



The Importance of an Enabling Environment for the Establishment of Sustainable Fertilizer Markets for Smallholder Farmers in Africa

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About PEMEFA (Partnership for Enabling Market Environments in Africa)

Consortium of 5 partner organizations:

1. African Fertilizer and Agribusiness Partnership (AFAP)
2. International Fertilizer Development Center (IFDC)
3. Michigan State University (MSU)
4. New Markets Lab (NML)
5. Regional Network of Agricultural Policy Research Institutes (ReNAPRI)





About PEMEFA (Partnership for Enabling Market Environments in Africa) (cont'd)

GOAL

Transform African agriculture and livelihoods by improving smallholder farmers' **access to and use of fertilizers** by establishing **comprehensive, relevant, and robust national and regional fertilizer policies and regulatory frameworks** that facilitate increased **private sector investment and participation** in fertilizer value chains.



About PEMEFA (Partnership for Enabling Market Environments in Africa) (cont'd)

OBJECTIVES

1. **Generate evidence** to mobilize support for policy and regulatory reforms that will encourage private sector-led fertilizer markets and improve smallholder farmers' access to and profitable use of fertilizers.
2. **Build the capacity** of stakeholders along fertilizer value chains to establish a conducive enabling environment for private sector-led fertilizer markets.
3. **Drive ongoing efforts** to reform policy, legal, and regulatory regimes for fertilizer through outreach and engagement.





About PEMEFA (Partnership for Enabling Market Environments in Africa) (cont'd)

PEMEFA's initial activities (including today's presentations) are supported by a planning grant from the Alliance for African Partnership (AAP)

The AAP is a new, innovative initiative at Michigan State University that seeks to develop a collaborative and cross-disciplinary platform for addressing today's global challenges.



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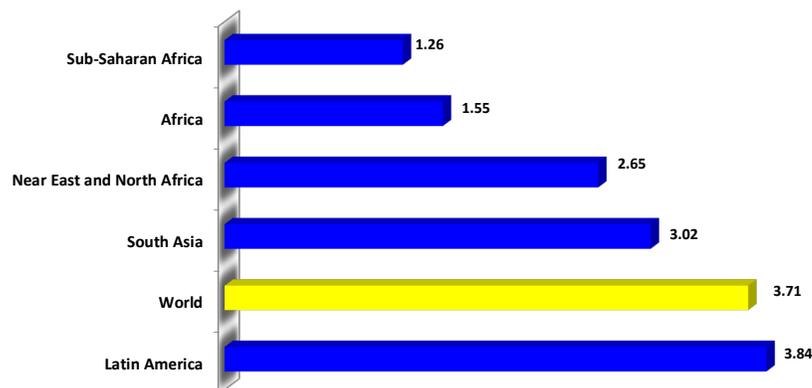


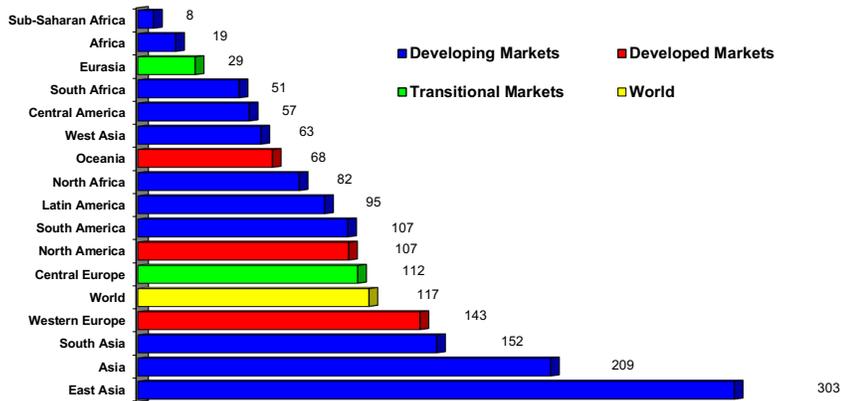
Importance of Agriculture for Africa

- Agriculture is key economic sector in Africa: 32% GDP and 65% of labor force
- Smallholder farmers produce 80% of food produced in Africa and they are mainly women
- Globally fertilizer is a key ingredient for increasing agricultural production:
 - To quote Normal Bourlag, "If high yielding seed varieties are the catalysts that have ignited the Green Revolution then **chemical fertilizer is the fuel** that has powered its forward surge."
 - Evidence suggests that **no region worldwide has been able to achieve food security without significantly increasing the use of fertilizer**" (Africa Fertilizer Summit, 2006)



Cereal Yields (tons/ha): Africa and Rest of the World





Africa: Other Fertilizer Facts

- SSA accounts for > 10% of the world's population but <1% of global fertilizer demand
 - Fertilizer demand SSA: **3.7 million metric tons nutrients or 2% of world demand (2017)**
 - Top 4 (South Africa, Ethiopia, Kenya, Nigeria) account for 50% of total fertilizer consumption
- SSA imports over 90% of its fertilizer requirements
- Annual grain imports into Africa: > **50 million mt**





Flow of Fertilizer from Supplier to Farm-Gate

Physical Flow of Fertilizer



Conduct (Coordination)

Functions

- Procurement (by tender or negotiation) and financing
- Ocean freight
- Handling, bagging, inspection, customs clearance
- Local transport, unloading, stacking, inventory finance

Performance (Profitability)

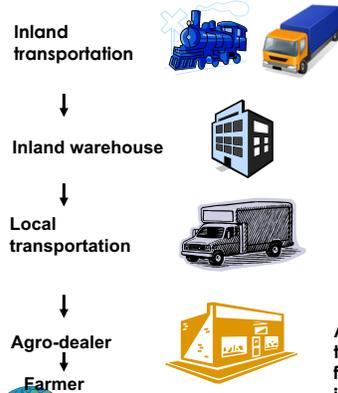
Transaction Costs

- FOB cost
- Freight costs
- Port charges
- Warehousing costs



Flow of Fertilizer (cont'd)

Physical Flow of Fertilizer



Conduct (Coordination)

Functions

- Inland transportation by road or rail
- Inland storage
- Local transportation by truck or public vehicles
- Agro-dealer retails to farmer (sales, rebagging, finance, distribution, information)

Performance (Profitability)

Transaction Costs

- Transport costs
- Warehousing costs
- Transport costs
- Operating costs





What is an Enabling Environment?

An enabling environment refers to **policies and regulations** and **supporting institutions** that are designed or implemented to **encourage increased private sector participation and investment** in fertilizer value chains, thereby increasing **competition**, putting **downward pressure on prices**, widening the range of **quality fertilizers** available, and improving **farmers' access** to fertilizers.



Some Definitions

- **Fertilizer policy** – provides the government's vision for the fertilizer sub-sector, guidance for the development of laws and regulations
- **Fertilizer law** and accompanying regulations
 - The **Fertilizer Law or Act** provides the legal principles which govern the manufacturing, importation, distribution, marketing, storage, trade and use of fertilizers
 - **Regulations** elaborate how the law will be implemented.

Policy
A policy is described
government, private
"Statement of Inter
important organiza





Fertilizer Policies and Regulations: Current Status

- Majority of countries in SSA do not have coherent fertilizer policies – ad hoc pronouncements or decrees that change often
- Main components of fertilizer regulation in SSA:
 - Registration of fertilizer products
 - Registration, licensing and operation of fertilizer businesses
 - Setting of fertilizer standards



Product Registration: Current Status

- In many SSA countries, fertilizer products must be registered before they can be sold commercially – an approved list of fertilizers
- In many countries new fertilizer formulations need to be tested for 3 years/seasons:
 - The introduction of new fertilizer products including fertilizer blends requires that the product be subjected to 3 seasons of trials by the research institute before it can be introduced to the market
 - This creates a huge disincentive for the private sector to introduce new fertilizers.





Registration and licensing of businesses: Current Status

- Fertilizer traders are required to register their businesses with other government offices for tax purposes
- Implications
 - Slow processes and multiple institutions involved leads to bureaucratic gridlock and limits market entry
 - Requirement for agrodealers to register with MoA may discourage legal fertilizer trade



Import and customs procedures and port operations: Current Status

- Countries have different requirements for importing fertilizer
 - Zimbabwe: import permit required
 - Tanzania: import license plus import permit required for each consignment
- All product entering a country must be tested by a government laboratory (even if it underwent PSI)

Implications

- The requirements can obstruct trade in fertilizer products by complicating the process and increasing time and cost required





Fertilizer Standards

- Standards set requirements and specifications for:
 - Physical composition; nutrient content; contaminant levels; packaging, branding, labelling, weight
- Current Status
 - Stringent Standards requirements
 - Narrow, specific definitions of fertilizers by nutrient composition
 - Both pose barriers to market entry



Quality Issues

- **Adulterated fertilizer**
 - Adding sand, earth, etc.
 - Mislabeling products.
- **Misleading labels**
 - Not in English language on bags or labels.
 - Not representing the true analysis of the nutrients.
- **Poor physical quality fertilizer**
 - Blends with unmatched granule/particle sizes.
- **Low weight bags**





Quality Control: Current Status

- National regulatory systems are under-resourced and ineffective
 - Most countries rely on PSI plus testing at the port
 - Enforcement at point of sale is weak – insufficient number of inspectors (usually less than 10 inspectors for the whole country).
 - In many countries, laboratory testing facilities are nonexistent or have old/insufficient equipment.

Implications

- Incidences of “fake” fertilizers are found in many fertilizer markets in SSA and pose a threat to market growth and yields



Main policies and regulations hindering growth of fertilizer markets in SSA

- Lack of or outdated fertilizer policies, laws/acts and regulations
- Strenuous and expensive requirements for product registration
- Import and customs procedures and port operations are complicated, time-consuming and costly
- Fertilizer quality challenges because national regulatory systems are under-resourced and ineffective
- Stringent Standards requirements





Impact of fertilizer policies and regulations on fertilizer market development in SSA: What we know



First Category of Literature (1)

- First, literature which describes the current status of fertilizer regulations in different countries around the globe and **infers** or **predicts** the impact on the private sector
- Prime example: “Enabling Business in Agriculture” (EBA) developed by the World Bank
 - The EBA benchmarks laws and regulations that impact the enabling environment for agribusiness markets.
 - EBA has developed three fertilizer indicators to measure laws and regulations and for each indicator it has developed good regulatory practices for fertilizer.





First Category of Literature (2)

- **Good Regulatory Practices for Fertilizer (EBA 2017)**
- For **fertilizer registration**:
 - Fertilizer registration should not be expensive and should not expire;
 - An official catalogue of registered fertilizers should be made available online;
 - Registration of fertilizer product should not be required if it is registered in another country in the region.
- For the **importation and distribution** of fertilizers:
 - All entities can import and distribute fertilizers;
 - Import permits not be required or not expensive, and easy to obtain.
- For **fertilizer quality control**:
 - Fertilizers must be packaged in sealed bags and properly labelled
 - Regulations should prohibit the sale of mislabeled and open fertilizer bags and impose penalties on those who fail to comply with set standards.



The EBA (2017) findings:

- The majority of countries with the **worst performance** on these fertilizer indicators were **located in SSA**. Why?
 - These countries have very **basic regulatory frameworks for registering** fertilizer.
 - The renewal period for **importer registrations** are shorter
 - **Import permits** are more expensive and valid for a shorter period of time.
 - Absence of laws prohibiting **mislabeled and open bag fertilizer**,
 - Lack of appropriate **penalties**
 - Absence of **labelling requirements** in at least one of the official languages
- *The study implies that these regulatory shortcomings negatively impact fertilizer market development in SSA by creating a **discouraging environment for the private sector**; but it does not do any analysis or provide any rigorous evidence to support these inferences.*





Second Category of Literature

- Literature from other regions of the world showing the impact of deregulation on technology transfer and private sector participation.
- Gisselquist and Grether (1998) present two case studies that show that deregulation does lead to a significant increase in technological transfer.
 - In Bangladesh, the **lifting of restrictions on imported diesel engines** in the late 1980s led to a **fall in price** and an **increase in their use** by farmers as consumers shifted to cheaper and smaller engines.
 - In Turkey, **deregulation of seed imports** (1982-84) caused a large **increase in the number of varieties** allowed for sale and a rapid **expansion of private company** participation.



Third Category of Literature

- Literature for SSA showing impact of current regulations on private sector participation
- Study by Gisselquist, Nash, and Pray (2002) used data from 4 countries (Bangladesh, Turkey, India and Zimbabwe) to test the following hypothesis:
 - **Regulatory reforms reducing obstacles to the introduction of new agricultural technology stimulate technology transfer.**
- Between 1980 and 1993, the regulatory reforms in these countries were as follows:
 - Bangladesh, Turkey and Zimbabwe **ended fertilizer price controls** and **relaxed import controls** reducing barriers to firm and product entry.
- The study found that these reforms resulted in market entry, new products and lower margins.
 - For example, Omnia, a major South African fertilizer manufacturer entered Zimbabwe with new fertilizer compositions in 1995 and existing companies responded with their own new compositions.





Enabling Environment for Fertilizer Markets in SSA: Knowledge Gaps

- **First**, what are the impacts of the current regulatory environment on private sector participation and investment?
- **Second**, what is the impact of deregulation on technology transfer and innovation – i.e., to what extent have regulatory reforms that have reduced obstacles to the introduction of new agricultural technology stimulated technology transfer and innovation?
- **Third**, what is the impact of overregulation – i.e., what are the foregone gains due to overregulation of the fertilizer industry in SSA which has blocked the introduction of new technologies which are more suitable for soil and crop nutrient needs?
- **Fourth**, further work on the implementation of these regulatory practices should also be conducted, since there is often a vast divide between regulations on paper and their application in practice. (i.e. “pressure testing” of new regulations)



Thank you

