphates du Togo (SNPT)</td>
<td>Phosphate Rock</td>
<td>1961</td>
</tr>
</tbody>
</table>

### BLENDING

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>Plant Site (Town/State)</th>
<th>Company</th>
<th>Year of Establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Burkina Faso</td>
<td>Bobo Dioulasso</td>
<td>CIPAM SA</td>
<td>2003</td>
</tr>
<tr>
<td>2</td>
<td>Côte d’Ivoire</td>
<td>Abidjan</td>
<td>Agro West Africa</td>
<td>2012</td>
</tr>
<tr>
<td>3</td>
<td>Côte d’Ivoire</td>
<td>Abidjan</td>
<td>Louis Dreyfus Commodities Côte d’Ivoire (Unit 1)</td>
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<tr>
<td>4</td>
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<td>Abidjan</td>
<td>Louis Dreyfus Commodities Côte d’Ivoire (Unit 2)</td>
<td>2015</td>
</tr>
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<td>Abidjan</td>
<td>Sea Invest</td>
<td>2013</td>
</tr>
<tr>
<td>6</td>
<td>Côte d’Ivoire</td>
<td>Abidjan</td>
<td>Yara Côte d’Ivoire</td>
<td>1990</td>
</tr>
<tr>
<td>7</td>
<td>Côte d’Ivoire</td>
<td>San Pedro</td>
<td>SEAP CI (Société d’Engrais d’Aménagement et de Phytosanitaire de Côte d’Ivoire)</td>
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</tr>
<tr>
<td>8</td>
<td>Ghana</td>
<td>Kpong</td>
<td>Louis Dreyfus Commodities Ltd - Ghana</td>
<td>2013</td>
</tr>
<tr>
<td>9</td>
<td>Ghana</td>
<td>Tema</td>
<td>Chemico Ltd</td>
<td>2004</td>
</tr>
<tr>
<td>10</td>
<td>Ghana</td>
<td>Tema</td>
<td>Yara Ghana Ltd</td>
<td>2007</td>
</tr>
<tr>
<td>11</td>
<td>Guinea</td>
<td>Conakry</td>
<td>Toguna Guinea Industries</td>
<td>2016</td>
</tr>
<tr>
<td>12</td>
<td>Mali</td>
<td>Bamako</td>
<td>PROFEBAni</td>
<td>--</td>
</tr>
<tr>
<td>13</td>
<td>Mali</td>
<td>Bamako</td>
<td>Toguna Agro Industries</td>
<td>2000</td>
</tr>
<tr>
<td>14</td>
<td>Mali</td>
<td>Ségou</td>
<td>Doucœur Partenaire Agricole</td>
<td>2011</td>
</tr>
<tr>
<td>15</td>
<td>Mali</td>
<td>Sikasso</td>
<td>Société Générale des Fertilisants (SOGEFERT)</td>
<td>2010</td>
</tr>
<tr>
<td>16</td>
<td>Nigeria</td>
<td>Aleto-Eleme, Rivers State</td>
<td>PrimeGold Fertilizers</td>
<td>2009</td>
</tr>
<tr>
<td>17</td>
<td>Nigeria</td>
<td>Gombe State</td>
<td>Springfield Agro Ltd</td>
<td>2000</td>
</tr>
<tr>
<td>18</td>
<td>Nigeria</td>
<td>Jigawa State</td>
<td>Abdullahiez Fertilizer Company Ltd</td>
<td>2011</td>
</tr>
<tr>
<td>19</td>
<td>Nigeria</td>
<td>Kaduna</td>
<td>MFB Fertilizer &amp; Chemical Companies Ltd</td>
<td>2013</td>
</tr>
<tr>
<td>20</td>
<td>Nigeria</td>
<td>Kano State</td>
<td>Continental Fertilizer Ltd</td>
<td>2009</td>
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<tr>
<td>22</td>
<td>Nigeria</td>
<td>Lagos</td>
<td>Golden Fertilizers</td>
<td>1998</td>
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<tr>
<td>23</td>
<td>Nigeria</td>
<td>Nassarawa State</td>
<td>Agtho Fertilizers</td>
<td>2002</td>
</tr>
<tr>
<td>24</td>
<td>Togo</td>
<td>Lomé</td>
<td>Compagnie des Intrants Agricoles du Togo (CIAT)</td>
<td>2011</td>
</tr>
</tbody>
</table>
PRODUCTION PROFILES

MALI

TILEMSI

PRODUCTS: TOGUNA AGRO INDUSTRIES
Phosphate Rock

CAPACITY: 300,000 mtpy

STORAGE CAPACITY: 10,000 mt raw material; 10,000 mt finished product

YEAR ESTABLISHED: 2007

CONTACT: Oumar Guindo
Director General
+223 66 74 00 60, + 223 20 20 30 81/85
omguindo@groupetoguna.com

NIGERIA

KADUNA SOUTH

PRODUCTS: CYBERNETICS NIGERIA LTD
Micronutrients

CAPACITY: 2,500 mtpy

STORAGE CAPACITY: 850 mt raw material; 1,500 mt finished product

YEAR ESTABLISHED: 1985

CONTACT: Pius Kole-James
Managing Director and CEO
+234 80 53 15 88 52
piuskolejames@yahoo.com

RIVERS STATE

PRODUCTS: INDRORAMA ELEME FERTILIZERS & CHEMICALS LTD
Urea

CAPACITY: 1,500,000 mtpy

YEAR ESTABLISHED: 2013

CONTACT: Rahul Mohan
Vice President
+234 80 52 02 23 95
fertsales@mdorama.com.ng

ONNE, RIVERS STATE

PRODUCTS: NOTORCHEMICAL INDUSTRIES PLC
Urea

CAPACITY: 400,000 mtpy

YEAR ESTABLISHED: 1988

CONTACT: Dr. Innocent Okuku
Group Head, Commercial Services
+234 80 73 80 01 37
innocent.okuku@notore.com

SENEGAL

DAKAR

PRODUCTS: INDUSTRIES CHIMIQUES DU SÉNÉGAL (ICS)
Phosphate Rock, Phosphoric Acid, DAP, SSP/TSP

CAPACITY: Unknown

YEAR ESTABLISHED: 1976

CONTACT: Santosh Dorak
Marketing Manager
+221 777 40 08 93
sdorak@ics.sn

MATAM

PRODUCTS: SOCIETE D’ETUDES ET DE REALISATION DES PHOSPHATES (SERPM)
Phosphate Rock

CAPACITY: 25,000 mtpy

YEAR ESTABLISHED: 2007

CONTACT: Eugene Ngor Faye
Director
+221 338 25 69 00
serpm@orange.sn

TOGO

KPÈMÈ

PRODUCTS: SOCIÉTÉ NOUVELLE DES PHOSPHATES DU TOGO (SNPT)
Phosphate Rock

CAPACITY: 300,000 mtpy

YEAR ESTABLISHED: 1961

CONTACT: Michel Kezie
Director General
+228 90 04 07 96
dg@phosphatesdutogo.com
## BLENDING PROFILES

### BURKINA FASO

**BOBO DIOULASSO**
- **Type of plant**: EMT Blender
- **Capacity**: 60 mtph
- **Year established**: 2003
- **Contact**: Bassole Armand
  - Operations Manager
  - +226 78 03 61 10, +226 20 98 40 61

### CÔTE D’IVOIRE

**ABIDJAN**
- **Type of plant**: RS Trading Blender
- **Capacity**: 50 mtph
- **Year established**: 2012
- **Contact**: Philippe Nakad
  - General Manager
  - +225 08 47 75 43, +225 21 22 12 40
dg@agrowestafrica.com

**LOUIS DREYFUS COMMODITIES CÔTE D’IVOIRE (UNIT 1)**
- **Type of plant**: Blender
- **Capacity**: 20 mtph
- **Year established**: 2001
- **Contact**: Frederic Legros
  - Head of Fertilizer Department
  - +225 09 95 85 96, +225 21 21 55 50
frederic.legros@lcom.com

**LOUIS DREYFUS COMMODITIES CÔTE D’IVOIRE (UNIT 2)**
- **Type of plant**: Blender
- **Capacity**: 100 mtph
- **Year established**: 2015
- **Contact**: Frederic Legros
  - Head of Fertilizer Department
  - +225 09 95 85 96, +225 21 21 55 50
frederic.legros@lcom.com

**SEA INVEST**
- **Type of plant**: CF Technologie Blender
- **Capacity**: 100 mtph
- **Year established**: 2013
- **Contact**: Anthony Arcidacio
  - General Manager
  - +225 21 21 85 00
anthony.arcidacio@sea-invest.com

**SAN PEDRO**
- **Type of plant**: EMT Blender
- **Capacity**: 40 mtph
- **Year established**: 2011
- **Contact**: Atse Fernand Niango
  - Sales Manager
  - +225 07 79 80 86
  - fniango@afrhemsofaco.net

### GHANA

**TEMA**
- **Type of plant**: Bulk Blender
- **Capacity**: 30 mtph
- **Year established**: 2004
- **Contact**: Prince Ayegyem Yeboah
  - Director of Sales and Marketing
  - +233 303 20 29 91
chemico@chemicogh.com

**LOUIS DREYFUS COMMODITIES LTD - GHANA**
- **Type of plant**: Blending Plant
- **Capacity**: 20 mtph
- **Year established**: 2013
- **Contact**: Mawunyo Puplampu
  - Operations Manager
  - +233 540 10 72 62
mawunyo.puplampu@lcom.com

**TEMA**
- **Type of plant**: Bulk Blender
- **Year established**: 2007
- **Contact**: Danquah Addo-Yobo
  - Managing Director
  - +233 540 11 21 37, +233 302 77 00 79
danquah.addo-yobo@yara.com

**KPOONG**
- **Type of plant**: Blending Plant
- **Capacity**: 20 mtph
- **Year established**: 2013
- **Contact**: Mawunyo Puplampu
  - Operations Manager
  - +233 540 10 72 62
mawunyo.puplampu@lcom.com

**YARA GHANA LTD**
- **Type of plant**: Bulk Blender
- **Year established**: 2007
- **Contact**: Danquah Addo-Yobo
  - Managing Director
  - +233 540 11 21 37, +233 302 77 00 79
danquah.addo-yobo@yara.com

### GUINEA

**CONAKRY**
- **Type of plant**: Blender
- **Capacity**: 90 mtph
- **Year established**: 2016
- **Contact**: Sékou Cissé
  - Directeur Général
  - +224 620 72 77 72, +224 664 25 62 21
togunaguinee@gmail.com

**TOGUNA GUINEA INDUSTRIES**
- **Type of plant**: Blender
- **Capacity**: 90 mtph
- **Year established**: 2016
- **Contact**: Sékou Cissé
  - Directeur Général
  - +224 620 72 77 72, +224 664 25 62 21
togunaguinee@gmail.com

### MALI

**SÉGOU**
- **Type of plant**: EMT Blender
- **Capacity**: 40 mtph
- **Year established**: 2011
- **Contact**: Fatoumata Doucouré
  - Financial Manager
  - +223 20 21 69 06, +223 66 16 80 17
doucouredefpaindustries.com, fasodigu@gmail.com

**DOUCOURÉ PARTENAIRE AGRICOLE**
- **Type of plant**: EMT Blender
- **Capacity**: 60 mtph
- **Year established**: 2011
- **Contact**: 2011
**BAMAKO**

**Profefa**
- **Capacity:** 1 mtph
- **Year established:** Unknown
- **Contact:** +223 20 21 00 40

**TOGUNA AGRO INDUSTRIES**
- **Type of plant:** Blender
- **Capacity:** 90 mtph
- **Storage capacity:** 10,000 mt raw material; 8,000 mt to 10,000 mt finished product
- **Year established:** 2000
- **Contact:** Oumar Guindo
  - General Manager: +223 66 74 00 60, +223 20 20 30 81/85
  - omguindo@grupetoguna.com

**SIKASSO**

**SOCIÉTÉ GÉNÉRALE DES FERTILISANTS (SOGEFERT)**
- **Type of plant:** Layco by Yargus Declining Weight Blender
- **Capacity:** 40 mtpd
- **Year established:** 2010
- **Contact:** Ousmane Sidibe
  - CEO: +223 76 40 31 15
  - ousmane.sidibe@gmail.com

**NIGERIA**

**JIGAWA STATE**

**Abдуlazzeez fertilizer company ltd**
- **Type of plant:** NPK Blender
- **Capacity:** 6 mtph
- **Year established:** 2011
- **Contact:** Sa’ysanu Abdulazeez
  - Managing Director: +234 80 33 69 30 01
  - azeefertilizercoy@gmail.com

**NASARAWA STATE**

**Agtho Fertilizers**
- **Type of plant:** NPK Blender
- **Capacity:** 40 mtph
- **Year established:** 2002
- **Contact:** Boniface Elewodalu
  - Managing Director and CEO: +234 80 30 00 00 00
  - bon@agthofertilizer.com

**KANO STATE**

**Continental Fertilizer ltd**
- **Type of plant:** NPK Blender
- **Capacity:** 90 mtph
- **Year established:** 2009
- **Contact:** Alh Ibrahim Saulawa
  - Managing Director and CEO: +234 70 30 00 00 00
  - info@continentalfertilizerltd.com

**LAGOS**

**Golden Fertilizers**
- **Type of plant:** NPK Blender
- **Capacity:** 200 mtph
- **Year established:** 1998
- **Contact:** Olusegun Falade
  - Head, Agro Input: +234 81 13 39 44 72, +234 80 83 83 03 20
  - sfalade@fmmplc.com

**KADUNA**

**Mfb fertilizer & chemical companies ltd**
- **Type of plant:** Ranco Blender
- **Capacity:** 90 mtph
- **Year established:** 2013
- **Contact:** Mohammed Maina
  - Assistant General Manager: +234 80 33 11 40 24, +234 80 99 28 00 98
  - maimoha@yahoo.com

**ALETO-ELEME, RIVERS STATE**

**Primegold Fertilizers**
- **Type of plant:** NPK Blender
- **Capacity:** 7 mtph
- **Year established:** 2016
- **Contact:** Sanusi Mohammed
  - Managing Director and CEO: +234 80 37 03 95 73
  - sfchemproduct@gmail.com

**GOMBE STATE**

**Springfield Agro Ltd**
- **Type of plant:** NPK Blender
- **Capacity:** 2 mtph
- **Year established:** 2000
- **Contact:** Mr. Tarun Das
  - Managing Director and CEO: +234 70 12 99 99 99
  - tarun@afriventures.com

**TOGO**

**Lomé**

**Compagnie des intrants agricoles du togo (ciat)**
- **Type of plant:** EMT Blender
- **Capacity:** 120 mtph
- **Year established:** 2011
- **Contact:** Desanti Gerard
  - General Director: +228 90 04 64 24
  - desantigerard@yahoo.fr, desanti@ciat.tg
## FUTURE PROJECTS PROFILES

### BURKINA FASO

**BOBO DIOULASSO**

**FASO FERT**  
- **Project:** Dolomite crushing equipment  
- **Expected capacity:** Unknown  
- **Expected completion:** 2017  
- **Contact:**  
  - Pascal Le Moel  
  - Managing Director  
  - fasofertdg@gmail.com

**TROPIC AGRO CHEM**  
- **Project:** Blender  
- **Expected capacity:** Unknown  
- **Expected completion:** 2017  
- **Contact:**  
  - Al Hassam Sanou  
  - CEO  
  - tropic_agrochem1@yahoo.fr

### GHANA

**TEMA**

**OMNI FERT**  
- **Project:** Bulk Blender  
- **Expected capacity:** 250,000 mtpy  
- **Expected completion:** 2017 (Q1)  
- **Contact:**  
  - Michael Zormelo  
  - Managing Director  
  - miczormelo@hotmail.com  
  - +233 540 10 51 59

### NIGERIA

**BAYELSA**

**BRASS FERTILIZER**  
- **Project:** Producer (urea)  
- **Expected capacity:** 1.3 mtpy  
- **Expected completion:** 2020 (Q1)  
- **Contact:**  
  - --

**LAGOS**

**DANGOTE FERTILIZER**  
- **Project:** Producer (urea)  
- **Expected capacity:** 2.8 mtpy  
- **Expected completion:** 2017 (Q1)  
- **Contact:**  
  - Aliyu Suleiman  
  - Corporate Strategy Lead  
  - aliyusuleiman@dangote-group.com  
  - +234 80 70 49 24 69

**OFELESA**

**BAYELSA FERTILIZER**

- **Project:** Producer (urea)  
- **Expected capacity:** 2.8 mtpy  
- **Expected completion:** 2017 (Q1)  
- **Contact:**  
  - --
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 factor 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

<table>
<thead>
<tr>
<th>Port</th>
<th>Bamako</th>
<th>Ouagadougou</th>
<th>Niamey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abidjan</td>
<td>1,184 km</td>
<td>1,176 km</td>
<td>1,629 km</td>
</tr>
<tr>
<td>Cotonou</td>
<td>2,036 km</td>
<td>2,012 km</td>
<td>1,056 km</td>
</tr>
<tr>
<td>Dakar</td>
<td>1,431 km</td>
<td>2,401 km</td>
<td>2,854 km</td>
</tr>
<tr>
<td>Lagos</td>
<td>1,428 km</td>
<td>852 km</td>
<td>799 km</td>
</tr>
<tr>
<td>Lomé</td>
<td>1,873 km</td>
<td>970 km</td>
<td>1,136 km</td>
</tr>
<tr>
<td>Tema</td>
<td>2,012 km</td>
<td>1,042 km</td>
<td>1,495 km</td>
</tr>
</tbody>
</table>

### Table 2. Port infrastructure characteristics

<table>
<thead>
<tr>
<th>Port</th>
<th>Cotonou</th>
<th>Lomé</th>
<th>Tema</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size/area of water body</td>
<td>60 ha</td>
<td>81 ha</td>
<td>166 ha</td>
</tr>
<tr>
<td>Length of dock</td>
<td>1,980 m</td>
<td>1,170 m</td>
<td>2,615 m</td>
</tr>
<tr>
<td>Number of dock work stations</td>
<td>12</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Permitted vessel draught</td>
<td>10 m</td>
<td>11 m</td>
<td>9.6 m</td>
</tr>
<tr>
<td>Warehouse capacities</td>
<td>83,500 m³</td>
<td>62,000 m³</td>
<td>53,270 m³</td>
</tr>
</tbody>
</table>

Source: isemar
OVERVIEW OF WEST AFRICAN COUNTRIES

**BENIN**
Capital & major city: Porto Novo, Cotonou
Geographical area: Land 110,622 km²; Water 2,000 km²
Total 112,622 km²
Population: 10.6 million (2011 est.)
Labor force: 3.662 million (2007 est.)
GDP real growth rate: 2012: 5.4%; 2013: 5.6%; 2014: 5.4%
GDP composition by sector: 35.9% agriculture
13.8% industry
50.3% services (2014 est.)
Major agricultural products: Cotton, maize, cassava (manioc, tapioca), yam, beans, palm oil, groundnut, cashew, livestock
Major industries: Textiles, food processing, construction materials, cement
Land use: 31.3% agricultural land
40% forest
28.7% other (2011 est.)

**BURKINA FASO**
Capital & major city: Ouagadougou, Bobo Dioulasso
Geographical area: Land 273,800 km²; Water 400 km²
Total 274,200 km²
Population: 10.6 million
Labor force: 7.692 million (2011 est.)
GDP real growth rate: 2013: 6.6%; 2014: 4.9%; 2015: 5%
GDP composition by sector: 22.9% agriculture
25.7% industry
51.5% services (2014 est.)
Major agricultural products: Cotton, groundnut, shea nuts, sesame, sorghum, millet, maize, rice, livestock
Major industries: Cotton lint, beverages, agricultural processing, soap, cigarettes, textiles, gold
Land use: 43% agricultural land
20.4% forest
36.6% other (2011 est.)

**CAPE VERDE**
Capital & major city: Praia, Mindelo
Geographical area: Land 4,033 km²; Water 0 km²
Total 4,033 km²
Population: 513,900
Labor force: 196,100 million (2007 est.)
GDP real growth rate: 2013: 1%; 2014: 1.8%; 2015: 3.5%
GDP composition by sector: 9.7% agriculture
18.3% industry
72% services (2015 est.)
Major agricultural products: Bananas, maize, beans, sweet potato, sugar-cane, coffee, groundnut, fish
Major industries: Food and beverages, fish processing, shoes and garments, salt mining, ship repair
Land use: 18.6% agricultural land
21% forest
60.4% other (2011 est.)

**CÔTE D’IVOIRE**
Capital & major city: Yamoussoukro, Abidjan
Geographical area: Land 318,003 km²; Water 4,460 km²
Total 322,463 km²
Population: 22.16 million
Labor force: 63.2% million (2015 est.) (68% in agriculture)
GDP real growth rate: 2013: 8.7%; 2014: 7.9%; 2015: 8.2%
GDP composition by sector: 17.4% agriculture
20.3% industry
62.2% services (2015 est.)
Major agricultural products: Coffee, cocoa beans, banana, palm kernels, maize, rice, cassava (manioc, tapioca), sweet potato, 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: 64.8% agricultural land
32.7% forest
25% other (2011 est.)
### Gambia
**Capital & major city**: Banjul, Brikama  
**Geographical area**: Land 10,120 km²; Water 1,180 km²  
**Total**: 11,300 km²  
**Population**: 1,928,000  
**Labor force**: 1,777,100 (2007 est.)  
**GDP growth rate**: 6.6% – 2014  
**GDP composition by sector**: 19.9% agriculture, 13.2% industry, 66.9% services (2015 est.)  
**Major agricultural products**: Rice, millet, sorghum, groundnut, maize, sesame, cassava (manioc, tapioca), palm kernels, cattle, sheep, goats  
**Major industries**: Groundnut, fish, hides, tourism, beverages, agricultural machinery assembly, woodworking, metalworking, clothing  
**Land use**: 56.1% agricultural land, 43.9% forest, 0.1% other (2011 est.)

### Guinea
**Capital & major city**: Conacry, PÎërezékore  
**Geographical area**: Land 245,857 km²; Water 1,400 km²  
**Total**: 247,257 km²  
**Population**: 12,28 million  
**Labor force**: 11,54 million (2015 est.)  
**GDP growth rate**: 2013: 7.3% – 2014: 4% – 2015: 3.5%  
**GDP composition by sector**: 20.7% agriculture, 27.7% industry, 51.6% services (2014)  
**Major agricultural products**: Cocoa, rice, cassava (manioc, tapioca), groundnut, maize, shea nuts, banana, timber, pineapple, vegetables  
**Major industries**: Mining, lumbering, light manufacturing, aluminum smelting, food processing, cement, small commercial ship building, petroleum  
**Land use**: 69.1% agricultural land, 21.2% forest, 9.7% other (2011 est.)

### Ghana
**Capital & major city**: Accra, Kumasi  
**Geographical area**: Land 227,533 km²; Water 11,000 km²  
**Total**: 238,533 km²  
**Population**: 26.79 million  
**Labor force**: 11,54 million (2015 est.)  
**GDP growth rate**: 2013: 7.3% – 2014: 4% – 2015: 3.5%  
**GDP composition by sector**: 20.7% agriculture, 27.7% industry, 51.6% services (2014)  
**Major agricultural products**: Cocoa, rice, cassava (manioc, tapioca), groundnut, maize, shea nuts, banana, timber, pineapple, vegetables  
**Major industries**: Mining, lumbering, light manufacturing, aluminum smelting, food processing, cement, small commercial ship building, petroleum  
**Land use**: 69.1% agricultural land, 21.2% forest, 9.7% other (2011 est.)

### Guinea-Bissau
**Capital & major city**: Bissau, Bafatá  
**Geographical area**: Land 28,120 km²; Water 8,005 km²  
**Total**: 36,125 km²  
**Population**: 1,801,000  
**Labor force**: 632,700 million (2007 est.)  
**GDP growth rate**: 2013: 0.0% – 2014: 5% – 2015: 4.7%  
**GDP composition by sector**: 44.7% agriculture, 13.4% industry, 41.9% services (2015 est.)  
**Major agricultural products**: Rice, maize, beans, cassava (manioc, tapioca), cashew, groundnut, palm kernels, cotton, timber, fish  
**Major industries**: Agricultural products processing, beer, soft drinks  
**Land use**: 44.8% agricultural land, 55.2% forest, 0.0% other (2011 est.)

### Liberia
**Capital & major city**: Monrovia, Gbarma  
**Geographical area**: Land 96,320 km²; Water 15,049 km²  
**Total**: 111,369 km²  
**Population**: 4,397,000  
**Labor force**: 1,554 million (2014 est.)  
**GDP growth rate**: 2013: 8.7% – 2014: 0.7% – 2015: 0.9%  
**GDP composition by sector**: 36% agriculture, 16% industry, 48% services (2015 est.)  
**Major agricultural products**: Rubber, coffee, cocoa, rice, cassava (manioc, tapioca), palm oil, sugarcane, banana, sheep, goats, timber  
**Major industries**: Mining (iron ore), rubber processing, palm oil processing, timber, diamonds  
**Land use**: 28.1% agricultural land, 44.6% forest, 27.3% other (2011 est.)

### Mali
**Capital & major city**: Bamako, Sikasso  
**Geographical area**: Land 1,240,192 km²; Water 20,002 km²  
**Total**: 1,260,192 km²  
**Population**: 17,09 million  
**Labor force**: 5,644 million (2015 est.)  
**GDP growth rate**: 2013: 1.7% – 2014: 7.2% – 2015: 5%  
**GDP composition by sector**: 38.5% agriculture, 23.3% industry, 38.2% services (2013 est.)  
**Major agricultural products**: Cotton, millet, rice, corn, vegetables, groundnut, cattle, sheep, goats  
**Major industries**: Food processing, construction, phosphate and gold mining  
**Land use**: 34.1% agricultural land, 10.2% forest, 55.7% other (2011 est.)
### Niger
- **Capital & major city**: Niamey, Zinder
- **Geographical area**: Land: 1,266,700 km²; Water: 300 km²
- **Total**: 1,267,000 km²
- **Population**: 19.1 million
- **Labor force**: 6.3 million (2015 est.) (90% in agriculture)
- **GDP real growth rate**: 2013: 4.6% – 2014: 4.9% – 2015: 4.3%
- **GDP composition by sector**: 17.3% agriculture; 18.9% industry; 45.5% services (2015 est.)
- **Major agricultural products**: Cowpea, cotton, groundnut, 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**: 35.1% agricultural land; 1% forest; 63.9% other (2011 est.)

### Nigeria
- **Capital & major city**: Abuja, Lagos
- **Geographical area**: Land: 910,768 km²; Water: 1,300 km²
- **Total**: 923,768 km²
- **Population**: 177.3 million
- **Labor force**: 57.4 million (2015 est.) (70% in agriculture)
- **GDP real growth rate**: 2013: 5.4% – 2014: 6.3% – 2015: 4%
- **GDP composition by sector**: 20.3% agriculture; 23.6% industry; 56.1% services (2013 est.)
- **Major agricultural products**: Cocoa, groundnut, cotton, palm oil, maize, rice, sorghum, millet, cassava (manioc, tapioca), yam, rubber; cattle, sheep, goats, pigs, timber, fish
- **Major industries**: Crude oil, coal, tin, columbite, rubber products, wood, hides/skins, textiles, cement and other construction materials, food products, footwear, chemicals, fertilizer, printing, ceramics, steel
- **Land use**: 78% agricultural land; 9.5% forest; 12.5% other (2011 est.)

### Senegal
- **Capital & major city**: Dakar, Touba
- **Geographical area**: Land: 192,530 km²; Water: 4,192 km²
- **Total**: 196,722 km²
- **Population**: 14.67 million
- **Labor force**: 6.515 million (2015 est.) (77.5% in agriculture)
- **GDP real growth rate**: 2013: 3.6% – 2014: 4.7% – 2015: 5.1%
- **GDP composition by sector**: 17.1% agriculture; 24.3% industry; 58.6% services (2015 est.)
- **Major agricultural products**: Groundnut, millet, maize, sorghum, rice, cotton, tomato, green vegetables, cattle, poultry, pigs, fish
- **Major industries**: Agriculture and fish processing, phosphate mining, fertilizer production, petroleum refining, zircon and gold mining, construction materials, ship construction and repair
- **Land use**: 46.8% agricultural land; 43.8% forest; 9.4% other (2011 est.)

### Togo
- **Capital & major city**: Lomé, Sokodé
- **Geographical area**: Land: 54,385 km²; Water: 2,400 km²
- **Total**: 56,785 km²
- **Population**: 7.115 million
- **Labor force**: 2.595 million (2007 est.) (65% in agriculture)
- **GDP real growth rate**: 2013: 5.4% – 2014: 5% – 2015: 5.4%
- **GDP composition by sector**: 29.5% agriculture; 21% industry; 49.5% services (2013 est.)
- **Major agricultural products**: Coffee, cocoa, cotton, yam, cassava (manioc, tapioca), maize, beans, rice, millet, sorghum, livestock, fish
- **Major industries**: Phosphate mining, agricultural processing, cement, handicrafts, textiles, beverages
- **Land use**: 67.4% agricultural land; 4.9% forest; 27.7% other (2011 est.)

Source: CIA (World Factbook) and The World Bank
The West Africa legal framework for fertilizer trade and quality control, which is being adopted, 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 C/REG..../..../.... relating to the role, organization and functioning of the West Africa Fertilizer Quality Control Committee.
3. Implementing Regulation C/REG..../..../.... relating to the labeling and tolerance limits of fertilizers traded in West Africa.
4. Implementing Regulation C/REG..../..../.... relating to the inspection of fertilizers in West Africa.
5. Implementing Regulation C/REG..../..../.... relating to the analysis of fertilizers in West Africa.

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. 2) and its operational budget is provided for by the ECOWAS Commission.
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 : satraore@ecowas.int
ECOWAS TOLERANCE LIMITS
FOR PLANT NUTRIENTS, HEAVY METALS AND BAG WEIGHT
(Ref. Regulation C/REG/.../.../...)

Economic Community of West African States

**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:

<table>
<thead>
<tr>
<th>TYPE OF FERTILIZER</th>
<th>TOLERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single nutrient fertilizers:</td>
<td>Maximum 0.3 units</td>
</tr>
<tr>
<td>With up to 20% nutrient content</td>
<td></td>
</tr>
<tr>
<td>With more than 20% nutrient content</td>
<td>Maximum 0.5 units</td>
</tr>
<tr>
<td>Complex fertilizers and NPK blends</td>
<td>Maximum 1.1 units for individual nutrients and maximum 2.5% for all nutrients combined</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>NUTRIENTS</th>
<th>TOLERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium (Ca)</td>
<td>0.2 unit ±5% of guarantee</td>
</tr>
<tr>
<td>Magnesium (Mg)</td>
<td></td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>HEAVY METAL</th>
<th>MULTIPLIER</th>
<th>TOLERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm per 1% P.O.</td>
<td>ppm per 1% micronutrients</td>
<td>milligrams per kilogram of biosolids or compost products – dry weight basis</td>
</tr>
<tr>
<td>Arsenic (As)</td>
<td>13</td>
<td>112</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Cobalt (Co)</td>
<td>136</td>
<td>2,228*</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>61</td>
<td>463</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Molybdenum (Mo)</td>
<td>42</td>
<td>300*</td>
</tr>
<tr>
<td>Nickel (Ni)</td>
<td>250</td>
<td>1,900</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>26</td>
<td>180</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>420</td>
<td>2,900*</td>
</tr>
</tbody>
</table>

* 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.O. 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.O. 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.O. 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.O. 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.O. 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.O.) or Potassium (K.O.), 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:

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

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: satraore@ecowas.int

YOUR CLAIM IS A WARRANTY!
Economic Community of West African States

(Ref. Regulation C/REG/.../.../...)

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 (P₂O₅) and Soluble Potash (K₂O) with each guarantee separated by a hyphen, “-”, eg., 15-15-15. The grade shall be in whole numbers and in the same terms, order, and percentages as in the guaranteed analysis.
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$_2$O$_5$) .................................... %
Soluble Potash (K$_2$O) .................................... %
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$_2$O$_5$, K$_2$O) 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:

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ECOWAS Commission
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**WAFA is born**

**West African Fertilizer Professionals are United and Committed!**

**Accra – September 2016**

**Concrete Objectives**

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<tr>
<th>Fertilizer Quality</th>
<th>A priority! Controls, analysis, recommendations and enforcement of regulations</th>
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<tbody>
<tr>
<td>Availability</td>
<td>A necessity! Ports, infrastructures, constraints and opportunities</td>
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<tr>
<td>Funding</td>
<td>A tool! Financial/funding mechanisms, Government subsidies</td>
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<tr>
<td>Training &amp; Information</td>
<td>Prospection: market survey, good agricultural practices</td>
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**An answer to food security in West Africa?**

“United to develop the fertilizer market in West Africa” is the aspiration of WAFA members in the sub-region due to both the necessity to widely valorize the profession and the rapid growth of agricultural development in Sub-Saharan Africa.

With recent developments in agricultural policies of African leaders with the objective to feed a population with the fastest demographic growth rate in the world (25% in 10 years according to the USDA), the development prospects of the agricultural sector of the zone are obvious and in constant change.

Food self-sufficiency cannot be done with a low productivity and without any improvement of soil that is often depleted, but globalisation imposes sustainable production which entails respect of people, environment, ethics and dignity in the conduct of business.

It is within this context that WAFA envisions the fertilizer market of tomorrow for West Africa.

Want to know more?

WAFA is a regional association registered in Mali, led by an elected executive board of 7 members coming from 7 different countries.

[www.wafafertilizer.org](http://www.wafafertilizer.org)

[contact@wafafertilizer.org](mailto:contact@wafafertilizer.org)
Challenges for a reliable market

To produce or import quality affordable fertilizers and provide them on time to farmers trained on good practices.

A Vision:
To become a West African structure of reference, bringing together all the professionals in the fertilizer sector to work on objectives of common interest in order to promote rational utilization of fertilizers and to render them competitive, in the interest of sustainable agriculture.

A Mission:
To put in place a conducive environment that allows accessibility and optimal use of quality fertilizers by West African producers/farmers. To contribute to the development of regional agricultural policies in terms of agronomy, infrastructure, revenues and financing, in a transparent manner and in the general interest of agricultural development. To support/assist members in facilitating business connections, access to production requirements and financing mechanisms, in order to improve and develop the fertilizer market. For this, the Association must bring together all skills, expertise and resources of its members and its technical partners.

An Ambition: To encourage West African farmers to make better use of fertilizers, in larger quantities while generating their interest through training and awareness-creation on productivity, confidence in quality of label, proximity, and prices studied within the closest geo-economic context.

Our partners

IFDC through the West Africa Fertilizer Program funded by USAID is the facilitator of the creation and coordination of WAFA.