

# TECHNICAL REPORT

## 2019 Fertilizer Statistics Validation Workshops

### Fertilizer Technical Working Groups (FTWG)

#### Burkina Faso | Cote d'Ivoire | Mali | Senegal

**Burkina Faso FTWG**



**Cote d'Ivoire FTWG**



**Mali FTWG**



**Senegal FTWG**



*Compilation of fertilizer statistics validated by FTWGs  
Burkina Faso, Côte d'Ivoire, Mali, Senegal  
October 2020*

*AfricaFertilizer.org is a joint initiative led by IFDC, in partnership with AFAP, IFA, FAO, and the Africa Union to facilitate exchange of information about soil fertility, fertilizers and good agricultural practices in Africa*



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# 1 INTRODUCTION

## 1.1 Background

The AfricaFertilizer.org (AFO) initiative, led by the International Fertilizer Development Center (IFDC) and supported by the International Fertilizer Association (IFA) and the African Fertilizer and Agribusiness Partnership (AFAP), since 2012, produces and disseminates official, reliable, and up-to-date statistics on fertilizers manufactured, imported, exported and consumed in sub-Saharan Africa. For the past three years, AFO and IFDC's Feed the Future Enhancing Growth through Regional Agricultural Input Systems (EnGRAIS) for West Africa project have been collaborating with the West Africa Fertilizer Association (WAFA) and jointly organizing annual workshops to validate national fertilizer statistics for at least 6 West African countries (Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, Senegal). The results are presented during the different editions of the West Africa Fertilizer Forum (WAFF), accessible online at [www.africafertilizer.org](http://www.africafertilizer.org), and are used to produce and update different reports, country fact sheets, or the West Africa Fertilizer Trade Map (WAFBIM).

In 2019, two regional workshops were organized, one for the two anglophone countries held on 13 and 14 March 2019 in Ghana, and a second one for the four francophone countries held on 27 and 28 March 2019 in Burkina Faso.

This year, exploring cost effective means of conducting the country pre-validation exercise for the four francophone countries, the Fertilizer Technical Working Group (FTWG) workshops were initially conducted locally, between February 19 and March 13, 2020, with the intention to carry out a regional pre-validation workshop, with up to 2 representatives from each country, from the 25 and 26 March 2020 in Senegal. These national workshops were organized in partnership with WAFA members in the countries involved, and with functioning national fertilizer associations (Cote d'Ivoire, Mali, and Senegal).

The four national workshops were facilitated and hosted by a WAFA member, with active involvement of national associations where they exist. The meetings were held on the dates below:

Table 1: Schedule of the francophone national FTWG workshops

Country	Sponsorship	Workshop Date	Workshop Location
Senegal	ICS	March 03, 2020	ICS meeting room, Dakar
Ivory Coast	AGRO WEST AFRICA	March 05, 2020	CITRANS Meeting Room, Abidjan
Mali	TOGUNA	March 05, 2020	Conference room TOGUNA, Bamako
Burkina Faso	TROPIC AGRO CHEM	March 11, 2020	Hotel Laico, Ouagadougou

In view of the evolution of COVID 19 and its impact on our daily life and activities, the regional workshop for French-speaking countries was cancelled for this year 2020. Experts were consulted during the month of April to conduct a virtual (online) review of the consolidated reports and tables prepared by AFO, prior to the finalization and publication of the 2019 fertilizer statistics.

This report compiles fertilizer statistics validated by the FTWGs of Burkina Faso, Côte d'Ivoire, Mali, and Senegal.



## 1.2 Objective

The national workshops for the pre-validation of 2019 fertilizer statistics aimed to do the following:

- Compile, analyze, and validate fertilizer statistics for 2019, with the support of representatives of public institutions and the private fertilizer sector players, prior to a consolidation of these statistics during a regional FTWG workshop.
- Inform and discuss with participants actions carried out in 2019 by WAFA – including its action plan for 2020; the state of the fertilizer market; and the business environment in the country and in the sub-region. These include regulatory frameworks, subsidy programs, strategies, and projects for the development of the agricultural and fertilizer sector.
- Strengthen linkages and networking among local stakeholders, particularly between national WAFA members, representatives of national fertilizer trade associations, and public institutions involved in fertilizer statistics management.

## 1.3 Expected Outcomes of the Workshop

At the end of the country workshop, participants would have prepared tables of statistics on fertilizer production, imports, exports, and apparent consumption for the year 2019. These tables would then be presented at the regional FTWG workshop for validation.

# 2 ORGANIZATION AND METHOD OF WORK

## 2.1 Participation in the Workshop

Each country workshop was attended by at least 5 delegates from the public sector and at least 5 representatives from the private sector.

National institutions invited to participate in the workshop included:

- The Department of Statistics of the Ministry of Agriculture.
- The Directorate of Agricultural or Vegetable Production of the Ministry of Agriculture.
- The Customs Statistics Directorate of the General Directorate of Customs.
- National statistical agencies and/or institutes.
- The National Secretariat of CountrySTAT.

Private institutions and organizations invited included:

- Private operators in the fertilizer sector (importers, manufacturers, producers).
- Professional and interprofessional associations in charge of crops that require fertilizers (e.g. cotton).
- Key technical partners, projects, and programs working on fertilizer issues.

A total of 98 participants from the public sector, private institutions, and technical partner took part in these workshops as presented in the table below:

Table 2: Summary Table of Participation by Country and Sector

Country	Private sector	Public Sector	IFDC/WAFA regional experts	Women	Men	Total
Burkina Faso	13	4	3	3	17	20
Ivory Coast	10	4	6	5	15	20
Mali	30	4	4	5	33	38
Senegal	14	3	3	1	19	20
<b>Total</b>	<b>67</b>	<b>15</b>	<b>16</b>	<b>14</b>	<b>84</b>	<b>98</b>

The full list of participants by country is annexed to this report ([List of Participants](#)).

## 2.2 Coordination

- The national fertilizer validation meetings were each conducted in a single day (from 9am to 5pm).
- Data sets to be availed for the validation exercise were:
  - Fertilizer production capacity and actual production volumes.
  - Fertilizer imports and exports datasets (raw datasets).
  - Actual fertilizer consumption, fertilizer use by crop and by area under cultivation.
- The data sets were compiled and processed by AFO and sent to participants prior to the workshop.
- Local IFDC and WAFA members provided technical assistance to the participants in the validation exercise.
- The pre-validated data, having been further processed by AFO, was presented to all participants for additional comments and endorsement.

## 2.3 Method of Working

The working method for validating the statistics was based on a protocol drawn up since 2012 between AFO/IFDC, CountrySTAT, and FAOSTAT, used to give a fair approximation of actual consumption. It is often difficult to survey all farmers to know the real consumption. Consequently, Apparent Consumption is used as an approximation of Real Consumption.

The concept of Apparent Consumption assumes stable stock levels in the fertilizer distribution chain - importers, distributors, retailers, state agencies, and agricultural producers. It assumes that fertilizer supply (availability) equals consumption:

**Apparent Consumption = Production + Imports - Exports - Non-Agricultural Use of Fertilizers**

In this perspective, we use foreign trade data (imports, exports) of fertilizers, Non-Agricultural Production and Use of Fertilizers to measure the Apparent Consumption of fertilizers by farmers.

After compiling apparent consumption data, we only reconcile apparent consumption with actual consumption when we have data on actual consumption.

## 3 RESULTS OF FERTILIZER STATISTICS REVIEW FOR THE FOUR COUNTRIES

### 3.1 Burkina Faso

Photo 1: Burkina Faso FTWG 2020



#### 3.1.1 Fertilizer Production

SEPB operates a Phosphate Rock mine in Kodjari, eastern Burkina Faso. The company has a grinding unit that makes phosphate available in 50 Kg bags for local consumption and is used as a soil conditioner. The volumes produced increased from 1,320 mt in 2018 to 1,800 mt in 2019.

The production of organic fertilizers is mainly carried out by three actors who are: AROM-H, BELWET, and FASO BIOGAZ. The volumes produced increased from 1,000 mt in 2018 to 3,100 mt in 2019.

CIPAM SA and Industries Chimiques Fertilisantes d'Afrique (IFCA) have invested in blending units to blend different types of NPK for the local market.

Figure 1: Map of Fertilizer Manufacturing Units in Burkina Faso

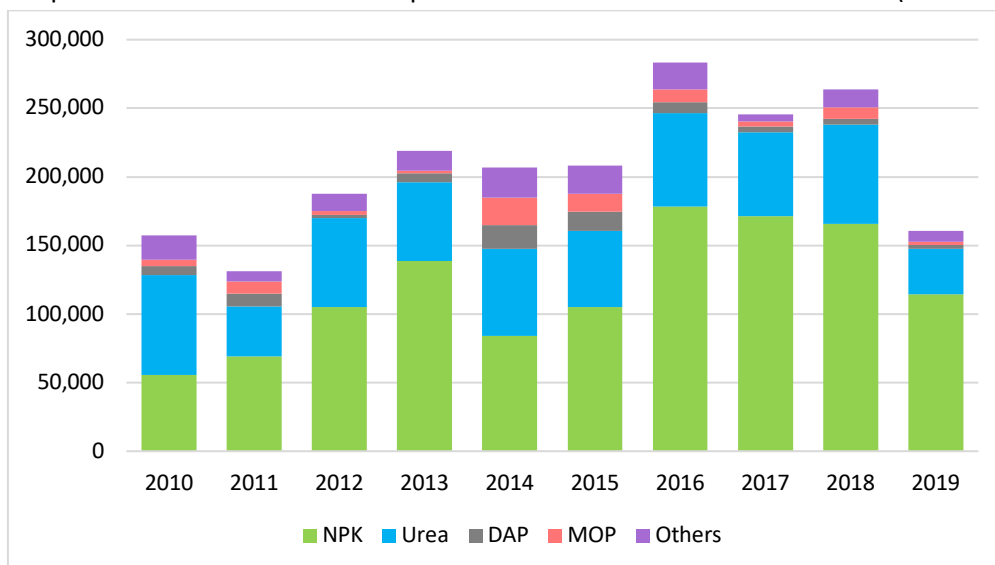


### 3.1.2 Fertilizer Import and Export

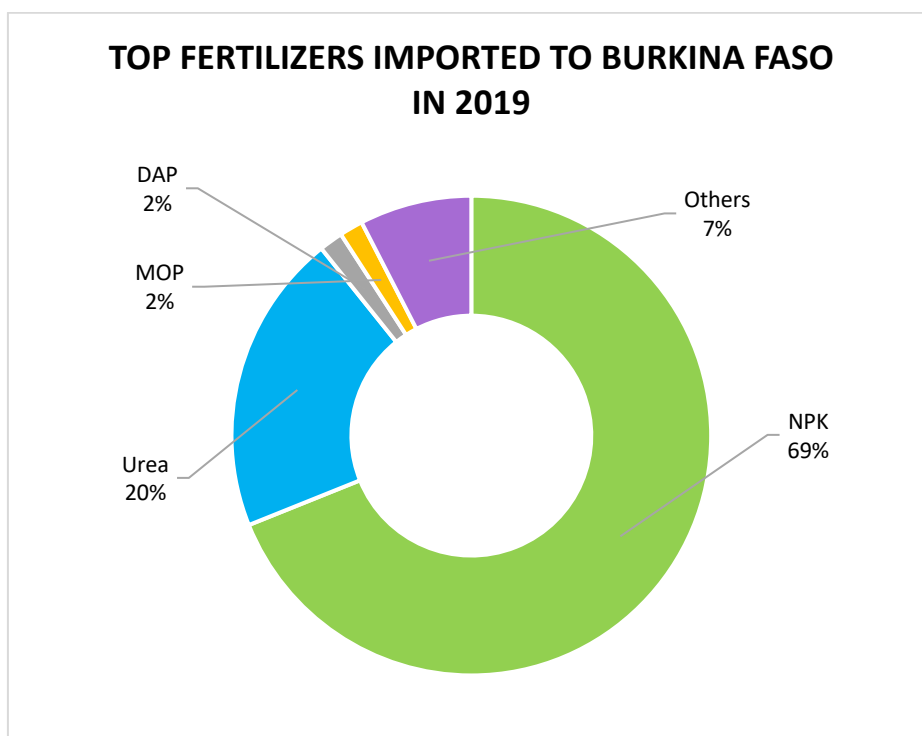
#### 3.1.2.1 Fertilizer Imports

NPK fertilizers and Urea officially remains the most imported fertilizers over the years in Burkina Faso. These fertilizers are mainly used in direct application. The remaining imports are DAP and MOP fertilizers used either in direct application or as raw materials to produce NPK blend fertilizers.

Graph 1: Evolution of Fertilizer Imports in Burkina Faso from 2010 to 2019 (in mt of products)



In 2019, fertilizer imports decreased by 39% from 263,548 mt in 2018 to 160,423 mt. According to importers, they reconsidered their intention to import more fertilizers because a large stock of fertilizers (about 45,000 mt) that was carried over from 2018 into 2019 existed in the distribution chain and was used in the 2019-2020 season.



### 3.1.2.2 Fertilizer Exports

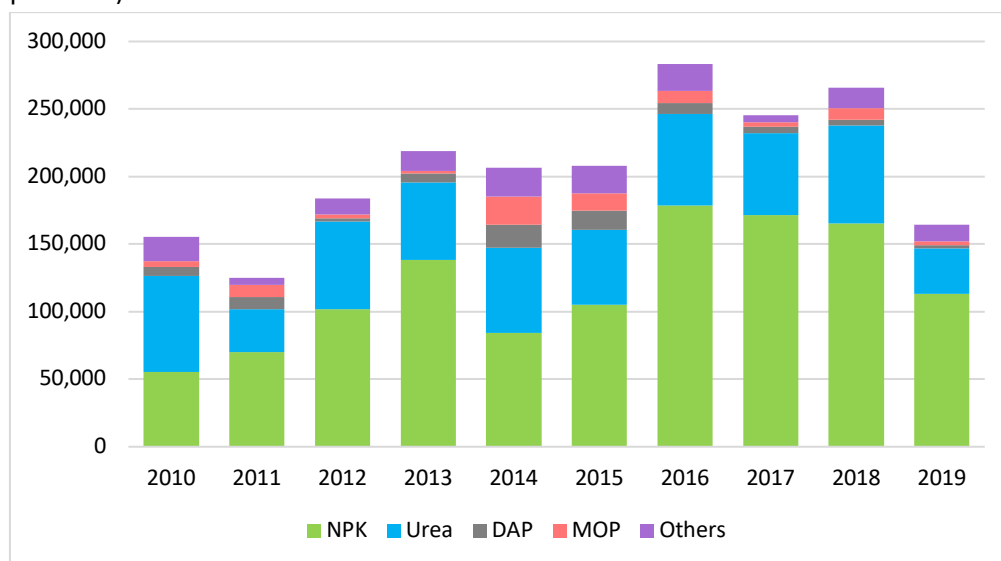
Official exports and re-exports from Burkina Faso are very low. In 2019, there were about 900 mt of NPK fertilizers that were officially re-exported to Mali.

## Fertilizer Consumption

### 3.1.3.1 Apparent Fertilizer Consumption

There was a 38% decrease in fertilizer apparent consumption from 2018 to 2019. The 2019 fertilizer apparent consumption was 164,422 mt. There was a 32% decrease in NPK and 54% decrease in Urea apparent consumption in 2019 as compared to 2018.

Graph 2: Evolution of Apparent Fertilizer Consumption in Burkina Faso from 2010 to 2019 (in mt of products)



The decrease was attributed to many factors including carry over stock from 2018, crisis between cotton farmers and cotton companies, insecurity in some areas of the country and unofficial imports from Ghana that finds its way to the Burkina Faso market.



Table 3: Summary of Fertilizer Statistics in Burkina Faso in 2019

HS Code	Product	Production	Total Imports	Total Exports	Non Fertilizer Use	2019 Fertilizer Imports	2019 Apparent consumption	2018 Apparent consumption	% Change
3105200000	NPK		114,215	900		114,215	113,315	165,553	
3102100000	Urea		33,426		1	33,425	33,425	72,313	
3102900000	Other N fertilizers		7,476			7,476	7,476	43	
3101000000	Organic fertilizers	3,100	20			20	3,120	9,955	
3105300000	DAP		2,635	1		2,635	2,634	4,290	
3104200000	MOP		2,611		0	2,611	2,611	8,253	
2510000000	Burkina Phosphate	1,800				-	1,800	1,320	
3102900000	Other P fertilizers		40			40	40	0	
3103900000	NP Compound		0			0	0	0	
3104900000	Other P fertilizers		0			0	0	0	
3102600000	Calcium nitrate		29		29	-	0	0	
3102210000	Ammonium sulphate		0		0	-	0	3,996	
3104300000	Potassium sulphate		0		0	-	0	0	
3105400000	MAP					-	0	20	
3102300000	Ammonium Nitrate		98		98	-	0	0	
3102500000	Sodium Nitrate		21	4	21	-	-4	0	
<b>Total (MT)</b>		<b>4,900</b>	<b>160,572</b>	<b>906</b>	<b>148</b>	<b>160,423</b>	<b>164,422</b>	<b>265,743</b>	<b>-38%</b>

## 3.2 Côte d'Ivoire

Photo 2: Côte d'Ivoire FTWG 2020



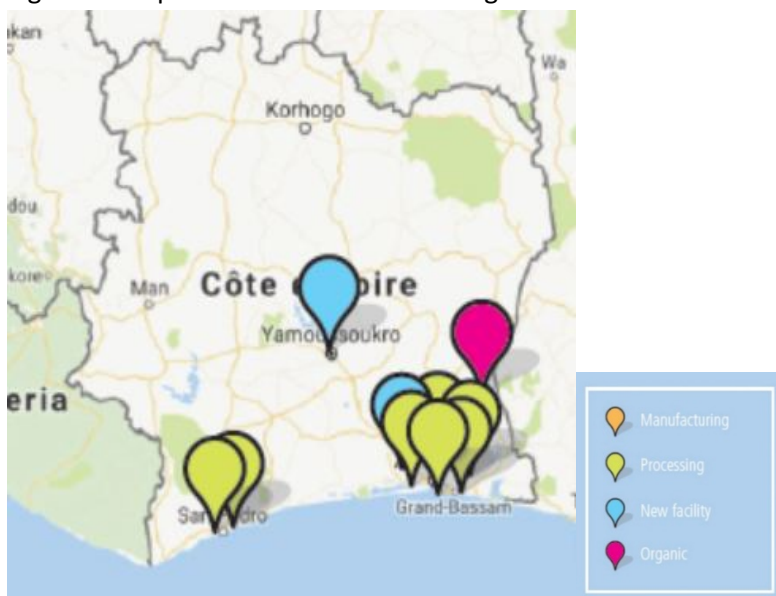
### 3.2.1 Fertilizer Production

There is no primary production of chemical fertilizers in Côte d'Ivoire, but an organic fertilizer production sector is being developed. ELEPHANT VERT is the main producer of organic fertilizers in the country. The production of organic fertilizers is developing more and more. From 5,000 mt in 2017, it has increased to about 15,000 mt in 2018, and to 18,800 mt in 2019.

Fertilizers are imported in bulk. Most of these fertilizers are used as raw materials to produce blended fertilizers. Five companies (YARA, SOLEVO (ex LDC), AGRO WEST AFRICA, SEAPCI, and SEA INVEST) have fertilizer blending units to produce blended fertilizers for the Ivorian market and for the sub-region (Burkina, Mali, etc.). The blended volumes represent an average of 3/4 of imports per year. The rest is NPK for direct application.

OCP and IVOIRE FORMULATION have plans to install fertilizer blending units in Abidjan and Yamoussoukro respectively, which are scheduled to start up in 2021.

Figure 2: Map of Fertilizer Manufacturing Units in Côte d'Ivoire

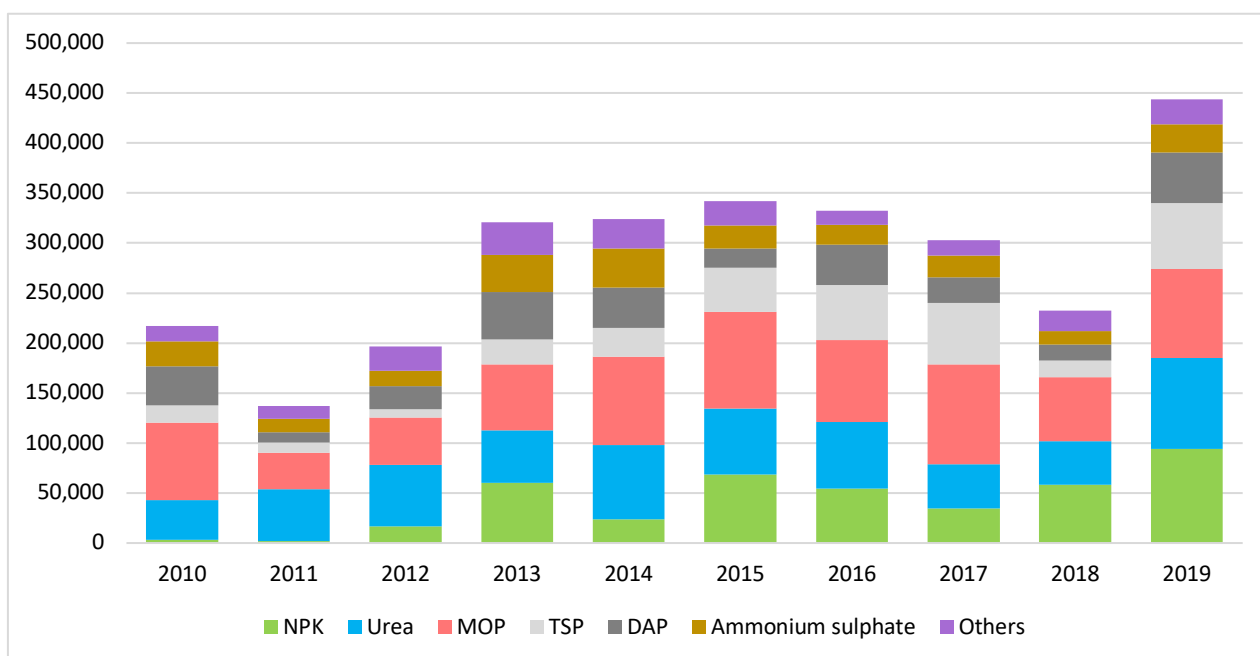


### 3.2.2 Fertilizer Import and Export

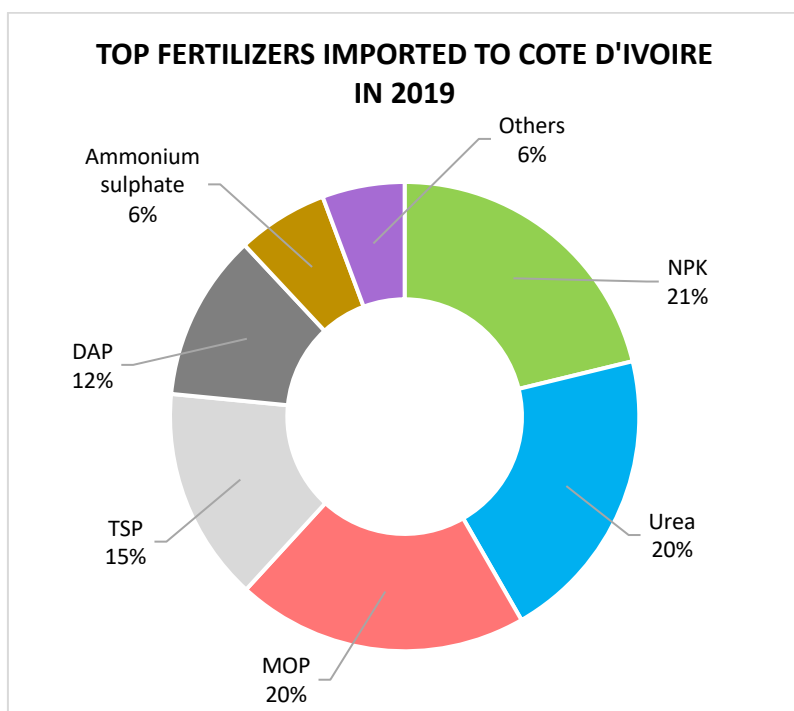
#### 3.2.2.1 Fertilizer Imports

Côte d'Ivoire mainly imports six fertilizers: MOP, Urea, TSP, DAP, NPK and Ammonium Sulphate. These fertilizers are used either in direct application (MOP, Urea, NPK) or as raw materials (MOP, Urea, TSP, DAP, Ammonium Sulphate) to produce NPK blends.

Graph 3: Evolution of Fertilizer Imports in Côte d'Ivoire from 2010 to 2019 (in mt of products)



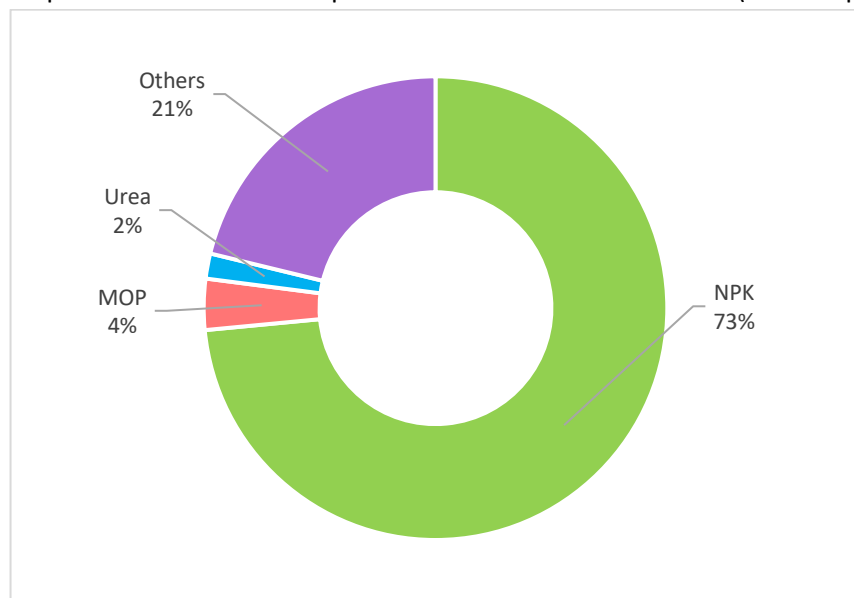
Official fertilizer imports increased by 91% in 2019 as compared with 2018, and by 47% as compared with 2017 imports making 2019 imports the highest since 2010.



### 3.2.2.2 Fertilizer Exports

As there is no primary production of chemical fertilizers in Côte d'Ivoire, fertilizers are mainly imported in bulk, blended, and bagged before being re-exported. In 2019, fertilizer re-exports increased significantly, from 15,310 mt in 2018 to 76,591 mt in 2019. NPK were the most exported fertilizers to neighboring Burkina Faso, Niger, and Mali.

Graph 4: Main Fertilizers Exported from Côte d'Ivoire in 2019 (in mt of products)

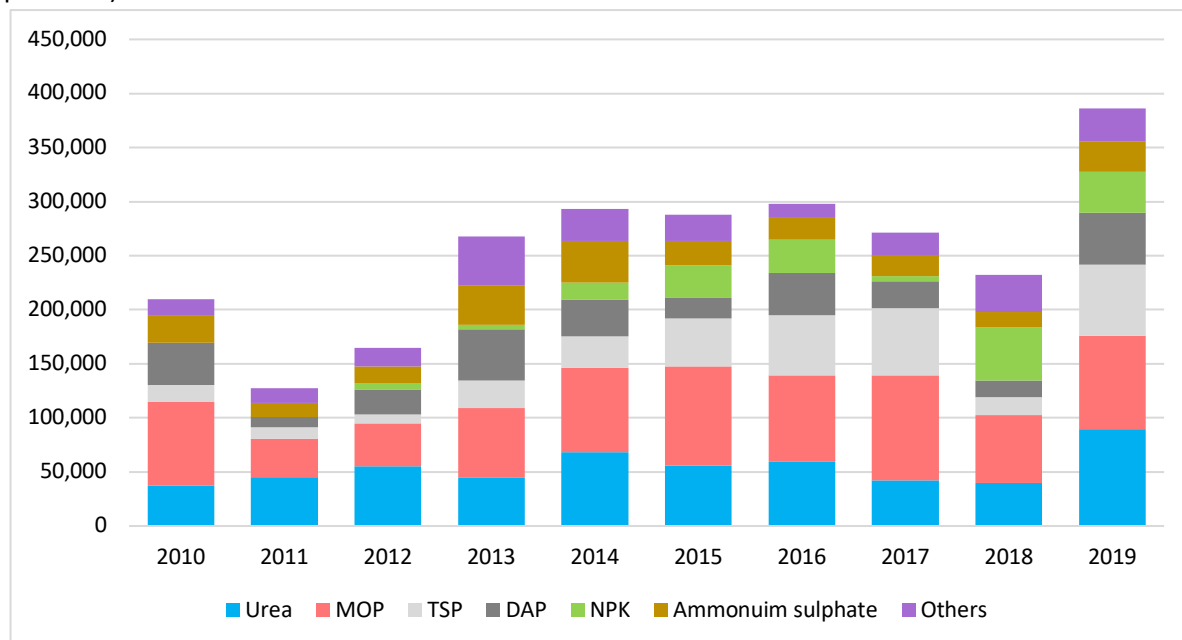


### 3.2.3 Fertilizer Consumption

#### 3.2.3.1 Apparent Fertilizer Consumption

There was a 66% increase in fertilizer apparent consumption from 2018 to 2019. Apparent consumption in 2019 was 386,083 mt. There were huge increases in apparent consumption of Urea, TSP, DAP and Ammonium Sulphate.

Graph 5: Evolution of Apparent Fertilizer Consumption in Côte d'Ivoire from 2010 to 2019 (in mt of products)



The increase was attributed to many factors including demand for cocoa and cotton fertilizers, which are the main fertilizer-consuming crops in Côte d'Ivoire.

Many farmers are beginning to regain confidence to invest in cocoa production because of the current 10% increase in purchase price of cocoa beans. Demand for fertilizers is also beginning to rise.

Table 4: Summary of Fertilizer Statistics in Côte d'Ivoire in 2019

HS Code	Product	Production	Total Imports	Total Exports	Non Fertilizer Use	2019 Fertilizer Imports	2019 Apparent consumption	2018 Apparent consumption	% Change
3102100000	Urea		91,043	1,340	88	90,955	89,615	39,698	
3104200000	MOP		89,281	2,722	21	89,260	86,539	62,671	
3103101000	TSP		65,397		0	65,397	65,397	16,505	
3105300000	DAP		51,057	3,010		51,057	48,047	15,761	
3105200000	NPK		94,135	56,286	9	94,127	37,840	49,302	
3102210000	Ammonium sulphate		27,831		1	27,830	27,830	13,888	
2510000000	Phosphate rock		19,400			19,400	19,400	7,248	
3101000000	Organic fertilizers	18,800	2,259	13,160	0	2,259	7,899	15,166	
3102600000	Calcium nitrate		1,911			1,911	1,911	288	
3104300000	SOP		869		0	869	869	1,092	
3102400000	CAN		360			360	360		
3105400000	MAP		163		12	151	151	100	
3105700000	NK Compound		75			75	75	100	
3102900000	Other N fertilizers		88	35	0	88	53	-1	
2834210000	Potassium nitrate		50			50	50		
3105600000	PK Compound		47			47	47	10,486	
3103900000	Other P fertilizers		3	2	3	0	-2	-214	
3102500000	Sodium nitrate		0	6	0	0	-6		
3104900000	Other K fertilizers		12	30	1	11	-19	-134	
3102300000	Ammonium nitrate		14,188	1,365	14,188	0	-1,365		
3103100000	SSP					0		31	
<b>Total (MT)</b>		<b>18,800</b>	<b>458,170</b>	<b>77,957</b>	<b>14,323</b>	<b>443,847</b>	<b>386,083</b>	<b>232,337</b>	<b>66%</b>

### 3.2.3.2 Actual Fertilizer Consumption

We had a data gap in expressing the actual consumption of fertilizer in Côte d'Ivoire. We were able to estimate fertilizer consumption for cotton and cocoa.

The data on fertilizer consumption in cotton are taken from the volumes resulting from the tender. In 2019, 33,720 mt of Urea and 112,050 mt of NPK 15 15 + 6S + 1B were distributed by cotton companies to farmers.

To estimate fertilizer consumption in cocoa, we used import data from the TSP (mainly used in the manufacture of cocoa fertilizer) and information from major manufacturers and importers. In 2019, 130,000 mt of cocoa fertilizer were consumed.



### 3.3 Mali

Photo 3: Mali FTWG 2020



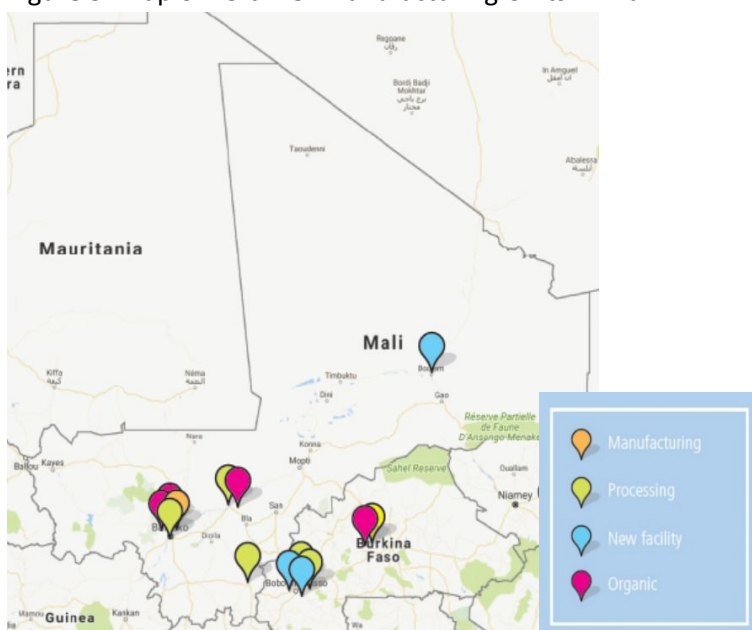
#### 3.3.1 Fertilizer Production

Mineral fertilizer production in Mali is mainly about the production of Tilemsi Rock Phosphate (PNT). It is produced by TOGUNA AGRO-INDUSTRIES. In 2019, 110,000 tons of PNT were produced. The PNT is mostly sold directly to cotton farmers and the remaining are used in blending. ELEPHANT VERT, ORGAFERT and PROFEBA are the main companies producing organic fertilizers. In 2019, the production of organic fertilizers was 40,374 mt. Out of this, 87% was produced by ELEPHANT VERT, 12% by ORGAFERT, and 1% by PROFEBA.

HS Code	Fertilizer Name	2016	2017	2018	2019
2510000000	Phosphate rock (PNT)	50,000	41,000	45,000	110,000
3101000000	Organic fertilizers	36500	41,000	47,950	40,374

DOUCOURÉ PARTENAIRE AGRO Industries (DPA), TOGUNA AGRO-INDUSTRIES and SOGEFERT have blending units located respectively in Ségou, Bamako, and Sikasso, and manufacture different types of NPK for local consumption and the sub-region.

Figure 3: Map of Fertilizer Manufacturing Units in Mali

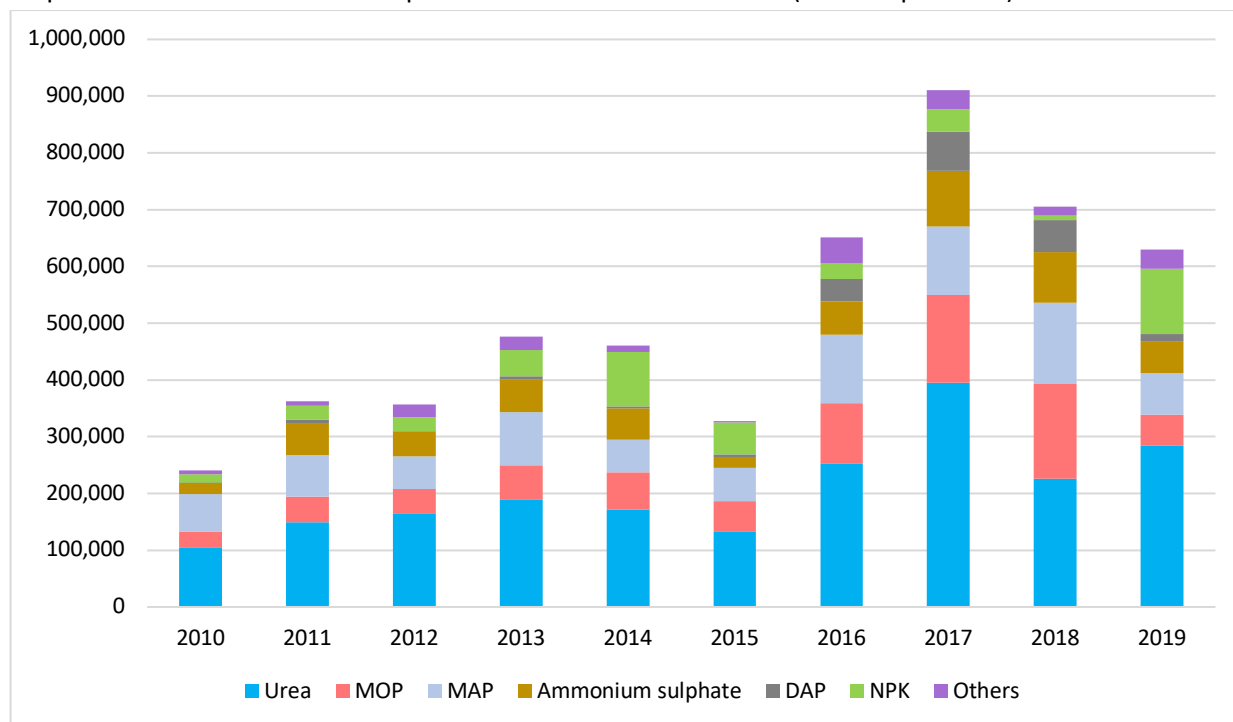


### 3.3.2 Fertilizer Import and Export

#### 3.3.2.1 Fertilizer Import

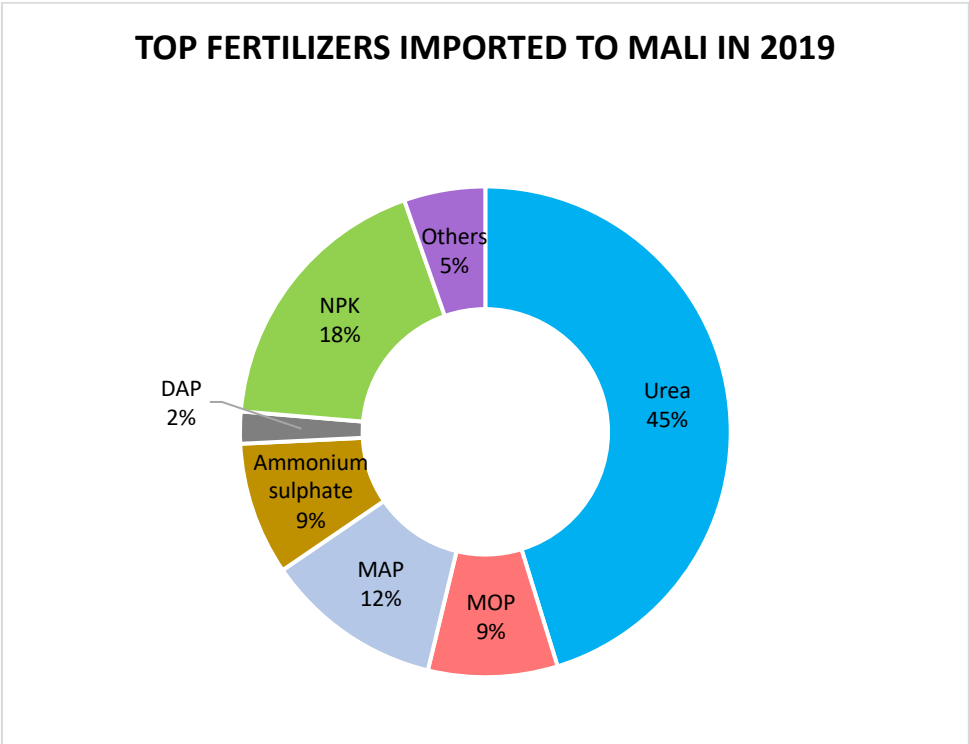
Mali mainly imports fertilizers including Urea, MAP, Ammonium Sulphate, MOP, NPK and DAP. NPK and part of Urea and DAP are imported for direct use while others are used mostly as raw materials to blend different grades of NPK.

Graph 6: Evolution of Fertilizer Imports in Mali from 2010 to 2019 (in mt of products)



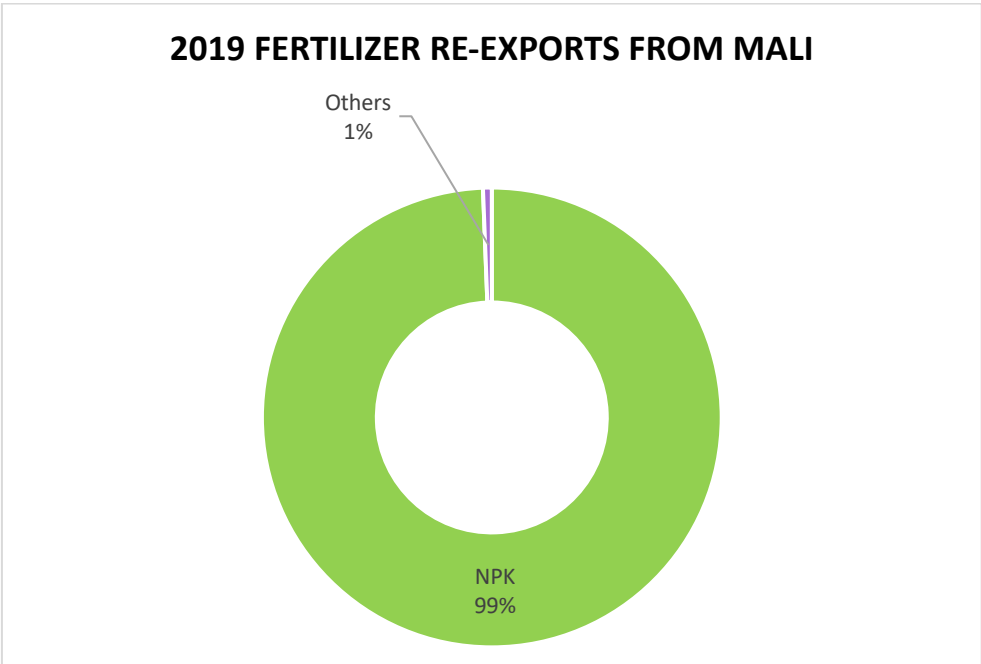
Official fertilizer imports decreased by 11%, from 705,746 mt in 2018 to 629,804 mt in 2019, a decrease of 75,942 mt.

The main variations were MAP (-48%), Ammonium Sulphate (-39%), MOP (-68%) and DAP (-76%). On the other hand, there was a clear increase of 26% in Urea imports, followed by a considerable increase in NPK imports. They are 15 times higher than last year.



**3.3.2.2 Fertilizer Export**

There are re-exports of fertilizers from Mali to neighboring countries. In 2019, fertilizer re-exports increased by 28%, from 55,411 mt in 2018 to 70,726 mt in 2019, an increase of 15,315 mt. Out of the 70,726 mt, 99% was NPK and the remaining were Urea and DAP. Most NPK were re-exported to Burkina Faso and Guinea.



### 3.3.3 Fertilizer Consumption

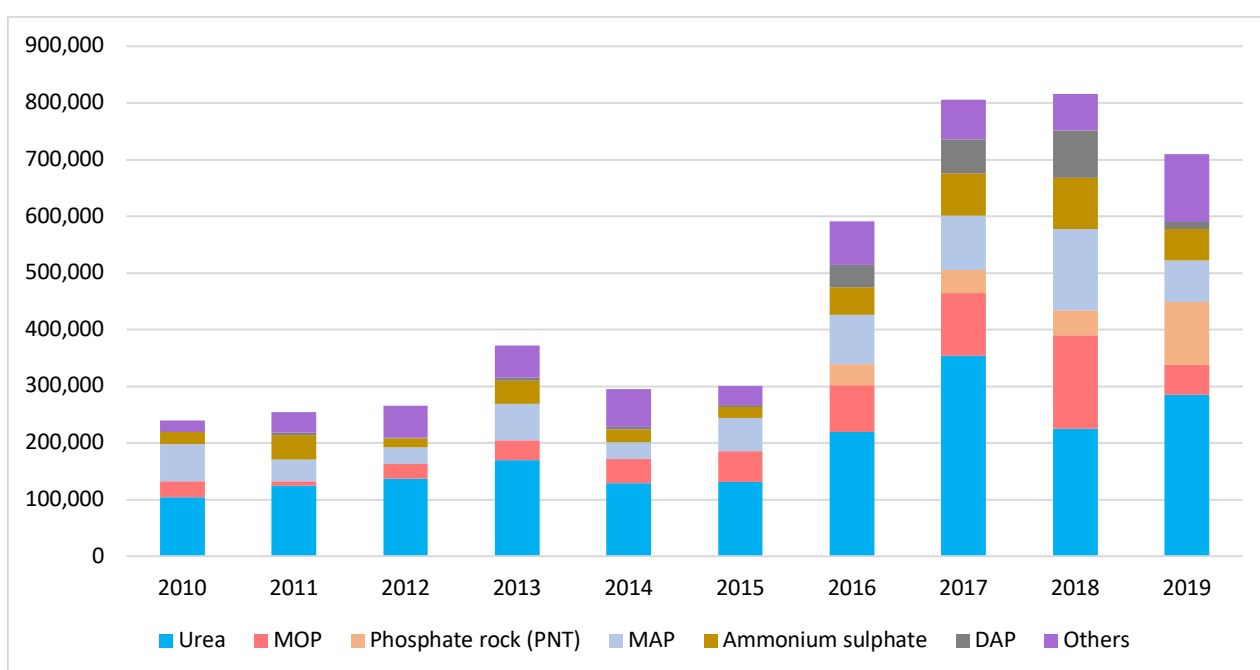
#### 3.3.3.1 Apparent Fertilizer Consumption

As indicated above, total fertilizer production was 150,374 mt; fertilizer imports were 629,804 mt; and total fertilizer exports were 70,726 mt in 2019.

Non-agricultural fertilizer use in 2019 was 349 mt. They are mainly composed of Ammonium Nitrate, accounting for 99% of non-agricultural uses, and are used mainly by the mining industry.

Apparent fertilizer consumption in Mali decreased by 13%. From 816,375 mt in 2018, it stood at 709,451 mt, a decrease of 106,924 mt. The main variations in 2019 for these fertilizers are as follows: MAP (-48%), Ammonium Sulphate (-39%), MOP (-67%) and DAP (-85%).

Graph 7: Evolution of Apparent Fertilizer Consumption in Mali from 2010 to 2019 (in mt of products)



According to private actors in the fertilizer sub-sector, the decrease in imports, which also affected apparent consumption, were due to the following reasons:

- Fertilizer stock carryovers: some importers had fertilizer stocks from the previous year. The availability of these stocks made it possible to reduce the quantities of fertilizer imported.
- Cash-flow pressures of fertilizer importers: The accumulation of government debts to fertilizer importers has led to cash-flow pressures for fertilizer importers. Due to lack of cash-flow (liquidity), some companies have reduced their fertilizer import volumes.

There was also a 145% increase in PNT consumption, from 45,000 mt in 2018 to 110,120 mt, an increase of 65,120 mt. This increase is because PNT is increasingly demanded and used by farmers in CMDT zones.

Table 5: Summary of Fertilizer Statistics in Mali in 2019

HS Code	Product	Production	Total Imports	Total Exports	Non Fertilizer Use	2019 Fertilizer Imports	2019 Apparent consumption	2018 Apparent consumption	% Change
3102100000	Urea		284,941	195		284,941	284,746	225,414	
2510000000	Phosphate rockl (PNT)	110,000	120			120	110,120	45,000	
3105400000	MAP		73,707			73,707	73,707	143,064	
3101000000	Organic fertilizers	40,374	16,451			16,451	56,825	63,998	
3102210000	Ammonium sulphate		55,136			55,136	55,136	90,219	
3104200000	MOP		53,682			53,682	53,682	163,934	
3105200000	NPK		115,310	70,291		115,310	45,018		
3103900000	Other P fertilizers		17,083			17,083	17,083		
3105300000	DAP		13,268	240		13,268	13,028	84,305	
3102900000	Other N fertilizers		82			82	82	100	
3102600000	Calcium nitrate		23			23	23		
3104300000	SOP							340	
2834210000	Potassium nitrate							1	
3102300000	Ammonium nitrate		346		346		-		
3102500000	Sodium nitrate		3		3		-		
<b>Total (MT)</b>		<b>150,374</b>	<b>630,152</b>	<b>70,726</b>	<b>349</b>	<b>629,804</b>	<b>709,451</b>	<b>816,375</b>	<b>-13%</b>

### 3.3.3.2 Actual Fertilizer Consumption

Actual fertilizer consumption is the sum of the consumption of subsidized and non-subsidized fertilizers. The National Directorate of Agriculture provides information on the quantities of subsidized fertilizers distributed to farmers during the crop year, while the private sector provides information on the quantities of non-subsidized fertilizers purchased by farmers during the same crop year.

The table below shows the estimated real consumption of fertilizers in Mali in 2019:

Table 6: Estimated Actual Fertilizer Consumption in Mali in 2019

Fertilizer distributed 2019-2020	Quantities (mt)	Sources
Subsidized fertilizer for cereal	117 404	National Directorate of Agriculture (DNA)
subsidized fertilizer for cotton	328 641	Cotton Company (CMDT)
Unsubsidized fertilizer	250 000	Private Sector Estimation
<b>Total fertilizer (mt)</b>	<b>696 045</b>	

Apparent and actual consumption data for 2019 were compared. There is a slight difference of 13,406 mt between apparent consumption (709,451 mt) and actual consumption (696,045 mt). This difference came up because estimates of real consumption did not take into account all cultivated areas receiving fertilizer, especially those not benefiting from the subsidy program, such as sugar cane, horticultural crops (potato, sweet potato, onion, okra, watermelon, etc.) and fertilizers distributed by NGOs and other development partners.

## 3.4 Senegal

Photo 4: Senegal FTWG 2020



### 3.4.1 Fertilizer Production

Senegal has several primary production units for natural phosphates. INDORAMA-ICS in Ndomor Diop, and more recently in Keur Mor Fall and Tobene, SERPM, SOMIVA and SEPHOS in Matam produce phosphate rocks. In 2019, phosphate rock production was 587,216 mt.

SEDAB and ELEPHANT VERT, owned by BIOTOSS, are the main organic fertilizer producing companies in the country. In 2019, organic fertilizer production was 3,900 mt.

HS Code	Fertilizer Name	2016	2017	2018	2019
2510000000	Phosphate rock		525,000	500,126	587,216
3105300000	DAP	28,880	126,815	88,086	16,015
3103900000	DSP	7,718	2,337		
3101000000	Organic fertilizers	1,000	1,500	2,000	3,990
<b>Total (MT)</b>		<b>37,598</b>	<b>655,652</b>	<b>590,212</b>	<b>607,221</b>

INDORAMA-ICS also manufactures phosphoric acid at its Darou site, part of which (about 10 to 15%) is used to produce DAP and also, together with imported nitrogen and potash, granulate NPK at their granulation unit in Mbao, on the outskirts of Dakar. There was 156,697 mt of NPK granulated in 2019 while in 2018, the granulated volumes were 66,073 mt. 42% of the 2019 volumes were destined for the local market and the rest exported to neighboring countries.



Figure 4: Map of Fertilizer Manufacturing Units in Senegal

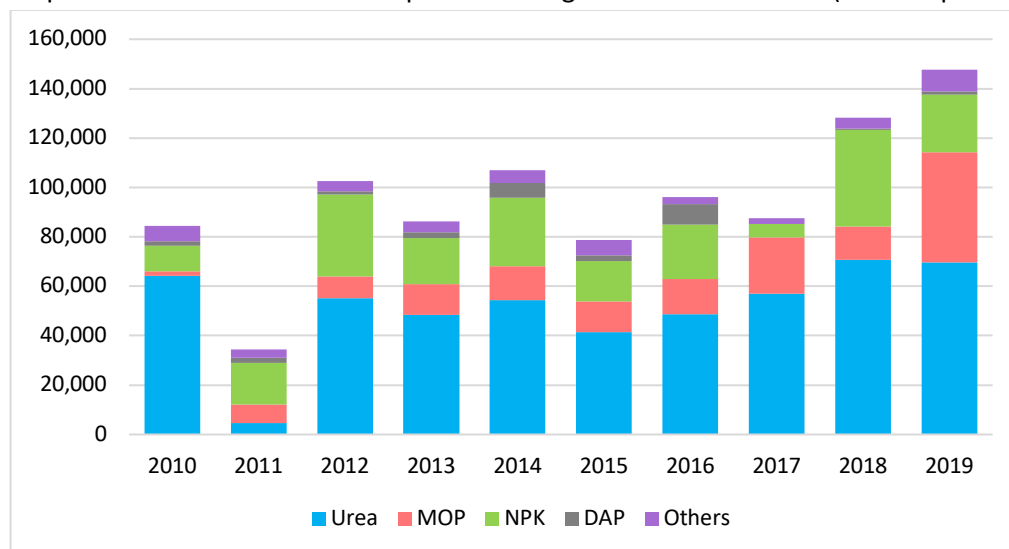


### 3.4.2 Fertilizer Import and Export

#### 3.4.2.1 Fertilizer Import

As there is significant local production of phosphate, Senegal mainly imports non-phosphate fertilizers, notably Urea and MOP. These fertilizers are largely mixed with locally produced phosphate fertilizers to make different types of NPK fertilizers for local consumption. Some NPK are also imported for direct use.

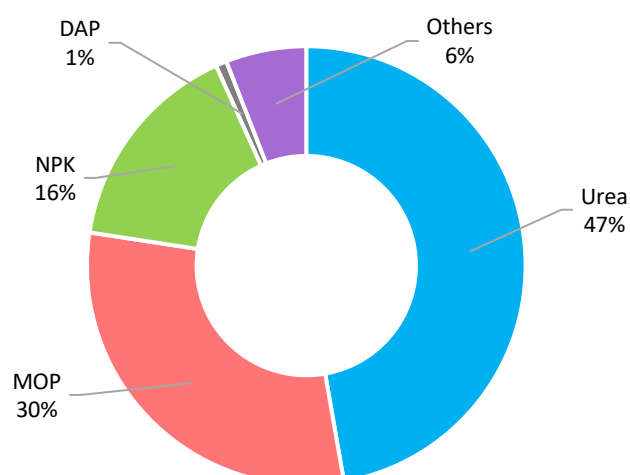
Graph 8: Evolution of Fertilizer Imports in Senegal from 2010 to 2019 (in mt of products)



In 2019, fertilizer imports increased by 15%, with a total volume of 147,634 mt against 128,209 mt in 2018, an increase of 19,425 mt. The main variations were MOP and DAP. Some 1,187 tons of DAP were imported in 2019, the needs of which are mainly covered by local production. Out of the 1,187 mt of DAP imported, 1,000 mt were imported by OCP.

Urea remains the most imported fertilizer in Senegal, accounting for 47% of imports in 2019.

### TOP FERTILIZERS IMPORTED TO SENEGAL IN 2019

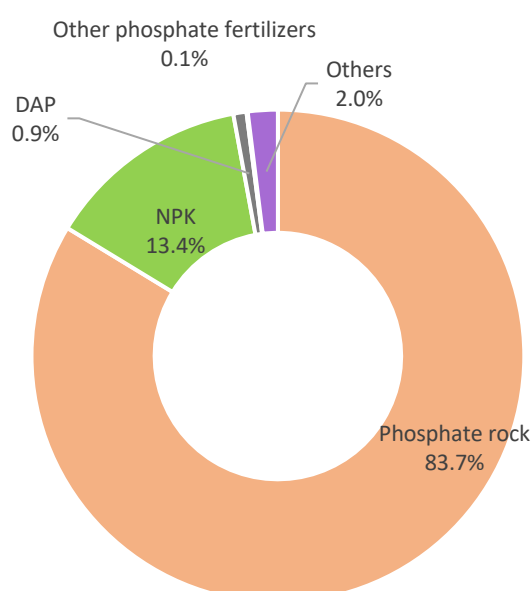


#### 3.4.2.2 Fertilizer Export

Senegal is a major fertilizer exporting country because of the existence of a large local production. In 2019, fertilizer exports increased by 17% from 600,210 mt in 2018 to 701,603 mt in 2019, an increase of 101,392 mt. This increase was mainly due to a record 94,019 mt NPK fertilizer export.

Phosphate rock remains the most exported fertilizer from Senegal. With an export volume of 587,216 mt, it accounted for 84% of total exports in 2019. Exports from Senegal are mostly to Asia.

Graph 9: Main Fertilizers Exported from Senegal in 2019 (in mt of products)



#### 3.4.3 Fertilizer Consumption

##### 3.4.3.1 Apparent Fertilizer Consumption

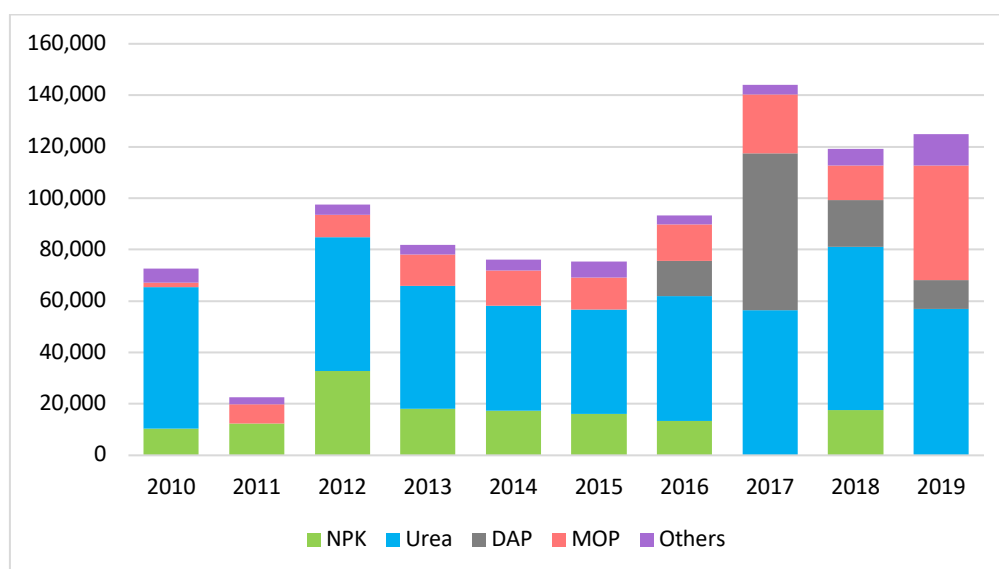
As indicated above, total fertilizer production was 607,221 mt, with fertilizer imports being 147,634 mt, and total fertilizer exports were 701,603 mt in 2019.

Non-agricultural use in 2019 was 14,852 mt (Ammonium Nitrate and Sodium Nitrate) which are used mainly by the mining industry.

The apparent consumption of fertilizers in Senegal increased by 5%. From 119,065 mt in 2018, it stood at 124,962 mt, an increase of 5,897 mt.

**There were however 156,697 mt of granulated NPK from phosphoric acid produced in Senegal and imported nitrogen (Urea) and potash (MOP). Since adding these volumes would be double counting of the imported products, it is not added to the apparent consumption calculation. The exact amount of phosphoric acid used in the granulation is also unknown. Apparent consumption volumes from 2016 have been revised by removing the granulated NPK thereby affecting previous apparent consumption data.**

Graph 10: Evolution of Apparent Fertilizer Consumption in Senegal from 2010 to 2019 (in mt of products)



According to the main players in the fertilizer sector, this increase is linked to efficient supply and good demand for fertilizers through the fertilizer subsidy program initiated by the Senegalese government.

There was also a 75% increase in the apparent consumption of organic fertilizers from 4,405 mt in 2018 to 7,714 mt, an increase of 3,309 mt. This increase was as a result of the interest of some farmers in organic fertilizers and the growing demand for organic products.

Table 7: Summary of Fertilizer Statistics in Senegal in 2019

HS Code	Product	Production	Total Imports	Total Exports	Non Fertilizer Use	2019 Fertilizer Imports	2019 Apparent consumption	2018 Apparent consumption	% Change
3102100000	Urea		69,757	12,798		69,757	56,959	63,500	
3105300000	DAP	16,015	1,187	6,054		1,187	11,148	18,146	
3101000000	Organic fertilizers	3990	3,728	4		3,728	7,714	4,405	
3104200000	MOP		44,538	21		44,538	44,517	3,444	
3102600000	Calcium nitrate		1,279			1,279	1,279	290	
3102210000	Ammonium sulphate		1,184			1,184	1,184	707	
3104300000	SOP		1,144	44		1,144	1,100	531	
2834210000	Potassium nitrate		363			363	363	383	
3105400000	Magnessium sulphate		251			251	251		
3105400000	MAP		198			198	198	4	
3104900000	Other K fertilizers		171	3		171	168	15	
3103900000	NP Compound		42			42	42		
2510000000	PK Compound		39			39	39		
2510000000	Phosphate rock	587,216		587,216		0	0		
3102500000	Sodium nitrate		6		6	0	0		
3102900000	Other N fertilizers		114	231		114	-117	14	
3103900000	Other P fertilizers		254	558		254	-304	-854	
3102300000	Ammonium nitrate		14,846	655	14846	0	-655		
3105200000	NPK		23,385	94,019		23,385	-70,634	17,626	
<b>Total (MT)</b>		<b>607,221</b>	<b>162,486</b>	<b>701,603</b>	<b>14,852</b>	<b>147,634</b>	<b>124,962</b>	<b>119,065</b>	<b>5%</b>

### 3.4.3.2 Actual Fertilizer Consumption

The following reports and data were made available to participants to estimate actual consumption:

- Fertilizer statistics from the Regional Directorate of Rural Development of the Ministry of Agriculture
- Fertilizer statistics from some private operators

Estimates of fertilizer consumption in Senegal are based on quantities given up under subsidy programs and commercial sales. Quantities from commercial sales have not been fully captured. Available data for 2019 are presented in the table below:

Table 8: Estimated Real Fertilizer Consumption in Senegal from 2017 to 2019

Fertilizer type	Groundnut	Cowpea	Sesame	Rice	Millet	Sorghum	Maize	Fonio	Cotton	Industrial	Vegetables	Total 2019	Total 2018	Total 2017
										Tomato				
NPK 6-20-10	39 777	6 441	823									47 041	45 000	33 500
NPK 15-15-15				1 149			12 445					13 594	15 000	16 500
NPK 15-10-10					10 337	2 432		54				12 823	10 000	10 000
NPK 9-23-30										2 012		2 012	3 000	3 000
NPK 10-10-20											4 668	4 668	7 000	10 000
NPK 14 18 18 5 1 2.5									3 900			3 900	3 600	4 112
DAP				12 118								12 118	10 000	9 000
Urea				21 824		11 290	2 402	46	372		9 526	45 460	70 945	67 948
NPK 10-20-10+6S												0	0	0
Ammonium sulphate											1 184	1 184	707	143
Potassium sulphate											1 100	1 100	571	291
Potassium nitrate											363	363	383	0
Calcium nitrate											1 279	1 279	290	142
Other K Fertilizers											168	168	15	0
Other N Fertilizers											0	0	14	205
Other P Fertilizers											0	0	80	
Organic fertilizer											7 714	7 714	4	4
MAP											198	198	4	320
<b>Total fertilizer (mt)</b>	<b>39 777</b>	<b>6 441</b>	<b>823</b>	<b>35 092</b>	<b>10 337</b>	<b>13 722</b>	<b>14 847</b>	<b>100</b>	<b>4 272</b>	<b>2 012</b>	<b>26 200</b>	<b>153 623</b>	<b>166 613</b>	<b>155 165</b>

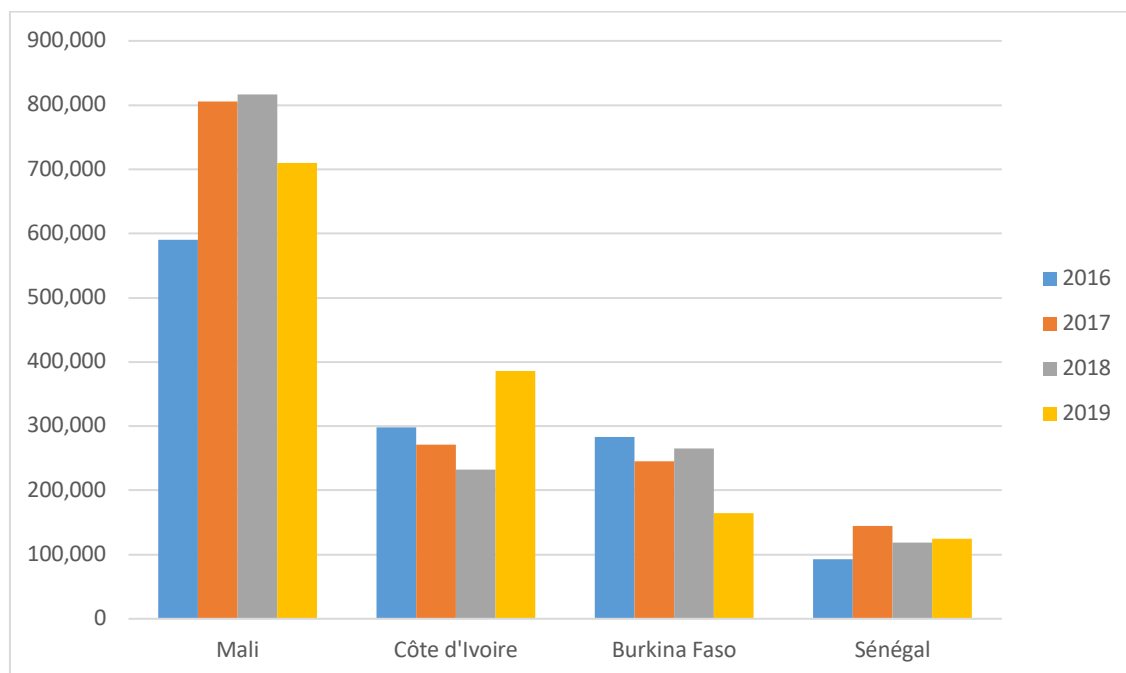
The data in the table show that actual consumption in Senegal fell by 8% in 2019, from 166,613 mt in 2018 to 153,623 mt. This decrease is because of the reduction in Urea consumption during 2019 (70,945 tons in 2018 compared to 45,459 mt in 2018). According to the main players in the fertilizer sector, this situation is linked to the reduction in the Urea subsidy rate. From 50% of the value of the price of fertilizer in 2018, it fell to 47% in 2019.

Apparent and actual consumption data for 2019 were compared. There is a difference of 28,661 mt between apparent consumption (124,962 mt) and actual consumption (153,623 mt).

### 3.5 Consolidation of Apparent Consumption for the Four Countries

In 2019, the apparent consumption of fertilizer for the four countries was 1,384,918 mt. Compared with the 2018 data, there is a decrease of 3% for the four countries. Côte d'Ivoire and Senegal had increases of 66% and 5% respectively whiles Mali and Burkina Faso had decreases of 13% and 38% respectively.

Graph 11: Apparent Fertilizer Consumption for the Four Countries





## 4 RECOMMENDATIONS AND CONCLUSIONS

The Fertilizer Statistics Validation Workshops, held from 3 to 11 March 2020 in the various countries provided updated data on fertilizer production, consumption, and trade. We noted some key points but also encountered some difficulties in estimating fertilizer statistics.

### 4.1 Key Points

- Difficulties Encountered

Among the difficulties encountered, we can note the following:

- Access to data on imported fertilizer formulations, production, and blending volumes are difficult to collect in the current context as there is no formal framework for data exchange
- It is difficult to know in detail the volumes of generic or specific fertilizers that are marketed by private wholesalers and retailers and their end use by agricultural producers
- It is difficult to estimate the volumes of fertilizers imported or exported informally in the sub-region, often not or poorly considered by Customs (actual volumes, classification, etc.)
- It is difficult to capture carry over stocks for the various countries
- The lack of a regulatory framework, consultation, and exchanges between the public and private sector makes it impossible for the system within the Ministry to have access to information on fertilizer statistics

### 4.2 Recommendations

The following are some important recommendations:

- Take into account Dolomite and Phosphate Rock in the import and export files of the Customs
- Continue to hold country-level FTWG meetings with the support of IFDC and WAFA and national associations to compile and harmonize fertilizer data prior to the official regional FTWG workshop
- Conduct studies on consumption by product and crop
- Set up a fertilizer Public Private Partnership (PPP) platform in each country, to be responsible for analyzing, communicating, proposing and advising its members on all issues relating to the fertilizer sector (regulations, statistics, good agricultural practices, technical recommendations, professionalization of operators, etc.);
- Create better collaboration between private sector actors and WAFA, modelled on IFA:
  - To sensitize industry players to make availability their activity reports to WAFA.
  - To insert a clause in WAFA's regulations of procedure requiring the cooperation of industry players to provide information.
- Harmonize methods and data sources with other methods such as ECOAGRIS for AFO's consumption.

For more information and data on fertilizers and agriculture on different countries in Africa, please contact:

AfricaFertilizer.org

Website: [www.africafertilizer.org](http://www.africafertilizer.org)

Facebook: [www.facebook.com\AfricaFertilizer.org](https://www.facebook.com/AfricaFertilizer.org)

Twitter: [http://twitter.com\afriCFertilizer](https://twitter.com/africafertilizer)

## 5 ANNEXES

### 5.1 Fertilizer Statistics from 2010 to 2019 by Country

#### Burkina Faso

##### Fertilizer Imports to Burkina Faso from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3105200000	NPK	55 716	69 207	104 965	138 608	84 239	105 013	178 526	171 473	165 558	114 215	-51342	-31%
3102100000	Urea	72 868	36 404	64 783	57 332	63 298	55 712	68 056	60 855	72 433	33 425	-39008	-54%
3105300000	DAP	6 565	9 065	2 668	6 493	17 057	13 881	7 827	4 537	3 495	2 635	-860	-25%
3104200000	MOP	4 495	9 260	2 807	2 079	20 447	13 149	9 225	3 495	4 537	2 611	-1926	-42%
	Other fertilizer	17 667	7 432	12 224	14 611	21 582	20 420	19 606	5 217	17 525	7 537	-9988	-57%
<b>Total fertilizer (mt)</b>		<b>157 311</b>	<b>131 367</b>	<b>187 448</b>	<b>219 122</b>	<b>206 623</b>	<b>208 175</b>	<b>283 241</b>	<b>245 576</b>	<b>263 548</b>	<b>160 423</b>	<b>-103124</b>	<b>-39%</b>

##### Apparent Consumption of Fertilizers in Burkina Faso from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3105200000	NPK	55,574	69,864	101,965	138,443	84,199	105,013	178,526	171,473	165,553	113,315	-52238	-32%
3102100000	Urea	70,893	32,004	64,668	57,332	63,298	55,712	68,056	60,855	72,313	33,425	-38888	-54%
3105300000	DAP	6,565	9,065	2,668	6,493	17,057	13,881	7,827	4,537	4,290	2,634	-1656	-39%
3104200000	MOP	4,495	8,910	2,807	2,079	20,447	13,149	9,225	3,495	8,253	2,611	-5642	-68%
	Other fertilizer	17,649	5,400	11,770	14,616	21,582	20,420	19,606	5,217	15,334	12,437	-2898	-19%
<b>Total fertilizer (mt)</b>		<b>155,175</b>	<b>125,242</b>	<b>183,879</b>	<b>218,962</b>	<b>206,583</b>	<b>208,175</b>	<b>283,241</b>	<b>245,576</b>	<b>265,743</b>	<b>164,422</b>	<b>-101321</b>	<b>-38%</b>

##### Fertilizers Distributed as Part of the Grant to Burkina Faso in 2019

Program	NPK	Urea	DAP	Total
Conventional Subsidy	6 704	2 725	1 164	10 593
E-voucher	9 745	6 283	0	16 028
Other project/programs	1 695	893	2 587	5 174
<b>Total fertilizer (mt)</b>	<b>18 144</b>	<b>9 901</b>	<b>3 751</b>	<b>31 796</b>

## Cote d'Ivoire

### Fertilizer Imports into Côte d'Ivoire from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3104200000	MOP	77 743	36 820	47 433	65 910	88 441	96 732	82 073	99 902	64 415	89 260	24846	39%
3105200000	NPK	3 080	2 023	16 434	60 004	23 522	68 770	54 224	34 687	58 499	94 126	35627	61%
3102100000	Urea	39 868	51 582	61 675	52 436	74 180	65 775	66 682	43 790	43 066	90 955	47889	111%
3103101000	TSP	16 901	10 246	8 363	25 475	29 317	43 881	55 348	62 045	16 505	65 397	48892	296%
3105300000	DAP	39 270	9 982	23 024	47 320	40 198	19 505	39 881	25 217	15 793	51 057	35264	223%
3102210000	Ammonium sulphate	24 561	13 871	15 394	36 742	38 816	22 741	20 175	21 573	13 888	27 830	13942	100%
	Other fertilizer	15 517	12 313	24 192	33 041	29 444	24 410	13 937	15 709	20 131	25 220	5089	25%
<b>Total fertilizer (mt)</b>		<b>216 940</b>	<b>136 837</b>	<b>196 514</b>	<b>320 929</b>	<b>323 918</b>	<b>341 813</b>	<b>332 320</b>	<b>302 924</b>	<b>232 298</b>	<b>443 847</b>	<b>211548</b>	<b>91%</b>

### Fertilizer Exports to Côte d'Ivoire from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3105200000	NPK	21 469	617	9 433	53 972	49 597	38 283	23 871	29 990	9 198	56 286	47088,59	512%
3102100000	Urea	2 325	9 534	6 377	7 870	5 752	9 699	7 525	1 521	3 368	1 340	-2028,49	-60%
3104200000	MOP	504	960	7 972	1 303	10 478	4 738	1 672	2 590	1 743	2 722	978,42	56%
	Other fertilizer	1 362	1 129	2 516	2 131	7 804	1 545	1 295	3 145	1 000	16 243	15243,13	1524%
<b>Total fertilizer (mt)</b>		<b>25 660</b>	<b>12 240</b>	<b>26 298</b>	<b>65 276</b>	<b>73 631</b>	<b>54 264</b>	<b>34 362</b>	<b>37 246</b>	<b>15 310</b>	<b>76 591</b>	<b>61281,65</b>	<b>400%</b>

### Apparent Consumption of Fertilizers in Côte d'Ivoire from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3102100000	Urea	37 579	44 949	55 310	44 566	68 428	55 850	59 157	42 269	39 698	89 615	49 917	126%
3104200000	MOP	77 239	35 860	39 460	64 607	77 958	91 993	80 401	97 312	62 671	86 539	23 867	38%
3103101000	TSP	15 690	10 246	8 363	25 475	29 285	43 853	55 348	62 039	16 505	65 397	48 892	296%
3105300000	DAP	39 208	9 882	23 024	47 218	33 459	19 160	39 298	24 953	15 761	48 047	32 286	205%
3102210000	Ammonium sulphate	24 496	13 107	15 391	36 252	38 691	22 258	20 170	19 424	13 888	27 831	13 943	100%
	Other fertilizer	15 522	13 500	23 045	49 462	45 140	54 759	43 674	25 159	83 813	68 653	(15 160)	-18%
<b>Total fertilizer (mt)</b>		<b>209 734</b>	<b>127 544</b>	<b>164 592</b>	<b>267 581</b>	<b>292 961</b>	<b>287 873</b>	<b>298 047</b>	<b>271 157</b>	<b>232 337</b>	<b>386 083</b>	153 745	66%

## Mali

### Fertilizer Production in Mali from 2016 to 2019

HS Code	Fertilizer types	2016	2017	2018	2019
2510000000	PNT (Tilemsi Rock phosphate)	50 000	41 000	45 000	110 000
3101000000	Organic fertilizer	36500	41 000	47 950	40 374
<b>Total fertilizer (mt)</b>		<b>86 500</b>	<b>82 000</b>	<b>92 950</b>	<b>150 374</b>

### Fertilizer imports to Mali from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3102100000	Urea	104 103	149 420	164 901	188 492	171 550	132 565	252 745	395 583	225 504	284 941	59 437	26%
3105200000	NPK	14 979	25 259	24 197	46 351	95 283	57 065	28 322	39 589	7 484	115 310	107 825	1441%
3105400000	MAP	65 478	73 381	58 166	94 247	57 133	58 146	120 767	120 776	143 064	73 707	-69 357	-48%
3102210000	Ammonium sulphate	20 609	56 338	43 403	57 146	55 279	18 897	57 915	98 337	90 219	55 136	-35 082	-39%
3104200000	MOP	28 748	45 183	42 861	60 908	66 071	54 180	106 633	153 659	166 984	53 682	-113 302	-68%
3105300000	DAP	110	5 457	613	5 384	3 875	4 604	39 508	69 300	55 701	13 268	-42 433	-76%
	Other fertilizer	6 724	7 270	22 744	23 434	11 835	2 378	45 686	33 280	16 790	33 759	16 969	101%
<b>Total fertilizer (mt)</b>		<b>240 750</b>	<b>362 307</b>	<b>356 885</b>	<b>475 962</b>	<b>461 027</b>	<b>327 835</b>	<b>651 575</b>	<b>910 524</b>	<b>705 746</b>	<b>629 804</b>	<b>-75 942</b>	<b>-11%</b>

### Fertilizer Exports to Mali from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3105200000	NPK	52 042	142 971	150 134	175 845	71 670	83 536	113 807	113 917	51 762	70 291	18 530	36%
3104200000	MOP		37 427	17 605	26 395	22 989	250	23 728	42 664	3 050		-3 050	-100%
3102100000	Urea	66	25 405	27 567	18 977	42 588	1 003	33 339	41 568	90	195	105	117%
3105400000	MAP		34 226	28 416	29 470	28 547	-	33 340	24 664	-		0	
	Other fertilizer	20	14 719	30 592	19 086	34 810	180	11 964	38 159	510	240	-270	-53%
<b>Total fertilizer (mt)</b>		<b>52 128</b>	<b>254 748</b>	<b>254 315</b>	<b>269 773</b>	<b>200 603</b>	<b>84 969</b>	<b>216 178</b>	<b>260 973</b>	<b>55 411</b>	<b>70 726</b>	<b>15 315</b>	<b>28%</b>

### Apparent Fertilizer Consumption in Mali from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
3102100000	Urea	104 037	124 015	137 334	169 514	128 963	131 562	219 405	354 014	225 414	284 746	59 332	26%
3104200000	MOP	28 748	7 756	25 256	34 513	43 082	54 180	82 905	110 995	163 934	53 682	-110 252	-67%
2510000000	Rock Phosphate (PNT)							36 755	40 403	45 000	110 120	65 120	145%
3105400000	MAP	65 478	39 155	29 750	64 778	28 587	58 146	87 427	96 112	143 064	73 707	-69 357	-48%
3102210000	Ammonium sulphate	20 609	42 282	15 708	40 844	23 290	18 897	47 759	74 722	90 219	55 136	-35 082	-39%
3105300000	DAP	110	5 457	613	5 384	3 875	4 354	39 448	59 918	84 305	13 028	-71 277	-85%
	Other fertilizer	20 704	35 606	57 068	56 952	67 662	33 336	76 956	69 716	64 440	119 031	54 592	85%
<b>Total fertilizer (mt)</b>		<b>239 686</b>	<b>254 271</b>	<b>265 729</b>	<b>371 985</b>	<b>295 459</b>	<b>300 474</b>	<b>590 655</b>	<b>805 879</b>	<b>816 375</b>	<b>709 451</b>	<b>-106 924</b>	<b>-13%</b>

## Senegal

### Fertilizer Production in Senegal from 2016 to 2019

HS Code	Fertilizer types	2016	2017	2018	2019
2510000000	Rock Phosphate		525,000	500,126	587,216
3105300000	DAP	28,880	126,815	88,086	16,015
3103900000	DSP	7,718	2,337		
3101000000	Organic fertilizer	1,000	1,500	2,000	3,990
<b>Total fertilizer (mt)</b>		<b>37,598</b>	<b>655,652</b>	<b>590,212</b>	<b>607,221</b>

### Fertilizer Imports to Senegal from 2010 to 2019

HS Code	Fertilizer Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Variations	(%) Variations
3102100000	Urea	64,291	4,751	55,239	48,509	54,406	41,295	48,608	56,921	70,796	69,757	-1,039	-1%
3104200000	MOP	1,775	7,458	8,697	12,403	13,640	12,580	14,412	22,939	13,444	44,538	31,094	231%
3105200000	NPK	10,410	16,806	33,176	18,664	27,873	16,428	22,008	5,304	39,000	23,385	-15,615	-40%
3105300000	DAP	1,766	2,024	1,354	2,261	6,011	2,313	8,263		500	1,187	687	137%
	Others	6,199	3,343	4,169	4,301	5,058	6,218	2,682	2,259	4,469	8,767	4,298	96%
<b>Total fertilizer (mt)</b>		<b>84,440</b>	<b>34,382</b>	<b>102,636</b>	<b>86,138</b>	<b>106,989</b>	<b>78,835</b>	<b>95,974</b>	<b>87,423</b>	<b>128,209</b>	<b>147,634</b>	<b>19,425</b>	<b>15%</b>

### Fertilizer Exports to Senegal from 2010 to 2019

HS Code	Fertilizer types	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change	(%) Change
2510000000	Rock phosphate								525 000	500 126	587 216	87 090	17%
3105200000	NPK	134	4 492	498	484	10 543	360	8 633	5 608	21 374	94 019	72 645	340%
3105300000	DAP	4 342	13 100	2 868	7 803	46 503	18 000	23 629	65 734	70 440	6 054	-64 386	-91%
3103900000	Other P fertilizer	23 064	12 000	28 460	25 654	8 331	8 002	60 332	17 856	934	558	-376	-40%
	Other fertilizer	9 662	24 142	3 229	1 577	14 152	807	132	726	7 336	13 756	6 420	88%
<b>Total fertilizer (mt)</b>		<b>37 203</b>	<b>53 734</b>	<b>35 056</b>	<b>35 518</b>	<b>79 530</b>	<b>27 169</b>	<b>92 726</b>	<b>614 923</b>	<b>600 210</b>	<b>701 603</b>	<b>101 392</b>	<b>17%</b>

## Apparent Consumption of Fertilizers in Senegal from 2010 to 2019

HS Code	Fertilizer Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Variations : (%)	Variations
3105200000	NPK	10,324	12,338	32,678	18,180	17,330	16,068	13,376	-	17,626	-	-17,626	-100%
3102100000	Urea	54,954	-	52,031	47,587	40,855	40,522	48,607	56,332	63,500	56,959	-6,541	-10%
3105300000	DAP	-	-	-	-	-	-	13,514	61,081	18,146	11,148	-6,998	-39%
3104200000	MOP	1,775	7,458	8,697	12,398	13,640	12,580	14,412	22,939	13,444	44,517	31,073	231%
	Others	5,633	2,759	4,068	3,582	4,378	6,129	3,340	3,759	6,350	12,338	5,988	94%
<b>Total fertilizer (mt)</b>		<b>72,686</b>	<b>22,555</b>	<b>97,474</b>	<b>81,747</b>	<b>76,203</b>	<b>75,299</b>	<b>93,248</b>	<b>144,111</b>	<b>119,065</b>	<b>124,962</b>	<b>5,897</b>	<b>5%</b>

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### 5.3 Agenda for the Meeting

Time	Activities	
09:00-09:30	<ul style="list-style-type: none"> <li>Welcome address</li> <li>Introduction of participants</li> <li>Workshop Program, Objectives and Expected Outcomes</li> </ul>	
09:30-10:00	<ul style="list-style-type: none"> <li>Presentation of available statistics for previous years and for 2019 (data, sources, quality, etc.)</li> <li>Available national data, methodology and process</li> </ul>	
10:00-10:30	Coffee Break	
10:30-12:30	Group 1: Review and validation of 2019 fertilizer import statistics	Group 2: Review and validation of 2019 statistics on fertilizer production and exports
12:30-14:00	Lunch Break	
14:00-15:30	Group A: Fertilizer sector players <ul style="list-style-type: none"> <li>Information on WAFA activities (2019 results, 2020 action plans)</li> <li>State of the National Association APECI</li> <li>Possible actions to strengthen links between actors</li> </ul>	Group B: Statisticians <ul style="list-style-type: none"> <li>Consolidation of data validated in the morning by groups 1 and 2</li> <li>Preparation of tables for 2019 and statistical series from 2010 to 2019</li> </ul>
15:30-16:00	Coffee Break	
16:00-17:00	<ul style="list-style-type: none"> <li>Presentation of national fertilizer statistics for 2019</li> <li>Information on the fertilizer sector in the country and in ECOWAS (implementation of ECOWAS regulations, subsidy programs, projects, upcoming events, and conferences)</li> </ul>	
17:00	End of work	

### 5.4 Terms of Reference

#### Background

For the past 3 years, AfricaFertilizer.org (AFO) has been collaborating with the West Africa Fertilizer Association (WAFA) and jointly organizing annual workshops to validate national fertilizer statistics for at least 6 West African countries (Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, and Senegal). The results are presented during the different editions of the West Africa Fertilizer Forum (WAFF), accessible online at [www.africafertilizer.org](http://www.africafertilizer.org), and used to produce and update different reports, country fact sheets or the West Africa Fertilizer Trade Map (WAFBIM).

In 2019, two regional workshops were organized, one for the two English-speaking countries held on 13 and 14 March 2019 in Ghana, and a second one for the four French-speaking countries held on 27 and 28 March 2019 in Burkina Faso.

This year, it was recommended that the FTWGs of the four French-speaking countries conduct national pre-validation workshops on fertilizer statistics between February 19 and March 13, 2020 before the regional validation workshop to be held at the end of March in Senegal. These national workshops were organized in partnership with WAFA members in the countries concerned, and with functioning national fertilizer associations (Cote d'Ivoire, Mali and Senegal).

## **Objectives**

The national workshops for the pre-validation of fertilizer statistics 2019 aimed to do the following:

- Compile, analyze, and validate fertilizer statistics for 2019, with the support of representatives of public institutions and the private fertilizer sector, prior to a consolidation of these statistics during a regional FTWG workshop.
- Inform and discuss with participants the actions carried out in 2019 by WAFA – including its action plan for 2020 ; the state of the fertilizer market ; and the business environment in the country and in the sub-region (regulatory frameworks, subsidy programs, strategies and projects for the development of the agricultural and fertilizer sector)
- Strengthen linkages and networking among local stakeholders, particularly between national WAFA members, representatives of national fertilizer trade associations, and public institutions involved in fertilizer statistics management.

## **Expected Outcomes of the Workshop**

At the end of the country workshop, participants would have prepared tables of statistics on fertilizer production, imports, exports, and apparent consumption for the year 2019. These tables would then be presented at the regional FTWG workshop for validation.

## **Participation in the Workshop**

Each country workshop would be attended by at least 5 delegates from the public sector and at least 5 representatives from the private sector.

National institutions invited to participate in the workshop include:

- The Department of Statistics of the Ministry of Agriculture;
- The Directorate of Agricultural or Vegetable Production of the Ministry of Agriculture;
- The Customs Statistics Directorate of the General Directorate of Customs;
- National statistical agencies and/or institutes;
- The National Secretariat of CountrySTAT.

Private institutions and organizations invited include:

- Private operators in the fertilizer sector (importers, manufacturers, producers) ;
- Professional and interprofessional associations in charge of crops that require fertilizers (e.g. cotton) ;
- Key technical partners, projects, and programs working on fertilizer issues.

## **Organization and Method of Work**

- Each country workshop will take place over a single day (from 9am to 5pm).
- Participating institutions and organizations are requested to collect and share available data with IFDC and WAFA 2 weeks before the workshop on the following:
  - Production capacity and fertilizer production;
  - Imports and exports (in raw format);
  - Actual fertilizer consumption, fertilizer use by crop, and by area under cultivation.
- This data will be compiled and processed by AFO and sent to participants prior to the workshop.

- These data will then be analyzed and validated during country group work sessions, with technical assistance from IFDC and WAFA.
- Finally, the results will be presented in plenary and recommendations will be made to ensure general acceptance of these results and to improve the quality of the information collected.

#### Data Format

For import and export data:

- Disaggregated import and export data, generally available at the level of Customs services and fertilizer entry and exit points (Port Authorities).
- Note that only aggregated data by product and by year are published. Information on operators or values is used only to verify and validate fertilizer types, volumes, and agricultural or non-agricultural use of these fertilizers, but is not published.
- The data should be provided in Excel format to allow in-depth analysis by the participants. Scanned or PDF files are not allowed. They must contain the following information:

- Customs codes in HS Harmonized System format
- The exact description of the goods in addition to the customs nomenclature
- Net volumes in kg or mt
- The value (local currency, or in US Dollars)
- The name of the importer or exporter
- The country of origin and/or destination
- The date of the operation (Day/Month/Year)

Table 1: Example of Import Data (data from Ghana for 2015)

Mois	jour	An	Code HS	Produit (description 1)	Produit (description 2)	Point d'ent	Pays d'origi	Poids net (kg)	Valeur en douz	Importateur	
01	9	2015	3102100000	PRILLED UREA IN BULK	( 3,000 MT)	TMA1	LY	3,000,000.00	3,746,912.56	YARA GHANA LTD	
01	12	2015	3105900000	384 BAGS X 25KG (FERTILIZER MAP)		TMA1	IL	11,228.96	45,836.58	DIZENGOFF GHANA LIMITED	
01	12	2015	3105900000	FERTILIZERMILLION MORE 15-7-15-2M	+ME (528 BAGS X 25KG)	TMA1	IL	11,608.90	47,387.44	DIZENGOFF GHANA LIMITED	
01	12	2015	3105900000	FERTILIZERMULTICOTE 15-7-15+2MGO	(42 BAGS X 25 KG)	TMA1	IL	1,542.14	6,295.00	DIZENGOFF GHANA LIMITED	
01	13	2015	3105300000	10 X 20' CONTS STC	DI-AMMONIUM PHOSPHATE (DAP)	TMA1	MA	250,000.00	506,526.14	LOUIS DREYFUS COMMODITIES GHANA LTD	
01	13	2015	3104900000	WETTABLE MICRONIZED MINERAL FERT	ZER-HERBAGREEN, 67 CARTONS WITH 6	KIA1	TH	449.24	23,240.12	FEVAK COMPANY LIMITED*****	
01	13	2015	3104900000	WETTABLE MICRONIZED MINERAL FERT	ZER-HERBAGREEN, 8 BAGS OF 25 KGS E	KIA1	TH	212.76	11,006.85	FEVAK COMPANY LIMITED*****	
01	15	2015	3102300000	AMMONIUM NITRATE		TMA1	CN	115,598.00	210,107.20	ANIGORD FAMILLE COMPANY LIMITED	
01	19	2015	3105590000	FERTILIZER 20115 - COATED FERTILIZE	RFLEXICOTE VU LR 18 19 - 5 - 9 + 2M	TKD1	BE	61,200.00	349,406.86	PLANTATIONS SOCFINAF GH. LTD	
01	20	2015	3105100000	48 TONS CALCIUM NITRATE FERTILIZER	(CALCIUM) IN 25KG BAGS	TMA1	NO	48,000.00	59,001.27	YARA GHANA LIMITED	
01	20	2015	3102100000	ALIMENTAR20 BAGS X 1200 KG = 24T	PI R CONTAINER X 5	TKD1	BE	120,000.00	271,584.48	GOLDEN STAR (BOGOSO / PRESTEA) LTD	
02	11	2015	3105200000	NPK FERTILIZER 23-10-05 IN BULK		TMA1	NO	1,275,000.00	1,723,842.51	YARA GHANA LIMITED	
02	12	2015	3102500000	SODIUM NITRATE MIN. 98%PACKING: 9	BAGS X 25 KGS	TKD1	BE	24,000.00	64,189.44	MAXAM GHANA LIMITED(FORMERLY UEE EX	
02	13	2015	3102300000	AMMONIUM NITRATE - EMULSION GRA	1440 BIG BAGS X 1250 KGS= 1800 00	TKD1	RU	1,800,000.00	3,042,665.02	AEI MINING SERVICES (GH) LTD	
02	13	2015	3102300000	AMMONIUM NITRATE - POROUS PRILLS	800 BAGS X 1250 KGS = 1 000 000 KG	TKD1	SE	1,000,000.00	2,442,418.13	AEI MINING SERVICES (GH) LTD	
02	13	2015	3102210000	AMMONIUM SULPHATE STANDARD IN	AGRICULTURAL FERTILIZER	TMA1	BE	1,060,000.00	1,005,809.94	LOUIS DREYFUS COMMODITIES GHANA LTD	
02	16	2015	3105200000	FERTILIZERCRISTALAND 15.30.15. NPK		TMA1	LB	138.78	1,352.40	NAD-ADRA COMPANY LIMITED	
02	16	2015	3105590000	FERTILIZERCRISTALAND 20.20.20. NPK		TMA1	LB	324.45	3,161.70	NAD-ADRA COMPANY LIMITED	
02	16	2015	3105590000	FERTILIZERCRISTALAND 28.14.14. NPK		TMA1	LB	58.14	566.54	NAD-ADRA COMPANY LIMITED	

For fertilizer production data :

- Volumes produced per year and per type of fertilizer, if possible indicating the formulas produced and their use per crop (e.g. NPK 15 15 15 + 6S + 1B mixed for application on cotton in Côte d'Ivoire).
- Information on the location, operator, production and storage capacities of the manufacturing and blending units

For fertilizer consumption data:

- Volumes consumed per year, per crop and per type of fertilizer.
- Information mainly coming from the Statistical Services of the Ministry of Agriculture, public companies using tenders, annual reports of agriculture, sector studies, etc.

Table 2: Example of Consumption Data by Products and Crops (in Côte d'Ivoire)

Cultures	Types d'engrais utilisés	Volumes d'engrais appliqués (en tonnes)				
		2011	2012	2013	2014	2015
COTON	UREE	13 200	18 840	20 898	20 734	20 101
	NPK 15 15 15 + 6S + 1B	48 550	65 287	76 177	82 935	80 403
	<b>TOTAL COTON</b>	<b>61 750</b>	<b>84 127</b>	<b>97 075</b>	<b>103 669</b>	<b>100 504</b>
CACAO	NITRABOR	1 000	1 000	2 000	2 000	1 300
	NPK 0 23 19 + 5MgO + 10CaO + B	29 800	18 000	31 500	60 000	100 000
	NPK 18 18 18	-	-	-	-	-
	TSP	-	-	-	-	-
	<b>TOTAL CACAO</b>	<b>30 800</b>	<b>19 000</b>	<b>33 500</b>	<b>62 000</b>	<b>101 300</b>
PALMIER A HUILE	UREE	140	-	-	-	4
	NPK 15 15 15 + 4MgO + 0.7B	4 800	1 200	2 500	2 129	1 977
	NPK 15 10 15	-	-	-	76	-
	NPK 14 10 18	-	-	-	29	118
	NPK 14 10 18 + 2.1MgO	-	-	-	-	35
	NPK 10.5 0 30	10 429	5 229	5 390	4 987	4 708
	NPK 3.5 3.5 49.5	-	-	-	-	-
	KCL	10 000	9 800	12 400	7 404	8 643
	PHOSPHATE TRICALCIQUE	-	-	-	5 817	4 821
	DAP	-	-	-	-	-
	DOLOMIE	831	861	352	352	-
	ROCHES PHOSPHATEES	2 909	3 282	3 214	3 214	-
	<b>TOTAL PALMIER A HUILE</b>	<b>29 109</b>	<b>20 372</b>	<b>23 856</b>	<b>24 008</b>	<b>20 306</b>

## 5.5 HS Codes for Fertilizers of Côte d'Ivoire

HS Code	AFO 10 code	Fertilizer Name (industry)
281410	2814100000	Anhydrous Ammonia
281420	2814200000	Ammonium Hydroxide
283421	2834210000	Potassium Nitrate
310100	3101000000	Organic Fertilizers
310210	3102100000	Urea 46 0 0
310221	3102210000	Ammonium Sulphate 21 0 0 + 24S
310229	3102290000	Double Salts of AS or AN
310230	3102300000	Ammonium nitrate
310240	3102400000	CAN 27 0 0
310250	3102500000	Sodium Nitrate
310260	3102600000	Calcium Nitrate
310310	3103100000	SSP 0 18 0
310310	3103101000	TSP 0 46 0
310420	3104200000	MOP 0 0 60
310430	3104300001	SOP 0 0 50
310520	3105201304	NPK 3.5 3.5 49
310520	3105511404	NP 3 22 0 + 18S
310520	3105511405	NP 3 22 0 + 27S
310520	3105202102	NPK 12.5 4 8
310520	3105202104	NPK 11 6 7 + 2MgO
310520	3105202311	NPK 15 9 20 + 9.5 S + TE



310520	3105202314	NPK 16 8.5 23 + 5S
310520	3105202318	NPK 18.5 9 24 + 2.2S + 2MgO
310520	3105202319	NPK 10.5 5 27 + 5MgO
310520	3105202321	NPK 12 6 20 + 4MgO
310520	3105202338	NPK 12 6 20 + TE
310520	3105202339	NPK 12 9 34 + TE
310520	3105202340	NPK 18 3 25
310520	3105202515	NPK 15 15
310520	3105202533	NPK 15 15 15 + 4CaO
310520	3105202534	NPK 15 15 15 + 6S + 1MgO
310520	3105202535	NPK 19 17 14 + 3S + 4MgO +0.4Zn
310520	3105202539	NPK 14 10 18
310520	3105202543	NPK 19 17 14 + 4S + 3MgO + 0.4Zn
310520	3105202544	NPK 12 11 18 + TE
310520	3105202545	NPK 15 15 15 + 6S + 1B
310520	3105202546	NPK 14 18
310520	3105202550	NPK 14 12 14
310520	3105202619	NPK 13 13 21
310520	3105202629	NPK 10 12 32 + 3MgO + TE
310520	3105202809	NPK 11 22 16
310520	3105202821	NPK 13 23 17 + 4.5S + 3MgO
310520	3105202907	NPK 12 22 22 + 0.6 S
310520	3105202908	NPK 10 20 20
310520	3105202913	NPK 13.5 27
310520	3105203401	NPK 20 10 5 + 5S
310520	3105203403	NPK 23 10 5 + 3S + 2MgO + 0.3Zn
310530	3105300000	DAP 18 46 0
310540	3105400000	MAP 11 52 0
310560	3105601201	PK 0 9 18 + TE
310560	3105601301	PK 0 5 20 + TE
310560	3105601501	PK 0 12 12 + TE
310560	3105601802	PK 0 23 19 + 6.5S + 5MgO + 10CaO
310560	3105601803	PK 0 23 19
310520	3105202630	NPK 16 11 29