Increasing Investment in the Fertilizer Value Chain - The AFAP Model

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The AFAP Program – January 13, 2015

Background – Why Fertilizer?

- Fertilizer is critical to achieve the CAADP target of 6%
- Fertilizer use in SSA: 11kg/ha of the world average of 100kg/ha
- AU/NEPAD response: "Abuja Declaration on Fertilizers for an African Green Revolution"
  - Increase availability, affordability and accessibility of fertilizer
  - Increase fertilizer use to at least 50kg/ha
- New initiative: African Fertilizer and Agribusiness Partnership (AFAP)

Africa's Fertilizer Market: Key Characteristics

- Small fertilizer markets
- On average, small-scale farmers use no organic or chemical fertilizers
  - Average fertilizer use for SSA is 11kg/ha
- Majority of fertilizer markets underwent liberalization and privatization in late 1980s, early 1990s

Flow of Fertilizer from Supplier to Farmgate

Conduct (Coordination)

Performance (Profitability)

Physical Flow of Fertilizer

Functions

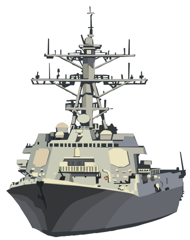
Transaction Costs

Procurement from Overseas Fertilizer Manufacturers

Procurement (by tender or negotiation) and financing

FOB cost

International Shipping



Ocean freight

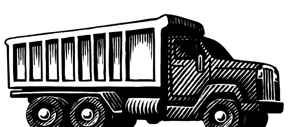
Freight costs

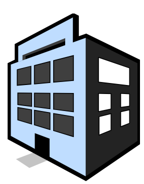
Sea Port in Coastal Country in Africa

Handling, bagging, Inspection, customs clearance

Port charges

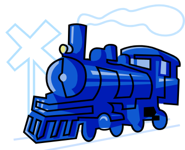
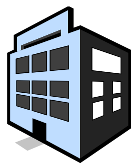
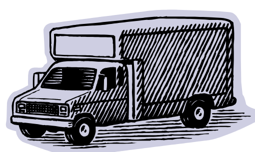
Warehousing in port vicinities





Local transport, unloading, stacking, inventory finance

Warehousing Costs

Physical Flow of Fertilizer		Conduct (Coordination) Functions	Performance (Profitability) Transaction Costs
Inland transportation	 	Inland transportation by road or rail	Transport costs
Inland Warehouse		Inland Storage	Warehousing costs
Local Transportation		Local transportation by truck or public vehicles	Transport costs
Agro-dealer		Agro-dealer retails to farmer (sales, rebagging, finance, distribution, information)	Operating costs
Farmer			

Barriers to the Flow of Fertilizer to the Farmgate (1)

- Importation:
  - Lack of domestic manufacturing facilities plus outdated recommendations results in importation of inappropriate fertilizers
  - Importers order in small batches which results in paying high prices on the world market
  - Poor port infrastructure results in high port charges
- Internal distribution:
  - Poor road and rail networks result in high transport costs
  - Shortage of warehouses results in inadequate stock
  - Poor access to credit: high interest rates and stiff collateral requirements

Barriers to the Flow of Fertilizer to the Farmgate (2)

- Retail:
  - Few agro-dealer operating next to the farm gate so poor access for farmers
    - Lack of access to credit poses a barrier to entry at retail level
    - Result: so they buy in small, frequent consignments
  - Retailers lack business management and marketing skills, and technical knowledge
- Farm-level demand
  - Lack of farmer knowledge of the correct use and benefits of fertilizers,
  - Use of inappropriate fertilizers due to outdated fertilizer recommendations
  - Lack of farmer access to credit;
  - Low returns to fertilizer use due to poor access to output markets.

The AFAP Model

African Fertilizer and Agribusiness Partnership

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What is the African Fertilizer and Agribusines Partnership?

AFAP is an independent non-profit organization working to establish more competitive and sustainable fertilizer markets in sub-Saharan Africa that can provide African smallholder farmers with the incentive, initiative, and capability to source and use fertilizer to improve crop production, reduce food insecurity, and increase rural incomes.

1) High cost of borrowing for all players all along the supply chain and its impact on the cost of fertilizer to farmers;
2) An unpredictable policy and regulatory environment.

AFAP is a collaboration between NEPAD, AGRA, IFDC, AfDB, and AGMARK

AFAP has 3 target countries (Ghana, Mozambique, Tanzania) and 2 pilot countries (Ethiopia, Nigeria)

Three Main Components

- 1) Agribusiness Partnership Contract (APCs) Mechanism
- 2) Regional Fertilizer Stakeholder Forums
- 3) Fertilizer Market Information Systems www.africafertilizer.org

What Are APCs?

APCs are agreements under which eligible international, regional and local agribusiness apply for AFAP assistance as they make inroads into the African fertilizer and other agribusiness markets.

AFAP assistance may include any combination of: payment and/or credit guarantees; matching grants; technical, logistical and marketing support; and training and organization of local entrepreneurs and farmers.

In return for AFAP's assistance agribusinesses agree to perform significant market development activities with local farmers and/or agribusiness (demand creation, extension support, farmer organization)

AFAP's APCs do the following:

- Expand supply of fertilizer:
  - Provides payment guarantees to new suppliers to the African market
  - Provides guarantees to new or growing blenders interested in expanding capacity
- Increase finance in the fertilizer distribution channel by:
  - Provide distribution guarantees to fertilizer distributors for credit to retailers
  - Matching grants to finance:
    - Building or expansion of warehouses at the wholesale and retail level:
    - The installation or renovation of fertilizer blending or granulation plants
    - Technical advice and business management training to address business or technical constraints being experienced by the private companies and banks
- Strengthen smallholder farmer access to and use of fertilizer by developing stronger and denser agrodealer networks in the rural interior (Hub-agrodealer networks)

Examples from Tanzania

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AFAP in Tanzania

AFAP operates in **11** regions in Tanzania which are grouped into 3 zones namely;

- Northern zone (Arusha, Kilimanjaro and Manyara regions)
- Southern Highlands Zone A (Iringa, Morogoro, Njombe and Ruvuma regions)
- Southern Highlands Zone B (Mbeya, Rukwa, Katavi and Kigoma)

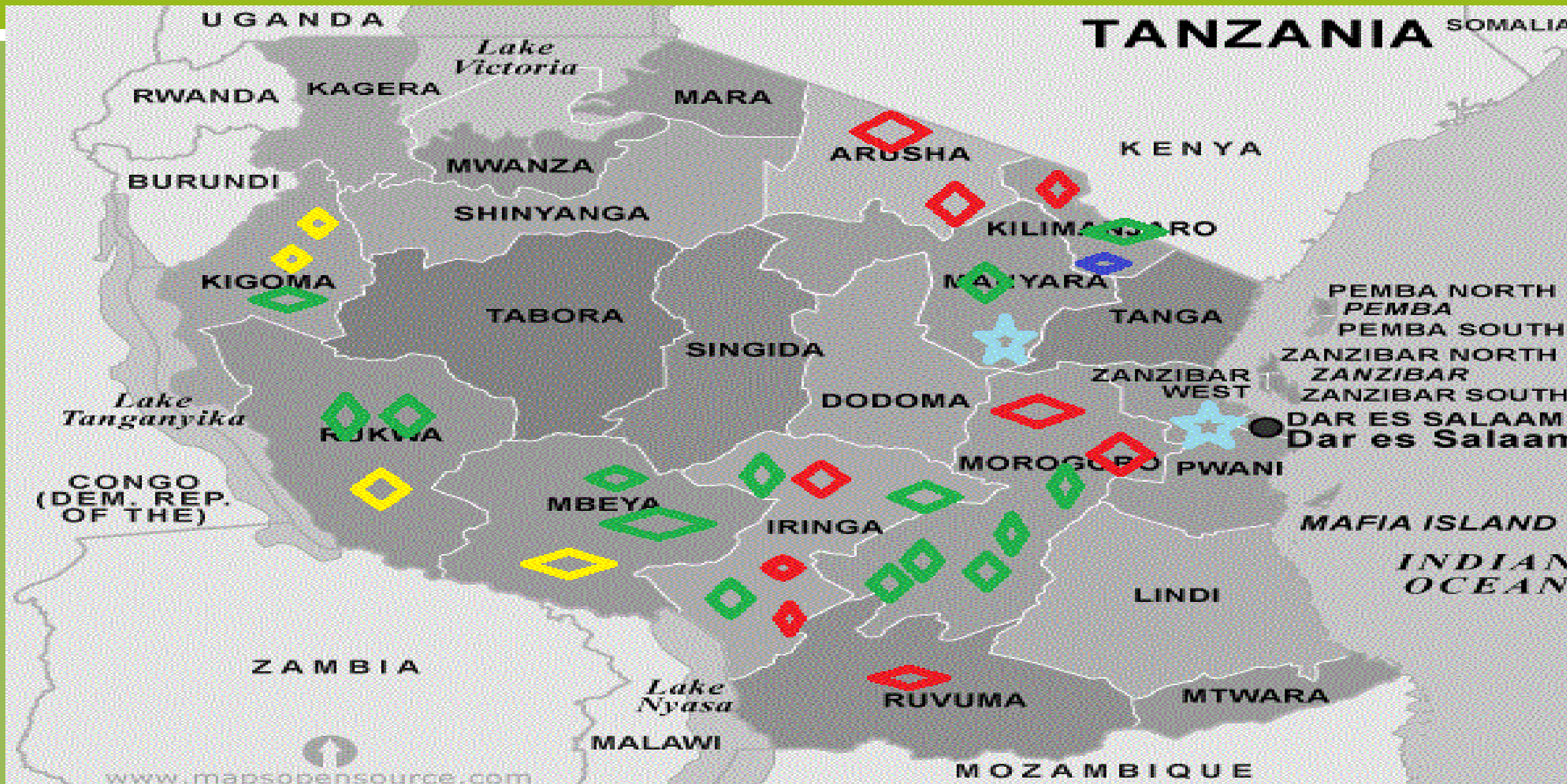
- As at 30th January 2015, **32** projects have been approved in Tanzania:
- **17** projects for credit guarantee
- **12** projects for warehouse construction
- **1** for warehouse purchase loan guarantee
- **2** for Blending (ETG and Minjingu)

Project Impact in Tanzania

The **25 hub agrodealers** approved projects will enable the following:

- **2,054,904** small holder farmers to be served through a network of **1,061** rural agro dealers

Locations of AFAP Projects in Tanzania-2014



Key:

Credit guarantee projects

Warehouse construction projects

Applications in the pipeline

Warehouse purchase loan guarantee

Blending projects

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BLENDING INITIATIVES

- In regards to supporting blending in Tanzania, AFAP supports the following activities:
  - ❖ AFAP is assisting ETG to establish an NPK plant at Dar es Salaam port. The project will cost about US$ 4 million. AFAP assistance will be in recruiting and paying for the required expertise to assist the company in establishing and operating the blending plant. With the new blending facility, ETG plans to establish a blending plant to produce 40,000 MT and later scale up to 100,000 MT. With the projected increase in fertilizer supply (40,000MT) more than 1,000, 000 farmers are going to benefit.
  - ❖ AFAP is helping Minjingu to carry out blending with respect to emerging deficient soil nutrients. AFAP helped Minjingu in conducting geological studies which looked specifically at aspects associated with processing side and quantifying size of the resource in mid-September 2014. Part of guarantee is expected to be used by Minjingu to guarantee the selected hub agro-dealers who will be supplied with Minjingu fertilizer under the same arrangement. AFAP in collaboration with IFDC has carried out a geological study aims at ascertaining the exact quantities and see the possibility of carrying out acidulation. There current production level is 25,000 MT of Minjingu mazao and have started to produce another blend comprising of NPKs and micro nutrients known as Minjingu Nafaka (NPS +)
  - ❖ Follow up and support the establishment of NPK blending plant by Live Support Systems (LSS) NPK blending plant The plant will be installed in Kibaha district, they are targeting to produce 250,000 MT of various NPK blends as per soil types
  - ❖ Israel Chemical Company (ICL) is also intending to carry out a blending plant in Tanzania with a strong bias of producing potassium based fertilizers.

Credit Guarantee for Tanzania

AFAP Tanzania has signed agreements with **6** fertilizer companies to supply fertilizers to AFAP-supported agro dealers **(25).**

- Minjingu Mines & Fertilizers Ltd
- Yara (T) Ltd
- China Pesticides (T) Ltd
- Export Trading Group
- Premium Agro Chem Ltd
- Tanzania Fertilizer Company (TFC)

Note: Initially, the idea was to support the credit guarantee beneficiaries only (15), but then it was decided to include the matching investment grantees (10) in order to help them with the problem of lack of working capital.

Credit Guarantee for Tanzania Cont.

Credit arrangement.

- The Agro dealer is supposed to pay 50% upfront of the proposed fertilizer consignment and pay the remaining fifty percent (50%) within sixty days (60).

- The Agro dealer can take the second consignment (within the 60 days after collecting the first consignment) if he/ she pays sixty percent (60%) of the first consignment balance and fifty percent (50%) of the proposed second consignment.
- The Agro dealer can be supplied with the third batch if he/she completes payments for the first consignment, sixty percent (60%) of the balance for second consignment and a fifty percent (50%) upfront of the proposed third consignment

CREDIT GUARANTEE IMPLEMENTATION STATUS AS AT FEBRUARY 2015

CREDIT GUARANTEE IMPLEMENTATION STATUS- FROM OCTOBER 2014 TO FEBRUARY 2015			
Name of Hub-Agrodealer	Location	Amount guaranteed (MT)	Amount sold(MT)
Rafiki Kilimo	Moshi	800.0	472.0
Obo Investment	Mbeya	1000.0	1988.96
Ikuwo Investment	Sumbawanga	1000.0	2370.9
Mary Agrodealer	Mbeya	800.0	300
Matamba Investment	Katavi	800.0	868.25
Emmanuel Mgaya	Iringa	800.0	419.1
Michael Mpembwa	Morogoro	800.0	142.5
Ngwale	Iringa	800.0	146.06
Nokwim Investment	Morogoro	800.0	295
Shilingi Agrodealers	Morogoro	800.0	91
Mlowe Jr Co ltd	Njombe	800.0	195
Majembe	Morogoro	800.0	452.2
Total		10000.0	7740.97

AFAP-Matching Investment Grantee Fertilizer Sales from November 2014 to February 2015

		CONSTRUCTION COST (US$)	AFAP GRANT(US$)	STORAGE CAPACITY (MT)	Amount Sold (NOV 2014 –FEB 2015) (MT)
1	Lipambikayika Agrovet	47,170	23,380	1,000	351
2	Mohamed Ngaula	37,852	18,925	300	45
3	Alpha Agro Chemicals	274,654	74,801	6,000	843.55
4	Imuka Agricultural Enterprises Ltd	75,334	37,667	1,728	771.2
5	Rubuye Agro Business Company Ltd	663,636	72,808	4,278	1848.85
6	Sungura Animal Feeds	245,794	57,169	4,000	144.70
7	Assenga Agrovet	-	-	6,000	455
8	Gaston Agrodealer	67,517	16,879	3,000	501
9	Buha Agroservices	50,527	25,264	1,500	133
10	Bajuta International Ltd	249,858	74,958	14,400	1,542.00
11	Unyiha Associate	43,229	21614	965	4,800
	Total	1,755,571	423,465	43,171	11,435.3

Warehouse Construction

The 10 approved warehouse projects for Tanzania will have a total storage capacity of **41,783** MT

- **12** are newly constructed warehouses out of which 4 warehouses have been completed and already in use. The remaining warehouses are in different stages of completion.

- **1** warehouse has been purchased under AFAP loan guarantee assistance and the warehouse is in use.

The following slides are showing the ongoing warehouse construction projects in different regions of Tanzania;

Assenga Agro-vet Company Ltd- Kilimanjaro, TZ

Description	Amount
Warehouse Price	**US$ 434,783**
AFAP Loan Guarantee	**US$ 250,000**
Storage Capacity	**6,000MT**
Small holder farmers to be reached	**100,000**
Retailers to be served-	**100**
Total fertilizer sales projections in 2014/2015	**3,000 MT**
Project status: The warehouse has already been purchased and part of it rented to Yara	

Alpha Agrochemicals Supply- Iringa, TZ

Description	Amount
Warehouse Construction Cost	**US$ 274,654**
AFAP contribution	**US$ 74,801**
APC fund paid to date (50%)	**US $ 37,400.5**
Storage Capacity	**6,000MT**
Small holder farmers to be reached	**74,250**
Retailers to be served-	**50**
Total fertilizer sales projections in 2014/2015	**12,600 MT**

Imuka Agricultural Enterprises- Morogoro , TZ

Description	Amount
Warehouse Construction Cost	**US$ 75,334**
AFAP contribution	**US$ 37,667**
APC fund paid to date	**US$ 18,286.5**
Storage Capacity	**1,728 MT**
Small holder farmers to be reached	**29,741**
Retailers to be served-	**50**
Total fertilizer sales projections in 2014/2015	**2,985 MT**

Sungura Animal Feed- Kilimanjaro, TZ

Description	Amount
Warehouse Construction Cost	**US$ 245,794**
AFAP contribution	**US$ 57,169**
APC fund paid to date (100%)	**US$ 57,169**
Storage Capacity	**4,000 MT**
SHFs to be reached	**30,000**
Retailers to be served-	**30**
Fertilizer sales projections in 2014/2015	**3,000MT**
Project Status : Construction complete and fertilizer is stored in.	

Bajuta International- Arusha, TZ

Description	Amount
Warehouse Construction Cost	**US$ 249,858**
AFAP contribution	**US$ 74,958**
Storage Capacity	**5,000MT**
APC fund paid to date (50%)	**US$ 37,479**
Small holder farmers to be reached	**240,000**
Retailers to be served-	**117**
Fertilizer sales projections in 2014/2015	**11,600 MT**
Project Status : Construction completed by 98%	

Mohamed Ngaula- Morogoro , TZ

Description	Amount
Warehouse Construction Cost	**$ 37,851.96**
AFAP contribution	**$ 18,925**
Storage Capacity	**300MT**
Small holder farmers to be reached	**10,000**
Retailers to be served-	**30**
Fertilizer sales projections in 2014/2015	**1000MT**

RUBUYE - NJOMBE , TZ

Description	Amount
Warehouse Construction Cost	**$ 500,405.**
AFAP contribution	**$ 72,808**
Storage Capacity	**5000MT**
Small holder farmers to be reached	**112,000**
Retailers to be served-	**80**
Fertilizer sales projections in 2014/2015	**4,278 MT.**

GASTON AGRODEALER- NJOMBE, TZ

Description	Amount
Warehouse Construction Cost	**$ 67, 517**
AFAP contribution	**US$ 16,879.**
Storage Capacity	**3000MT**
Small holder farmers to be reached	**26,000**
Retailers to be served-	**30**
Fertilizer sales projections in 2014/2015	**3,115MT**

LIPAMBIKAYIKA- RUVUMA, TZ

Description	Amount
Warehouse Construction Cost	**US$ 47,170.2**
AFAP contribution	**US$ 23,790**
Storage Capacity	**1,000 MT**
APC fund paid to date (50%)	**US$11,895**
Small holder farmers to be reached	**76,000**
Retailers to be served-	**30**
Fertilizer sales projections in 2014/2015	**3,800 MT**
Project Status : Construction completed by 50%	

Unyiha Associates

Description	Amount
Warehouse Construction Cost	**US$ 43,229**
AFAP contribution	**US$ 21,614**
Storage Capacity	**965 MT**
APC fund paid to date (50%)	
Small holder farmers to be reached	**135,000**
Retailers to be served-	**24**
Fertilizer sales projections in 2014/2015	**5000 MT**
Project Status : Construction completed by 60%	

Responsibilities of Benefiting Hub Agro Dealers

- In return to AFAP support the beneficiaries are committed themselves to perform the following
- Demand creation activities
  - ❖Conduct demonstration plots
  - ❖Leaflets
  - ❖Radio programmes
- Involvement in output Market
- Provide transportations service to rural agro dealers
- To provide fertilizer on credit to both farmers and rural agro dealers

OTHER AFAP SUPPORTED ACTIVITIES

- AFAP and IITA have entered in an MoU with AFAP given a task of promoting the use of bio fertilizer in soya beans and common beans
- The bio fertilizers involved are
    - Legume fix
    - Biofix
    - Nitrosua

and these have been proved to be effective in increasing productivity as confirmed by MAFC and SUA

- Dissemination fields will take place at the following places
    - Mbeya region (Mbeya rural and Mbozi Districts) - Common Beans
    - Ruvuma Region (Namtumbo District) – Soya Beans
    - Tanga Region (Korogwe District) – Soya Beans and Common Beans
    - Morogoro region (Kilosa District) – Soya Beans

Farmers' Training on Bio-fertilizers at Morogoro-February 2015

Training at Msimba Village, Mikumi, Morogoro March 2015

Farmers' Training on Bio –Fertilizers in Mbeya

Demonstration Plots in Mbeya

CHALLENGES

- Problems of working capital among hub-agrodealers
- Lack of reliable output market for surplus produce
- High loan interest rates (19%-21%)
- High fertilizer prices (Monopoly nature of importers)
- Limited funds at AFAP

RECOMMENDATIONS AND WAY FORWARD

Recommendations

- Explore more local funding from the different sources and donor community.
- Hub agro dealers involved under this arrangement should be given a priority in agriculture related financing initiatives e.g
  - Tanzania Agricultural Bank
  - Tanzania Investment Bank
  - Input Trust Fund
  - Private Agricultural Sector Support
- Because the Hub agro dealers are buying surplus produce from farmers they should be given a priority by NFRA and Mixed Crops Board when buying produce from farmers.

Way forward

- Need to enhance a close working relationship between AFAP and Ministry

Conclusions

- The implementation of the AFAP model has resulted in a marked increase in the levels of involvement and investment in the fertilizer market by fertilizer and agribusiness companies in Tanzania.
- As a result, in the AFAP intervention areas, fertilizer volumes are up, prices are lower, distances traveled by farmers have decreased, and the number of smallholder farmers using fertilizers has increased.
- Nevertheless, there is still a lot of work to be done: the model is only in 11 regions; the price of fertilizer is still to high; distribution networks are still weak to nonexistent which is a key reason for the continued low levels of fertilizer use.
- There is still a lot of need for initiatives that will increase investment and engagement by the private sector in fertilizer and agribusiness in Tanzania, and public-private partnerships (like AFAP) have an important role to play.

Thank You.

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