

Proceedings of the National Seminar of Fertilizer

6th July 2018

Partnership for Enabling Market Environments
for Fertilizer in Africa (PEMEFA)



Alliance for African Partnership
MICHIGAN STATE UNIVERSITY



National Symposium on Fertilizer
InterContinental Hotel
Lusaka
ZAMBIA



The Role of Regulations in Stimulating Private
Sector Development in the Fertilizer Value



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ACRONYMS

AAP	: Alliance for African Partnership
AFAP	: African Fertilizer and Agribusiness Partnership
AFDB	: African Development Bank
CARD	: Centre for Agricultural Research and Development
CRS	: Conservation Farming, Catholic Relief Services
CSPR	: Civil Society for Poverty Reduction
CTPD	: Centre for Trade Policy and Development
CUTS	: The Consumer Unit Trust Society
FISP	: Farm Inputs Subsidy Programme
FVC	: Fertilizer Value Chain
GDP	: Growth Domestic Product
IAPRI	: Indaba Agricultural Policy Research Institute
IFDC	: International Fertilizer Development Center
LUANAR	: Lilongwe University of Agriculture and Natural Resources
MoA	: Ministry of Agriculture
MoFEP&D	: Ministry of Finance, Economic Planning and Development
MSU	: Michigan State University
NGOs	: Non-Governmental Organizations
NML	: New Markets Lab
NUSFAZ	: National Union for small scale farmers in Zambia
PEMEFA	: Enabling Market Environments for Fertilizer in Africa
PPD	: Public-Private Dialogue
PPP	: Public-Private Partnership
ReNAPRI	: Regional Network of Agricultural Policy Research Institutes
SSA	: Sub-Saharan Africa
ZAFPN	: Zambia Association for Fertilizer and Plant Nutrition
ZAMACE	: Private fertilizer companies such as Zambian Commodity Exchange
ZNFU	: Zambia National Farmers Union

PREFACE

The combined effects of climate change, declining soil fertility due to soil erosion, nutrient mining and low adoption of soil-fertility enhancing technologies (including rotation, cover crops, intercropping, and conservation agriculture) has led to the underperformance of the agricultural sector in sub-Saharan Africa (SSA). It is widely acknowledged that increased use of improved input technologies, particularly fertilizers, along with other soil fertility management practices may bring high returns to capital and labour investments in agriculture. To boost agricultural production and productivity, there is a general trend towards the promotion of inorganic fertilizers as a strategy for harnessing agricultural investments for the transformation of the agricultural sector in order to achieve agricultural growth in SSA.

In 2017, the Centre for Agricultural Research and Development (CARD) at Lilongwe University of Agriculture and Natural Resources (LUANAR) was delegated by the Board of Regional Network of Agricultural Policy Research Institutes (ReNAPRI-Africa) to join a collaborative research team for the implementation of the research project titled **“Improving the Enabling Environment for Fertilizer Markets in Africa: An Institutional Collaborative Approach to Value Chain Development”**. This project was developed by a Team that included Michigan State University (MSU-AFRE-USA), African Fertilizer and Agribusiness Partnership (AFAP-South Africa), International Fertilizer Development Centre (IFDC-USA) and New Markets Lab (NML-USA) and Indaba Agricultural Policy Research Institute (IAPRI) based in Zambia on behalf of ReNAPRI in response for a Call for Proposal for research grants from the Alliance for African Partnership (AAP) at the Michigan State University (MSU).

The goals of the Alliance for African Partnership (AAP) research awards were to promote collaborations with African partners and institutions, develop capacity for conducting international research for MSU researchers and African partners and promote equitable collaboration between American and African institutions and researchers

Members implementing the project formed a Consortium called **“Partnership for Enabling Market Environments for Fertilizer in Africa**

(PEMEFA)” to continue research collaboration beyond the period of the MSU AAP grant.

The project that PEMEFA is implementing aims at supporting the transformation of African agriculture and livelihoods by facilitating the creation of an enabling environment for the development of fertilizer markets in sub-Saharan Africa. The goal of the project is to increase private sector participation and investments in these markets, thereby improving the availability, accessibility and incentives to use fertilizers by smallholder farmers in sub-Saharan Africa. PEMEFA intends to transform African agriculture, lives, and partnerships by improving smallholder farmers’ access to and use of fertilizers through the development of comprehensive, relevant, and robust national and regional fertilizer policies and regulatory frameworks that facilitate increased private sector investment and engagement in fertilizer value chains in SSA. The consortium’s short-term objectives under this planning grant are:

- a) generating empirical evidence to inform policy development and regulatory changes;
- b) building capacity to generate and use that evidence to improve fertilizer policies and regulations;
- c) engaging policymakers and other stakeholders via sustained dialog and outreach;
- d) monitoring and assessing the impact of policy and regulatory changes on private sector investment, smallholder access to fertilizer and other income.

A few accomplishments have been made to-date that include

- a) conducting literature review on existing evidence on the effects of and best practices for regulations, policies, and legal frameworks to create an enabling environment for private sector investment in fertilizer value chains in SSA.
- b) capacity building of various stakeholders in the fertilizer value chain that include government, farmers, and representatives from the donor community, private sector input companies, research organizations, and non-governmental organizations through workshops and lecture

series countries.

- c) developing ideas for a larger grant proposal to continue with the work on fertilizer policies and regulation beyond the MSU AAP grant.
- d) Policy and Legal Engagement and Outreach on the preliminary findings from this research with key stakeholders that include government, farmers, and representatives from the donor community, private sector input companies, research organizations, and non-governmental organizations.

This report is a summary of such policy engagement through a National Symposium on ***The Roles of regulations on the private sector investment in the fertilizer value chain*** that was held at the InterContinental Hotel in Lusaka, Zambia on 6th July 2018.

The objective of the workshop was to raise awareness on how important fertilizer regulations are in creating an enabling environment for the private sector to thrive and invest in these markets. It also provided a platform for sharing what the Zambian Government is doing to facilitate private sector participation in the fertilizer value chain.

The National Symposium was one of the key deliverable for AAP/MSU research support. It is expected that this report will serve as a resource to identify future areas of research that will help to fill existing knowledge gaps on fertilizer policy and regulatory issues in Malawi and generate public discourse on the importance of fertilizer markets for African agricultural development.

Professor Charles B. Jumbe
Principal Investigator, CARD/ReNAPRI

ACKNOWLEDGEMENTS

The Indaba Agricultural Policy Research Institute (IAPRI) would like to thank Professor Charles Jumbe and Mr. Stewvier Kaiyatsa from the Centre for Agriculture Research and Development (CARD) at the Lilongwe University of Agriculture and Natural Resources (LUANAR) and Mr. Kilian Banda from the African Fertilizer and Agribusiness Partnership (AFAP) representing PEMEFA in liaison with Mr. Ballard Zulu for IAPRI for organizing this high-level national seminar that brought together high-level stakeholders from the private and public sectors to discuss pertinent issue that concerns the agricultural sector development in Zambia and share findings and lessons from the work that PEMEFA has been implementing over the past year (2017/18).

Special recognition must go to the Alliance for African Partnership at the Michigan State University (AAP/MSU) for providing research grants for the collaborative research that involved the PAMEFA members namely, Michigan State University (USA), New Markets Lab-NML (USA), International Fertilizer Development Corporation-IFDC (USA), African Fertilizer and Agribusiness Partnership-AFAP (South Africa) and Regional Network for Agricultural Policy Research Institutes (ReNAPRI) through the Center for Agricultural Research and Development (CARD) at the Lilongwe University of Agriculture and Natural Resources (LUANAR). Special tribute should go to the Principal Investigator for the project, Professor Charles B. Jumbe from CARD for ably representing ReNAPRI in the execution of this project whose findings were shared among various stakeholders at the Seminar.

We thank our staff from IAPRI led by Mr. Ballard Zulu the Director of Outreach at IAPRI for identifying and inviting various stakeholders to share their experiences and expectations, and for handling their logistics. We also thank all participants that attended the national seminar on 6th July 2018 at the prestigious InterContinental Hotel in Zambia. Without the patronage of the stakeholders, this seminar would not have taken place.

In particular, IAPRI would like to express its sincere appreciation for the support and collaboration received from the Ministries of Agriculture, development partners, University of Zambia, farmer associations and cooperatives as well as the private

sector. The fact that the Assistant Director, Mr. Kaunda Kapepak graced and officially opened the national seminar on behalf of the Ministry of Agriculture is a clear testimony of the Government of Zambia's interest and commitment in stimulating private sector investments in the agricultural sector particularly in the fertilizer value chain to ensure that smallholder farmers have timely access to fertilizers in the quantity and quality that will assist to boost their agricultural production.

IAPRI also deeply acknowledges the distinguished resource persons who made presentations to a wide range of participants from government ministries and departments, private sector, development partners, civil society and farmer organizations, the academia and farmer representatives. The success of the symposium is a result of the quality of presentations and deliberations during the symposium.

This report has been produced by Professor Jumbe with support from Mr. Stevier Kaiyatsa from Ministry of Finance, Economic Planning and Development in Malawi and IAPRI Secretariat. We thank the Team for producing the proceedings of the seminar so and fast and expediently so that it can be shared with participants to the symposium and members of the PAMEFA as an output of this important project.

Finally, as IAPRI, we cherish the collaboration that exists between IAPRI and all other institutions under the PAMEFA. The untiring efforts of the collaborators for this project deserve our heartfelt appreciation for their invaluable support. It is this kind of untiring support from the partner Universities that gives us bountiful of hope that, together, we have capacity to make meaningful contributions to the country's and regional policy landscape that will eventually translate into improved agricultural productivity, attainment of household and national food security, and equitable economic growth for our beautiful country Zambia and the region.

Mr. Chance Kabaghe
Executive Director, IAPRI

1.0 INTRODUCTION

1.1 Context

The Partnership for Enabling Market Environments for Fertilizer in Africa (PEMEFA) is a newly established partnership engaged in collaborative research, outreach, and capacity building activities and composed of Michigan State University (MSU), the African Fertilizer and Agribusiness Partnership (AFAP), the Regional Network of Agricultural Policy Research Institutes (ReNAPRI), the New Markets Lab (NML), and the International Fertilizer Development Center (IFDC). The principal investigators of PEMEFA are Nicole Mason (MSU), Maria Wanzala (AFAP), Charles Jumbe (CARD/ReNAPRI), Joshua Ariga (IFDC), and Katrin Kuhlmann (NML). ReNAPRI is represented by the Centre for Agricultural Research and Development (CARD) at Lilongwe University of Agriculture and Natural Resources (LUANAR). PEMEFA was formed with seed funding from the Alliance for African Partnership (AAP), a new, innovative initiative at MSU that seeks to develop a collaborative and cross-disciplinary platform for addressing today's global challenges. The vision of PEMEFA is to transform African agriculture, lives, and partnerships by improving smallholder farmers' access to and use of fertilizers through the establishment of comprehensive, relevant, and robust national and regional fertilizer policies and regulatory frameworks that facilitate increased private sector investment and engagement in fertilizer value chains in sub-Saharan Africa (SSA). A critical element needed to accommodate the dynamism and enhance the growth of the fertilizer sector in SSA is the creation of an enabling environment.

PEMEFA will support the creation of such an enabling environment by: (i) *generating empirical evidence* to inform policy and

regulatory decisions; (ii) *monitoring and assessing* the impact of policy and regulatory changes; (iii) *building bridges* between public and private sector stakeholders in fertilizer value chains through policy outreach and engagement, and enhanced Public-Private Dialogue (PPD) platforms; and (iv) *transforming institutions* by (a) *building the capacity* of actors and institutions along fertilizer value chains, and (b) *transforming the nascent PEMEFA consortium* into a sustainable consortium with long-term and scalable impacts that move the needle on fertilizer policies and regulations, facilitate increased private sector investment in fertilizer markets, and ultimately increase smallholder farmers' access to inputs and thereby improve their productivity and well-being. It is against this background that PEMEFA in conjunction with the Indaba Agricultural Policy Research Institute (IAPRI) held its second seminar on the role of regulations in stimulating private sector development in the fertilizer value chain on 6th July 2018 at the Intercontinental Hotel in Lusaka, Zambia.

1.2 Workshop Participants

The workshop drew its participants from various institutions, namely: government including Ministry of Agriculture; the academia, University of Lusaka; Development Partners, African Development Bank (AFDB); Private fertilizer companies such as Zambian Commodity Exchange (ZAMACE), Zambia National Farmers Union (ZNFU), Yara Fertilizer Company, Aurum Quiver Limited, Palm Associates and Vilma Enterprise Limited; agro-dealers; farmers; and civil society organizations such as MUSIKA, IAPRI, Centre for Trade Policy and Development (CTPD), Conservation Farming, Catholic Relief Services (CRS); Cotton Board, Cotton Association, Civil Society for Poverty Reduction (CSPR), National Union for small

scale farmers in Zambia (NUSFAZ), and The Consumer Unit Trust Society (CUTS).



Photo 1 Workshop Participants

2.0 WORKSHOP OBJECTIVES AND OPENING

2.1 Workshop Objectives

The second seminar of PEMEFA was held to present evidence from across Africa of the types of policies, laws, and regulations that promote versus hinder fertilizer business in Sub-Saharan Africa. The seminar was expected to stimulate research to fill existing knowledge gaps on fertilizer policy and regulatory issues and generate public discourse on the importance of fertilizer markets for Zambian agricultural development.

2.2 Workshop Opening

2.2.1 Welcome remarks and introductions by Mr. Ballard Zulu at IAPRI

In his welcome remarks, Mr. Zulu, Outreach Director at IAPRI and Convener for the seminar started by salutation where he recognized the Guest of Honour, Assistant Director in the Ministry of Agriculture, Mr. Kaunda Kapepak, the Acting Director for CARD, Dr Thabbie Chilongo, PEMEFA Principal Investigator at CARD, Prof.

Charles Jumbe, PEMEFA Co-Principal Investigator at AFAP, Killian Banda, Executive Director at IAPRI, Mr. Chance Kabaghe, all Government Officials, the Development Community, the Private Sector Representatives, the Development Organizations including NGOs and other Institutions, Representative of Farmer and Civil Society Organizations, Research and Academic Institutions, members of the media, invited participants, ladies and gentlemen. This was followed by self-introductions. Mr. Zulu concluded by outlining the workshop programme.

2.2.2 Opening Remarks by Dr. Thabbie Chilongo, Acting Director at CARD, LUANAR

In his opening remarks, Dr. Thabbie Chilongo, Acting Director at CARD, indicated that the seminar was organized under the auspices of a research consortium called “Partnership for Enabling Market Environments for Fertilizer in Africa (PEMEFA)” where the Centre for Agricultural Research and Development of the Lilongwe University of Agriculture and Natural Resources is a member representing the Regional Network of Agricultural Policy and Research Institutes (ReNAPRI). The consortium is a culmination of collaborative efforts by several high-end stakeholders in the fertilizer industry of which CARD is proud to be part of. The Acting Director indicated that both IAPRI and CARD are members of RENAPRI and they collaborate from time to time.



Phot 2: Dr. Thabbie Chilongo, Acting Director of CARD

The Acting Director indicated that the seminar was expected to spur debate on how we can fill the existing knowledge gaps on fertilizer policy and regulatory issues in the Region and Africa in general, more especially on the importance of fertilizer markets for African agricultural development. The seminar came at the right time when there is high demand for evidence-based policy formulation. He encouraged active participation in seminar’s deliberations which would be vital in improving the Fertilizer industry operating space. The Acting Director concluded by thanking the Guest of Honour, Mr. Kaunda Kapepak, Executive Director of IAPRI, Mr. Chance Kabaghe, the IAPRI’s Director of Outreach, Mr. Ballard Zulu, and everyone for honouring the invitations.

2.2.3 Opening Remarks by Mr. Chance Kabaghe, Executive Director IAPRI

In his opening remarks, Mr. Chance Kabaghe, Executive Director at IAPRI, welcomed the participants to the seminar. Mr. Kabaghe indicated that the seminar was organized to

raise awareness on how important fertilizer regulations are creating an enabling environment for the private sector to thrive and invest in fertilizer markets in SSA. The seminar was expected to stimulate research to fill existing knowledge gaps on fertilizer policy and regulatory issues and generate public discourse on the importance of fertilizer markets for Zambian agricultural development.



Photo 3: Mr. Chance Kabaghe, Executive Director, IAPRI

2.2.4 Official Opening by Mr. Kaunda Kapepak, Assistant Director at MoA

The Assistant Director, Mr. Kaunda Kapepak, indicated that the aim of PEMEFA fits well with the mission and policy of IAPRI and MoA. He indicated that the role of IAPRI is to link factual analysis to policy discussion in the agricultural sector while the MoA facilitate and support the development of a sustainable, diversified and competitive agricultural sector that assures food and nutrition security, contributes to job creation and maximizes the sector’s contribution to GDP.



Photo 4: Mr. Kaunda Kaepapak, Assistant Director at MoA

Mr. Kaepapak pointed out that two of the eight Zambian Second Agricultural Policy objectives were closely related to the objectives of the workshop, namely; increase agricultural production and productivity through promotion of the efficient use of fertilizers and agrochemicals, and to improve the efficiency of agricultural markets for inputs and outputs through the promotion of private sector participation in agricultural markets for inputs and outputs. He concluded by encouraging the participants to focus on new insights from this workshop and develop instructive resolutions based on facts that Zambia can use to achieve sustainable growth in the sector as it relates to fertilizer use.

3.0 SUMMARY OF PAPER PRESENTATIONS AND DISCUSSIONS

3.1 Background of PEMEFA and progress to date.

Mr. Killian Banda the African Fertilizer and Agribusiness Partnership (AFAP) who represented PEMEFA explained that the goal of PEMEFA is to 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. This goal would be achieved by generating evidence, building the capacity, driving ongoing efforts, and establish PEMEFA as a programmatically and financially sustainable consortium.



Photo 3: Mr. Killian Banda, AFAP

PEMEFA will use an integrated and multidisciplinary approach. It was indicated that policies and regulations affect the efficiency of activities throughout the fertilizer value chain from manufacturing, to importation and distribution, to the farm. The policy change process improves the efficiency of the value chain by: (i) generating empirical evidence to provide the basis for policy and regulatory reforms; (ii) building capacity to generate and use that evidence to improve fertilizer policies and regulations, and improve understanding of the legal and regulatory systems governing fertilizer value chains; (iii) engaging policymakers and other stakeholders via sustained dialogue and outreach; (iv) implementing system-wide legal and regulatory

change; and (v) monitoring and assessing the impacts of fertilizer policy and regulatory changes on private sector investment, smallholder access to fertilizer, and other outcomes. There is feedback between the stages, and this feedback is also used to improve future activities.

Mr. Banda pointed out that a number of activities have been implemented such as AAP launch in Tanzania on 2017. These include a synthesis report on the effects of and best practices for regulations, policies, and legal frameworks to create an enabling environment for private sector investment in fertilizer value chains in SSA, a ½ day workshop on fertilizer regulatory frameworks at an IFDC Training Workshop in Jinja, a policy seminar/outreach event in Malawi and Zambia, pilot a lecture series at US and SSA universities on fertilizer policy/regulatory issues, jointly prepared a concept note that will be shopped around for funding for a multi-million dollar grant to support the activities of the PEMEFA consortium, and among other things. He concluded with the way forward for PEMEFA that will include: developing Fertilizer Legal Guides and Tools to identify implementation gaps, establish a Fertilizer Accessibility Index, and capacity building along value chain actors.

3.2 PEMEFA and Preliminary Research Findings

Prof. Jumbe informed participants that Partnership for Enabling Market Environment in Africa (PEMEFA) is Consortium of five partner organisations, namely: African Fertilizer and Agribusiness Partnership (AFAP), International Fertilizer Development Center (IFDC), Michigan State University (MSU), New Markets Lab (NML), and Regional Network of Agricultural Policy Research Institutes (ReNAPRI). The goal of PEMEFA is to 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. The following objectives were outlined:

- i. 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.
- ii. Build the capacity of stakeholders along fertilizer value chains to establish a conducive enabling environment for private sector-led fertilizer markets.
- iii. Drive ongoing efforts to reform policy, legal, and regulatory regimes for fertilizer through outreach and engagement.



Photo 2: Prof. Charles Jumbe

On preliminary findings, Kaiyatsa informed participants that PEMEFA had reviewed three categories of literature. The first category is literature which describes the status of fertilizer regulations in different countries around the globe and infers or predicts the impact on the private sector and even provides some anecdotal evidence to support its predictions. The prime example is the global index “Enabling Business in Agriculture (EBA)” which was developed by the World Bank. The EBA benchmarks laws and regulations that impact

the enabling environment for agribusiness markets and aims to encourage policy decisions that support inclusive participation in agricultural value chains using three fertilizer indicators to measure laws and regulations: fertilizer registration; importation and distribution; quality control.

Summarizing the findings, Mr. Kaiyatsa reported that EBA (2017) study found that the majority of countries with the worst performance on these fertilizer indicators were located in SSA because: they have very basic regulatory frameworks for registering fertilizer; the renewal period for importer registrations are shorter and import permits are more expensive and valid for a shorter period of time; and there no laws



prohibiting mislabeled and open bag fertilizer, the lack of appropriate penalties and the no labelling requirements in at least one of the official languages of the country.

Mr. Stevier Kaiyatsa, Ministry of EPD

Kaiyatsa, further, indicated that second category is literature from other regions of the world showing the impact of deregulation on

technology transfer and private sector participation using the study by Gisselquist and Grether (1998) which presents two case studies that show that deregulation does lead to a significant increase in technological transfer in Bangladesh and Turkey.

The third category is literature for SSA is a little more rigorous, in that it analyses the impact of regulations on technology transfer and innovation as well as on private sector entry into the fertilizer industry in Africa. He presented the study by Gisselquist, Nash, and Pray (2002) describe regulatory reforms to remove barriers to private technology transfer and their impact on input industries. The study used data from 4 countries (Bangladesh, Turkey, India and Zimbabwe) to test how reducing obstacles to the introduction of new agricultural technology stimulate technology transfer. He concluded by indicating that there is a need for additional research on Enabling Environment for Fertilizer Markets in SSA, and the following knowledge gaps were proposed as starting points:

- i. First, what are the impacts of the current regulatory environment on private sector participation and investment?
 - ii. 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?
- iii. 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?
- iv. 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)

3.3 Structure of the Zambian Fertilizer Market

Dr. Rhoda Mukuka from IAPRI presented the structure of the fertilizer market in Zambia. In her presentation, she indicated most Zambian soils especially in the northern parts of the country are acidic and require liming before application of fertilizer. The input supply comprises government and private sector. The government has dominated the supply of fertilizer which crowd out the private sector participation. The private sector mainly supplies D-compound and Urea fertilizers. Farmers access fertilizer either through government’s FSP or commercial purchase from large input suppliers and agro-dealers. She pointed out that the E-voucher implementation has triggered participation of private sector in fertilizer distribution and marketing in Zambia.



Photo 5: Dr. Rhoda Mukuka, IAPRI

Dr. Mukuka highlighted the challenges that are affecting the fertilizer sector which include: high costs which make fertilizers unaffordable by most small-scale farmers, storage challenges making fertilizer unavailable throughout the year, political fertilizer market frustration, and availability of fake fertilizers on the market resulting from lack of proper inspection/monitoring by relevant institutions. She concluded with recommendations that can stimulate private sector participation in the fertilizer markets, namely; fertilizer value chain should be private sector led from production to marketing, encourage availability of fertilizer throughout the year in all parts of the country by leaving the E-voucher open throughout the year, encourage the use of blended fertilizers where soils are tested and specific recommendations are made, and that government should take effective regulatory and standards role.

4.0 GROUP DISCUSSIONS

The seminar participants were placed into three groups to discuss three questions, namely; (i) how do we stimulate the involvement of the private sector in the fertilizer value chain? (ii) How do we make the private sector an efficient partner in development? And (iii) what policies/regulations need to be changed developed or implemented to stimulate the private sector’s investment in fertilizer value chain? This was followed with group presentation (see annex 1.4 to 1.6 for group presentations). The major issues that emerged from the group discussions are summarized below:

4.1 How do we stimulate the involvement of the private sector in the fertilizer value chain?

- Continue implementation of the E-voucher
- Enhance partnerships with the government, agro-dealers and other input producer
- Investment in public goods—roads, markets, telecommunication facilities in productive areas
- Using warehouse facilities such as ZAMACE
- Encourage private sector to take advantage of the ZAMACE platform, in particular warehouse receipt system to store fertilizer and use it to access financing
- There is need for predictable and consistent policy environment
- Develop a fertilizer: law, policy, and strategy
- Strengthen the Fertiliser Association of Zambia
- Need for regular Government/Private sector/Civic organization platform to discuss these issues
- Tax relief with regards to production material or imports since cost is high; machinery, feed stock is high (manufacturing equipment – duty is so high and not there).
- Investment in agro dealership
- Push NCZ into PPP (private sector to up with efficient technology use)
- Blending of fertilizer – need for corroboration among private players; need for correct soil maps if blending has to work effectively; fertilizers must be specific for specific soils, Sensitizations of farmers on blending, there is need for policy on fertilizer blending, sell fertilizer for specific for a

particular community; Agro dealers to invest in soil testing as an innovation.

4.2 How do we make the private sector an efficient partner in development?

- Create an enabling environment with respect to policies and regulations
- Investment in public goods—roads, markets, telecommunication facilities in productive areas
- Create an enabling environment
- Limiting government interventions in the sector
- Limit activities that can disadvantage the private sector
- Private sector and government can collaborate to put in place testing labs
- Leveraging government and private sector resources on extension, storage
- Monitoring and enforcement of standards by ensuring that the different agencies that regulate the sector are well funded
- Government to regulate (ensure that markets are available) only and allow for enabling environment for private sector full role in marketing; partial deregulation – were businesses are classified different based on their capital available; need for some form of grading
- Tax relief on agricultural inputs, fertilizer blending technologies and raw materials
- Predictable policy actions by the government – this allows private sector to plan.

4.3 What policies/regulations need to be changed developed or implemented to stimulate the private sector's investment in fertilizer value chain?

- Zambia Compulsory Standards Agency should be strengthened in terms of quality monitoring through the construction of facilities such as labs
- Implementation of the Public Private Partnership (PPP) Act
- Develop a fertilizer: law, policy, and strategy which address issues of soil mapping/blending/certification/regulation
- Need for Partial deregulation in (Fertilizer Value Chain – FVC)
- Tax incentives and flexibility (16.5%), duty on fertilizer is 25.5%
- Need for New Standalone Fertilizer Act
- FISP program being making it more efficient (improve e-FISP); run e-FISP as an independent entity; planning and early implementation of e-FISP.

5.0 CLOSING REMARKS

5.1 Remarks by a member of the ZAFPN, Mr. Peter Sichamba

Mr. Sichamba thanked IAPRI for organizing such an important seminar. He indicated that the private sector, NGOs, and Academic institutions are much willing and passionate to see that the fertilizer industry in the SSA improves. It is important for the private sector to embrace the efforts that partners are bringing on board to make fertilizer business more profitable. He indicated that access to market is the main issue emerging from the seminar. The private sector investment is driven by profits while the most important farm inputs that smallholder farmers cherishes mostly are seed and fertilizer.

However, farmers face logistical challenges to move inputs to farm one hectare of land. Mr.

Sichamba asked IAPRI to compile the off-takers such as ZAMACE and AFRI to partner with Yara Fertilizer Company. During the dry period these off-takers get busy with aggregating grain when the condition of the rural road network is relatively good. As such, there is need for a partnership with these off-takers so that when a truck meant to collect grain in the rural areas should take fertilizers from Lusaka so that farmers buy fertilizer as they sell their grain on the same spot. This partnership could stimulate the private sector to invest in the furthest rural areas in Zambia.

5.2 Closing Remarks by IAPRI Executive Director, Mr. Chance Kabaghe

The closing speech for the seminar was delivered by the Executive Director of IAPRI, Mr. Chance Kabaghe. In his closing remarks, Mr. Kabaghe thanked the Guest of Honor, presenters and all the participants for the quality discussion. He also acknowledged that fertilizer is key to solving issues of hunger. He said that the Abuja declaration was very clear on what steps as Africa we should take in order to meet the Malabo declaration that there should be zero hunger in Africa by 2025. The kind of fertilizer application of 8kg for SSA per annum is very dismal performance. With this performance we can forget about meeting the Malabo declaration and various protocols that our governments have signed at regional, continental and UN levels.

Mr. Kabaghe indicated that IAPRI is determined to make sure that policy makers do implement some of the key issues that were discussed. IAPRI will make sure that the highest-level policy makers also open platform to discuss having the private sector lead in the fertilizer value chain. He concurred with Prof. Jumbe that there should be registration and some act of parliament related to fertilizer issues along the value chain

that Zambia does not have. In addition to the National Agricultural Policy there is also a need for a Fertilizer Policy to be developed. The current fertilizer consumption is 400 000 Mt which is considered to be very low. To achieve high fertilizer consumption levels, for example 1 000 000 Mt, there is need to build the capacity of farmers to take farming as a business. Once farmers take farming as a business, they will realize that fertilizer and certified seed are key. This will immediately triple the buying of fertilizer by farmers.

Mr. Kabaghe concluded that the private sector is key to improve the fertilizer industry in Zambia while government should restrict itself to regulations and standards. He mentioned that the seed industry in Zambia has been very successful as private sector led with no controls (open market) with a small government component of seed regulation and certification.

This has attracted big seed companies in the world. The same can be done in the fertilizer industry. The private sector does not import fertilizer when the government is importing the fertilizer for fear of being crowded out of fertilizer market. Private sector keeps on checking what the government is going to do every year. Procurement and distribution of fertilizer should be left to the private sector. IAPRI is very key to ensure that the government continues to implement the E-voucher which has crowded in 2300 private sector in the distribution of subsidized fertilizer. The next step is how IAPRI convince the policy makers to implement the policy recommendations from the seminar.



ANNEXES

ANNEXES

Annex 1: Papers presented at the Seminar

Annex 1.1: Background of PEMEFA and Progress to date

Partnership for Enabling Market Environments
for Fertilizer in Africa (PEMEFA)



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Background and Status of Partnership for Enabling Market Environments for Fertilizer in Africa (PEMEFA)

Maria Wanzala-Mlobela (AFAP) & Killian Banda (AFAP)
on behalf of the PEMEFA team

Seminar of the Role of Regulation in Stimulating Private Sector Development in the Fertilizer
Value Chain

06 July 2018 – Intercontinental Hotel, Lusaka, Zambia



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Partnership for Enabling Market Environments
for Fertilizer in Africa (PEMEFA)



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Project Summary:

- Fertilizers are critical to increased productivity of smallholder farmers in sub-Saharan Africa (SSA).
- Fertilizer was responsible for over 30 percent of the yield growth during the Green Revolution in Asia.
- However, fertilizer use in SSA is only 15 kg per hectare (kg/ha) compared to the world average of 124 kg/ha.
- In the 1990s, fertilizer markets in SSA were liberalized and the result was an influx of private companies.
- A key reason for the low private sector response is a weak enabling environment.
- In many African countries, there is little knowledge and understanding among policymakers and other stakeholders of the legal and regulatory systems that govern the supply, distribution, and use of fertilizers, and their impacts on the performance of the sector.

With seed funding from the Alliance for African Partnership (AAP), AFAP, IFDC, MSU, NML, and ReNAPRI have formed a consortium – the Partnership for Enabling Market Environments for Fertilizer in Africa (PEMEFA)



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Project 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.



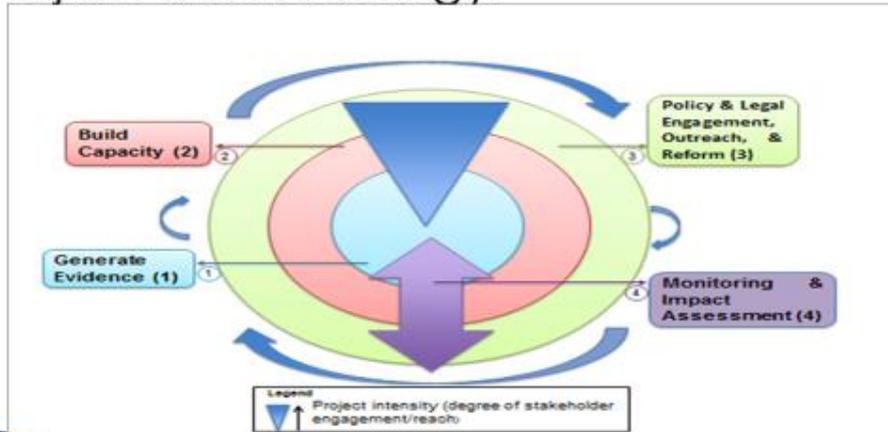
Project Objectives:

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.
4. **Establish our nascent AAP partnership, PEMEFA, as a programmatically and financially sustainable consortium** with long-term and scalable impacts on fertilizer policies and regulations in SSA.





Project Methodology:



Project Activities:

1. Gather and synthesize existing empirical evidence
2. Conduct a ½ day workshop on fertilizer regulatory frameworks
3. Conduct a ½ day policy seminar/outreach event
4. Pilot a lecture series at US & SSA universities on fertilizer policy/regulatory issues.
5. Contribute to a study on the impacts of the 2012 Economic Community of West African States Fertilizer Regulatory Framework on fertilizer trade and use.
6. Conduct a literature review/synthesis on best practices for Public-Private Dialogue platforms (PPDs) and take stock of current fertilizer PPDs in SSA.
7. Review the literature on effective consortium models.
8. Jointly prepare and submit at least one proposal for a multi-million dollar, multi-year grant to support the activities of the PEMEFA consortium.





Project Expected Outcomes:

1. **Improved knowledge and understanding** of best practices for the creation of a fertilizer business-enabling environment.
2. **Higher quality research and policy insights** as a result of increased multidisciplinary and multi-institutional engagement.
3. **Improved stakeholder participation** in the reform process.
4. **Increased research and public discourse** at US and SSA universities on creating an enabling environment for fertilizer business.
5. **Better organized and more impactful fertilizer PPDs.**
6. **A well-resourced consortium** with sufficient funds to work toward the achievement of its goal and objectives.
7. **A consortium that harnesses** the unique expertise and skills of its members while leaving room for exploration and enhancement of individual strengths and interests.



Project Status to date:

1. **AAP launch Dar-es-Salam, Tanzania** - (17-22 July 2017)
2. **Synthesis report** on the effects of and best practices for regulations, policies, and legal frameworks to create an enabling environment for private sector investment in fertilizer value chains in SSA.
3. **Conducted a ½ day workshop on fertilizer regulatory frameworks** at an IFDC Training Workshop in Jinja in Feb. 2018 with sessions on: (i) understanding and interpreting current regulatory frameworks; (ii) effectively advocating for reforms to regulatory frameworks; and (iii) drafting and revising fertilizer regulatory frameworks.
4. **Conducted a ½ day policy seminar/outreach event**
5. **4 Pilot a lecture series** at US & SSA universities on fertilizer policy/regulatory issues.
6. **Contributed to a study on the impacts of the 2012 Economic Community of West African States Fertilizer Regulatory Framework** on fertilizer trade and use.
7. **Conducted a literature review/synthesis on best practices for Public-Private Dialogue platforms (PPDs)** and took stock of current fertilizer PPDs in SSA.
8. **Reviewed the literature on effective consortium models.**
9. **Jointly prepared a concept note that will be shopped around for funding** for a multi-million dollar, multi-year grant to support the activities of the PEMEFA consortium.





PEMEFA Way forward:

1. **Fertilizer Legal Guides and Tools to Identify Implementation Gaps**
2. **Stacked Surveys of Private Businesses Throughout the Fertilizer Value Chain**
3. **Economic Lab or Lab-in-the-field Experiment(s)**
4. **Establish a Fertilizer Accessibility Index**
5. **Capacity Building along value chain actors**
6. **Other potential activities:**
 - Analysing how the governments can shift towards private sector friendly fertilizer subsidies
 - Analysis of how the shift by some governments from fertilizer subsidy programs to other initiatives
 - Cross country analysis of EBA data
 - Developing a multi-disciplinary (e.g., legal and economic) methodology to measure the effectiveness and impacts of legal and regulatory changes in the fertilizer sub-sector

Target Countries: **Southern Africa-** Malawi, Mozambique, Zambia & South Africa; **East Africa-** Rwanda, Tanzania, Kenya & Uganda; **West Africa-** Burkina Faso, Ghana, Nigeria & Mali



Thank you! Questions?

PEMEFA team

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Annex 1.2: PEMEFA Preliminary Project Research Findings

Partnership for Enabling Market Environments
for Fertilizer in Africa (PEMEFA)



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

Seminar of the Role of Regulation in Stimulating Private Sector Development in the Fertilizer Value Chain

Friday, 06th July 2018
Intercontinental Hotel, Lusaka



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Partnership for Enabling Market Environments
for Fertilizer in Africa (PEMEFA)



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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)



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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.



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



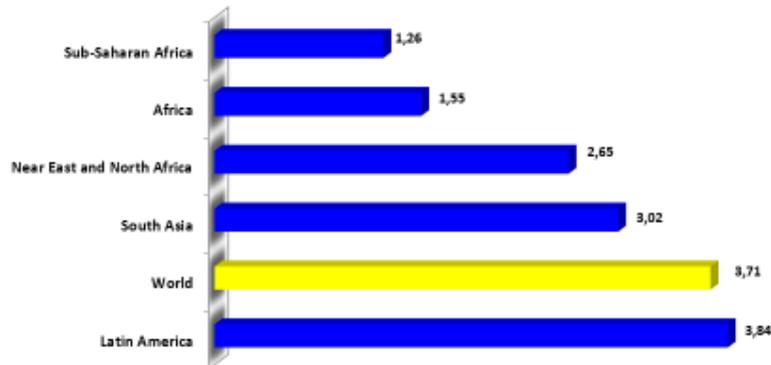


Importance of Agriculture for Africa

- 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 Norman Bourtag, "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)

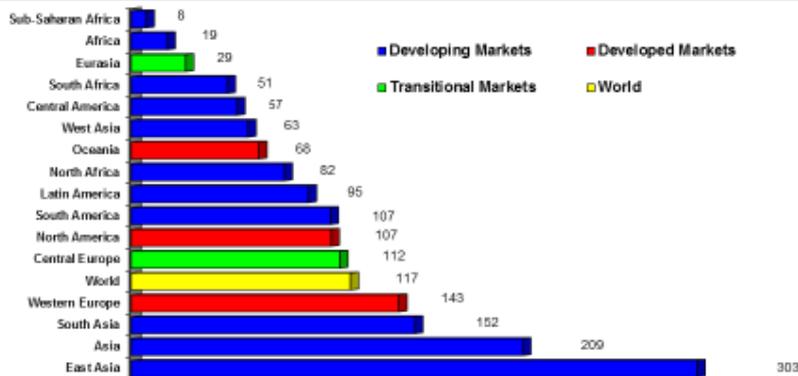


Cereal Yields (tons/ha): Africa and Rest of the World





Per Hectare Fertilizer Use by Markets, 2010



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





Evidence from Literature so Far



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;
 - Re-registration of fertilizer product should not be required if it is registered in another country in the region.
 - Fertilizer registration should include an application to register and lab sample analysis
- For the **importation and distribution** of fertilizers:
 - All entities can import and distribute fertilizers;
 - All entities are required to register as importers, and registration is inexpensive and does not expire.
 - 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.*



The EBA (2017) findings:

- How is Zambia performing on EBA fertilizer indicators?

EBA Indicators	Zambia	Malawi
Fertilizer registration index (0-7)	2.9	3.5
Time to register a new fertilizer product (days)	210	913
Cost to register a new fertilizer product (% income per capita)	226.6	3030.5
Quality control of fertilizer index (0-7)	3.5	4.5
Importing & distributing fertilizer index (0-7)	2.5	3.0





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.





Second and third Category of Literature

• What kind of reforming regulations can Zambia consider in fertilizer industry?

- Allow companies to sell fertilizer with any combination of nutrients.
- Enforce truth-in-labelling and;
- Ban dangerous impurities such as heavy metals and other harmful items.



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)



Partnership for Enabling Market Environments
for Fertilizer in Africa (PEMEFA)



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Thank you



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Fertilizer Reforms and Impacts on Technology Transfer

Country	Reforms	Impact on TT
Bangladesh	1988–90, govt shifted most domestic fertilizer sales from factories and ports to private traders.	Traders introduced new products (e.g., single super phosphate and micronutrients) to address soil deficiencies
	1990, govt allowed private import of triple super phosphate and muriate of potash without permits.	
	Around 1991, govt allowed private import of all other fertilizers without permits.	
	1995 (policy reversal), govt assigned markets to each fertilizer dealer, banning sales outside assigned markets.	
	Around 1996 (policy reversal), govt began to limit (list) fertilizer compositions allowed for sale.	
Turkey	In the early 1980s, the govt established a workable foreign exchange market.	Competing oligopolists introduced new compounds in the mid-1980s
	1986, govt ended fertilizer price controls and allowed four private companies to import fertilizers; subsidies continued.	
	1994, govt opened fertilizer imports to all large companies; subsidies continued.	
Zimbabwe	1994, govt established a workable foreign exchange market.	Significant increase in number of compositions offered.
	1993–95, govt ended all fertilizer price controls.	



Annex 1.3: Structure of the Zambian Fertilizer Market



Structure of the Zambian Fertilizer Market

by

Rhoda Mofya-Mukuka and Auckland Kuteya

Presented at the Seminar of the Role of Regulation in Stimulating Private Sector Development in the Fertilizer Value Chain

Friday, 7th July 2018, Intercontinental Hotel, Lusaka



Presentation Outline



Introduction

2

- Importance of fertilizer
 - Key input for commercial agriculture
 - For higher yields
- Most Zambian soils especially in the northern parts of the country are acidic and require liming before application of fertilizers
- For a long time Government supply dominated the fertilizer markets
 - Crowded out private sector participation
- Mainly D-compound and Urea fertilizers are supplied

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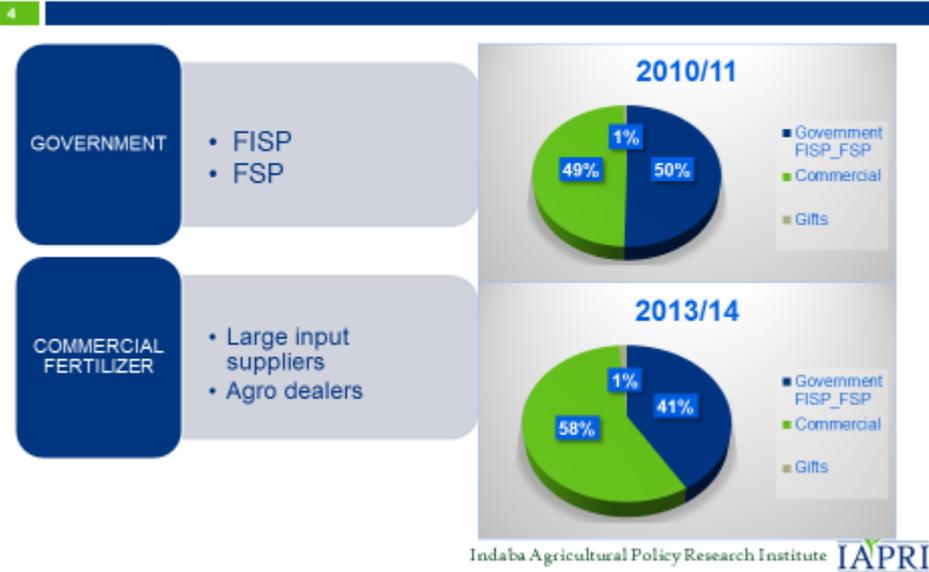
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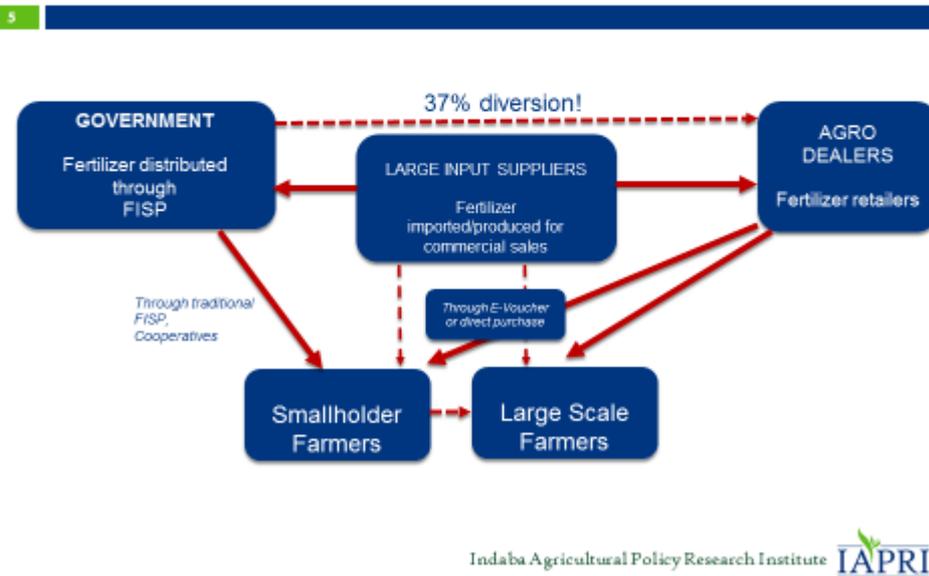
Fertilizer Supply in Zambia

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Main Fertilizer Sources



Fertilizer Market Structure in Zambia



Large Fertilizer Suppliers in Zambia

6

- About 70 primary input suppliers among which are:

Local
Companies

- Nitrogen Chemicals of Zambia (NCZ)
- Neria Investments

Multi-national
Companies

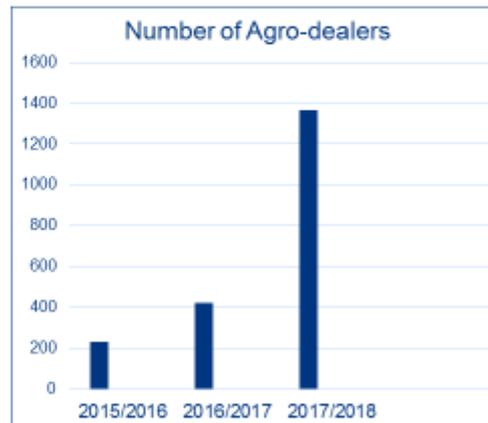
- Zambian Fertilizer
- Omnia
- Yara Zambia
- Export Trading Group (ETG)
- Farmer Rama
- Forest Co.

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Agro dealers have Increased since the Introduction with the E-voucher

7

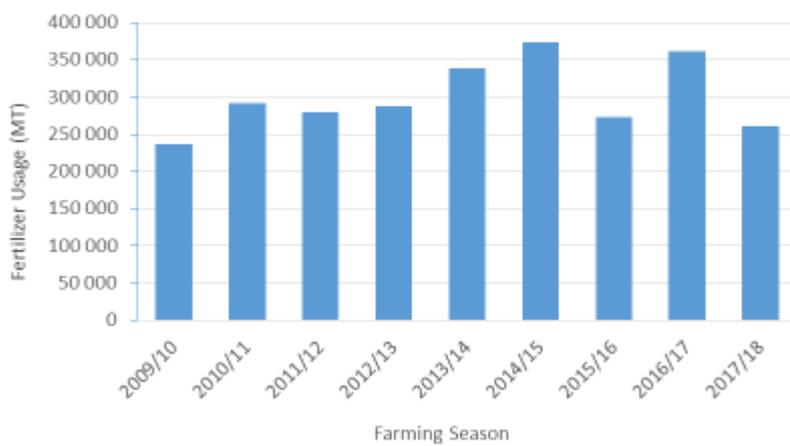
- E-voucher implementation has triggered participation of private sector in fertilizer distribution and marketing
- Agro-dealers sales points estimated at 2,300
 - Some had more than one outlets



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Fertilizer Usage

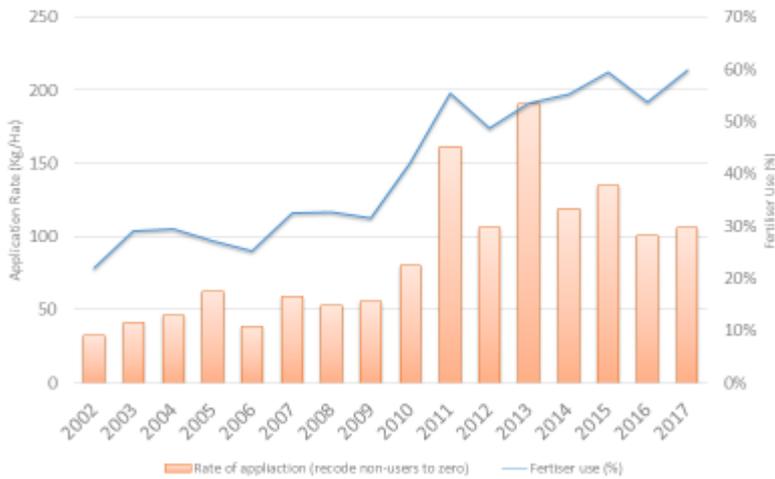
Total Fertilizer Usage (MT) by Year



Source: CFS, various years

Fertilizer use per hectare

10

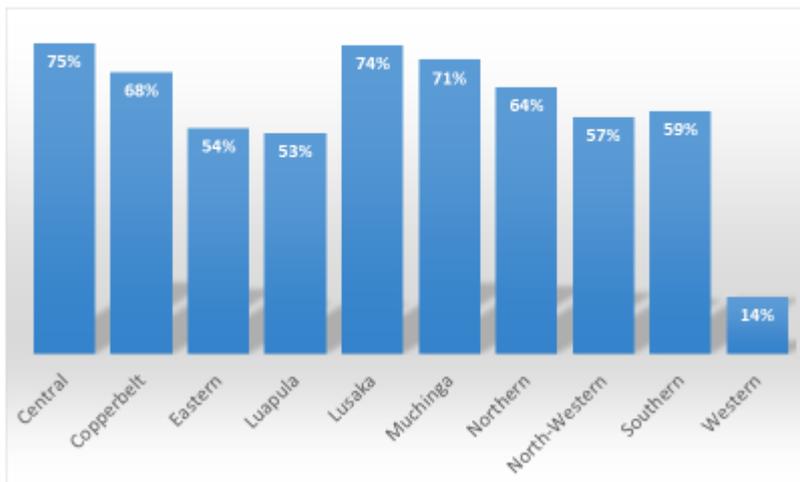


Source: CFS, various years

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Fertilizer use by Province

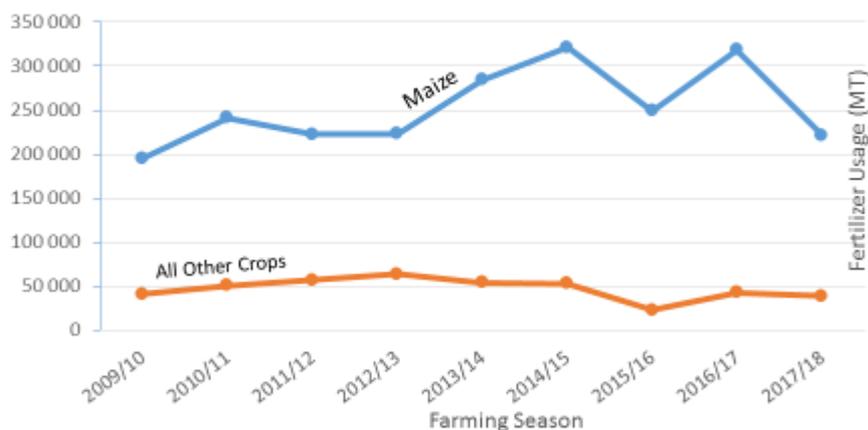
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Total Fertilizer Usage on Maize Vs All Other Crops

12

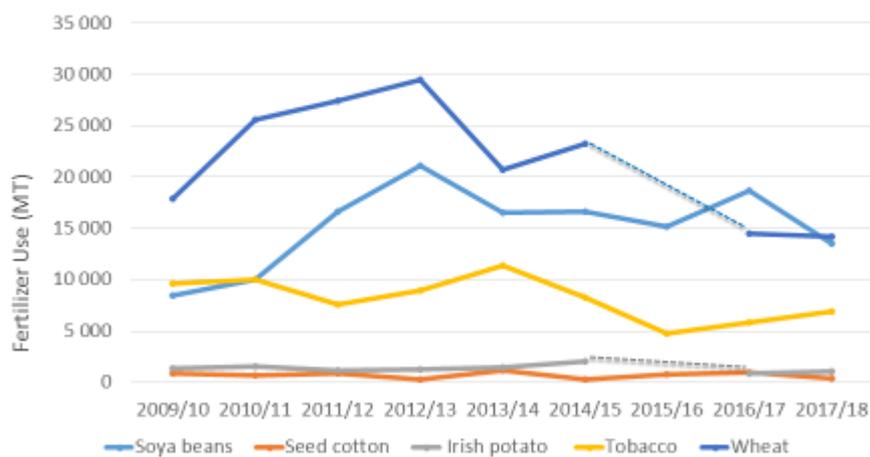


Source: CFS, various years

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Total Fertilizer Usage by Selected Crops

13



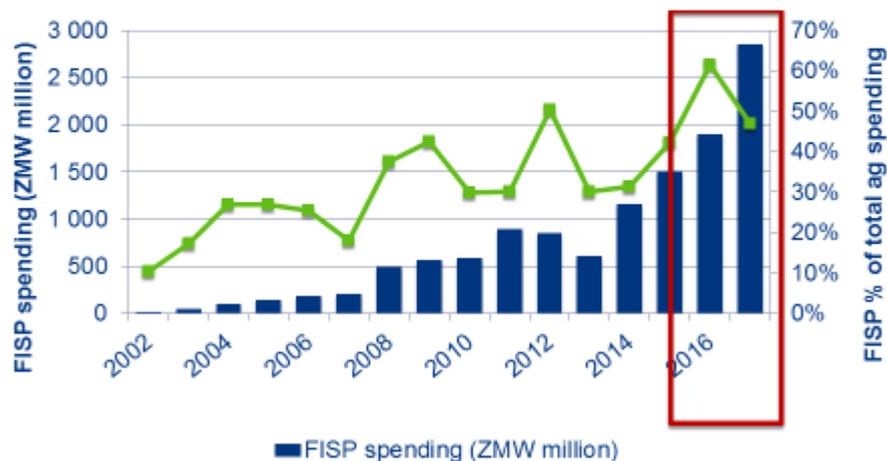
Source: CFS, various years

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Government Spending on Fertilizer

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FISP spending, 2002-2017



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Challenges facing the Fertilizer Sector

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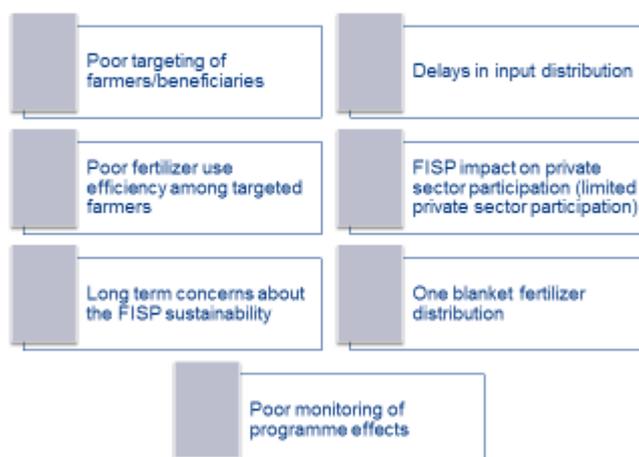
Challenges facing the Fertilizer Sector

- High cost – unaffordable by most small-scale farmers
 - High importation and transport costs
- Storage challenges – fertilizer not available throughout the year
- Political fertilizer market frustration
- Fake fertilizers on the market resulting from lack of proper inspection/monitoring by relevant institutions:
 - Zambia Compulsory Standards agency
 - Zambia Environmental Management Agency
 - Ministry of Agriculture
 - competition and consumer protection commission

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Traditional FISP related challenges

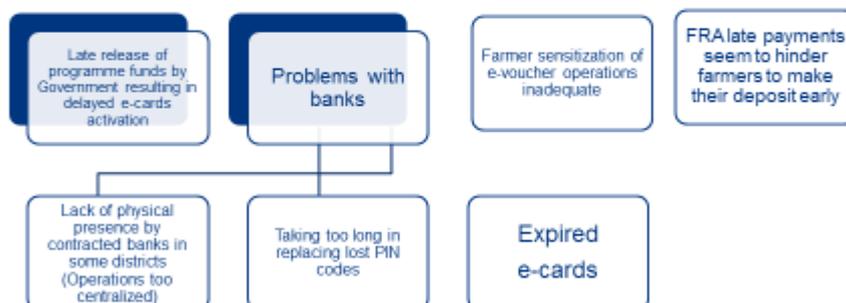
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E-Voucher related challenges

19



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Conclusions

20

Fertilizer usage in Zambia has remained virtually the same over years, below 400,000 MT per annum

Fertilizer usage is still dominant on maize production

Commercial fertilizer is increasingly becoming popular among smallholder farmers

Decline in fertilizer usage during the e-voucher period could be explained by enhanced agricultural diversification

The E-voucher system has increased private sector participation in the fertilizer markets

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Recommendations

21

Fertilizer value chain should be private sector led (production to marketing)

Encourage the use of blended fertilizers – where soils are tested and specific recommendations are made

Encourage availability of fertilizer throughout the year in all parts of the country

- Leave the E-voucher open throughout the year

Government takes effective regulatory and standards role

Indaba Agricultural Policy Research Institute 

Thank You

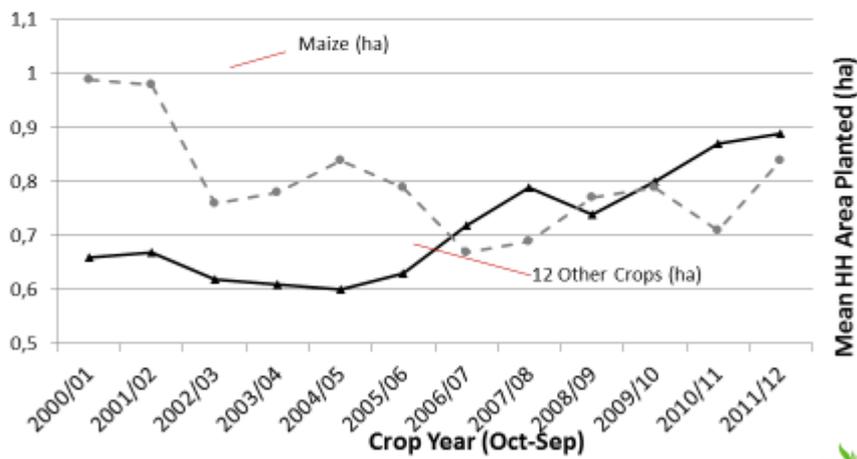
22



Indaba Agricultural Policy Research Institute 

Mean Smallholder Area Planted to Maize and Other Crops

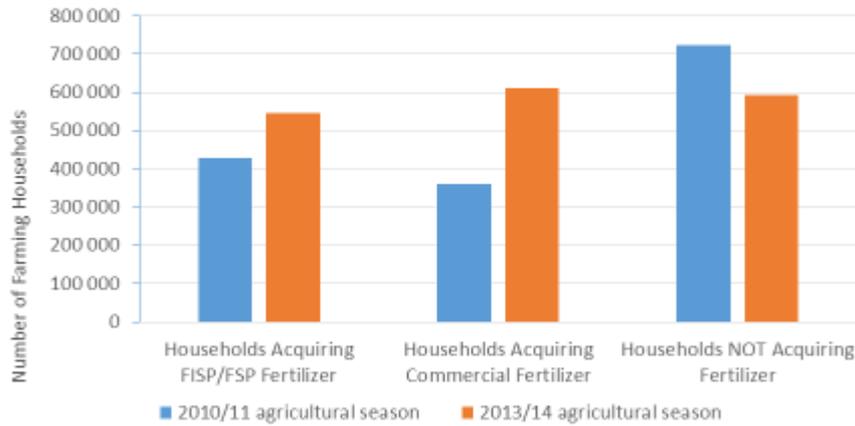
23



Indaba Agricultural Policy Research Institute 

HHs Accessing Fertilizer by Source

24

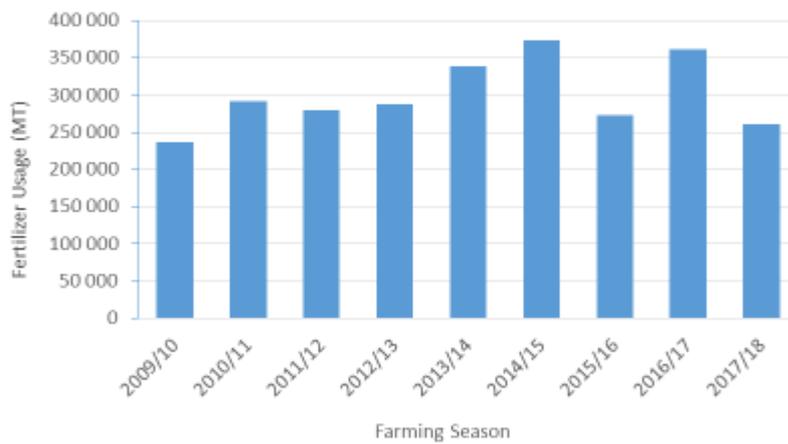


Source: RALS12 & RALS15

Indaba Agricultural Policy Research Institute 

Total Fertilizer Usage (MT) by Year

25



Source: CFS, various years

Indaba Agricultural Policy Research Institute 

Annex 1.4: Group One Presentation

Stimulate participation

1. Tax relief with regards to production material or imports since cost is high; machinery, feed stock is high (manufacturing equipment – duty is so high and not there).
2. Investment in agro dealership
3. Push NCZ into PPP (private sector to up with efficient technology use)
4. Blending of fertilizer – need for corroboration among private players; need for correct soil maps if blending has to work effectively; fertilizers must be specific for specific soils, Sensitizations of farmers on blending, there is need for policy on fertilizer blending, sell fertilizer for specific for a particular community; Agro dealers to invest in soil testing as an innovation.

Efficient private sector in development

1. Govt to regulate (ensure that markets are available) only and allow for enabling environment for private sector full role in marketing; partial deregulation – were businesses are classified different based on their capital available; need for some form of grading
2. Tax flexibility
3. Predictable policy actions by the government – this allows private sector to plan

Policies and regulations to be changed

1. Need for Partial deregulation in (Fertilizer Value Chain – FVC)
2. Tax incentives and flexibility (16.5%), duty on fertilizer is 25.5%
3. Need for New Standalone Fertilizer Act
4. FISP program being making it more efficient (improve e-FISP); run e-FISP as an independent entity; planning and early implementation of e-FISP.

Annex 1.5: Group Two Presentation

Q1. How do we stimulate the involvement of the private sector in the fertilizer value chain?

1. Continued implementation of the E-voucher
 2. Enhance partnerships with the government, agro-dealers and other input producer
 3. Investment in public goods—roads, markets, telecommunication facilities in productive areas
 4. Using warehouse facilities such as ZAMACE
- 

Q2. How do we make the private sector an efficient partner in development?

1. Create an enabling environment with respect to policies and regulations
 2. Investment in public goods—roads, markets, telecommunication facilities in productive areas
- 

Q3. What policies/regulations need to be changed developed or implemented to stimulate the private sector's investment in fertilizer value chain?

1. Zambia Compulsory Standards Agency should be strengthened in terms of quality monitoring through the construction of facilities such as labs
2. Implementation of the Public Private Partnership (PPP) Act

Annex 1.6: Group Three Presentation

QUESTIONS DISCUSSED IN PLENARY

- There is evidence indicating low returns to fertilizer use on account of low soil biomass. Will the project address issue of availability of complementary soil fertility enhancers such as soil biomass?
 - We need to make sure that there is a correct mix of inorganic and organic fertilizers
- How much push is being done to respond the information that has been presented today
 - The promotion of public-private dialogue seeks to address these by making these more inclusive
- To what extent are we involving the private sector in these processes
 - Government has traditionally taken the lead without considering the other key players
 - This is problematic because it allows for so

HOW DO WE STIMULATE THE PRIVATE SECTOR INTO ENGAGING IN THE SECTOR?

- Encourage private sector to take advantage of the ZAMACE platform, in particular warehouse receipt system to store fertilizer and use it to access financing
 - e.g., partner with fertilizer companies to get inputs on credit through the input financing system
- There is need for predictable and consistent policy environment
 - Current stop and go policies not helping private sector
- Develop a fertilizer: law|policy|strategy
- Strengthen the Fertiliser Association of Zambia
- Need for regular Government/Private sector/Civic organization platform to discuss these issues

HOW DO WE MAKE THE PRIVATE SECTOR AN EFFICIENT PARTNER IN DEVELOPMENT

- Create an enabling environment
- Limiting government interventions in the sector
- Limit activities that can disadvantage the private sector
- Private sector and government can collaborate to put in place testing labs
- Leveraging government and private sector resources on extension, storage
- Monitoring and enforcement of standards by ensuring that the different agencies that regulate the sector are well funded

WHAT LEGISLATION DO WE NEED?

- Develop a fertilizer:
 - law|
 - policy|
 - strategy which address issues of soil mapping/blending/certification/regulation

Annex 2.1: Opening Remarks by Dr. Thabbie Chilongo, Acting Director at CARD, LUANAR

**REMARKS DELIVERED BY THE ACTING DIRECTOR, CENTRE FOR
AGRICULTURAL RESERACH AND DEVELOPMENT (CARD), LILONGWE
UNIVERSITY OF AGRICULTURE AND NATURAL RESOURCES (LUANAR), DR.
THABBIE CHILONGO**

**DURING THE
SEMINAR ON THE ROLE OF REGULATION IN STIMULATING PRIVATE SECTOR
INVESTMENT IN THE FERTILIZER VALUE CHAIN**

Friday, 6 July 2018 – Intercontinental Hotel. Lusaka

OUR GUEST OF HONOUR, THE ASSISTANT DIRECTOR IN THE MINISTRY OF AGRICULTURE.

THE EXECUTIVE DIRECTOR OF INDABA AGRICULTURAL RESEARCH INSTITUTE (IAPRI), MR. CHANCE KABAGHE,

THE DIRECTOR OF CEREMONIES, MR. BALLARD ZULU,

THE REPRESENTATIVE FOR THE PARTNERSHIP FOR ENVIRONMENT FOR FERTILIZER IN AFRICA (PEMEFA), MR KILLIAN BANDA

GOVERNMENT OFFICIALS FROM THE MINISTRY OF AGRICULTURE AND STAFF FROM OTHER GOVERNMENT

REGIONAL STAKEHOLDERS WHO HAVE TRAVELLED FROM OTHER COUNTRIES TO BE WITH US

REPRESENTATIVES FROM THE PRIVATE SECTOR AND OTHER NGOS

MEMBERS OF THE ACADEMIA AND RESEARCH FRATERNITY;

THE MEDIA HOUSES PRESENT

LADIES AND GENTLEMEN

1. Let me continue to welcome you all of you to this **“SEMINAR ON THE ROLE OF REGULATION IN STIMULATING PRIVATE SECTOR INVESTMENT IN THE FERTILIZER VALUE CHAIN”**
2. Our Guest of Honour, Ladies and Gentlemen, allow me first introduce my organization: Centre for Agricultural Research and Development (CARD), This is a research arm of the Lilongwe University of Agriculture and Natural Resources (LUANAR) – previously known as Bunda College of Agriculture when it was under the University of Malawi.
3. CARD has four main mandates of Research, Consultancy, Training and Outreach in agricultural and related matters. This Seminar therefore augurs well with CARD’s mandates of Research and Outreach.
4. This Seminar has been organized under the auspices of a research consortium called “Partnership for Enabling Market Environments for Fertilizer in Africa (PEMEFA)” where the Regional Network of Agricultural Policy Research Institutes (RENAPRI) is one of the member organizations.
5. I will not pre-empt details about the Consortium as these will be presented in detail later on, suffice to say the consortium is a culmination of collaborative efforts by several high-end stakeholders in the fertilizer industry of which RENAPRI is proud to be part of.

6. Both Indaba Agricultural Research Policy Institute (IAPRI) and CARD are members of RENAPRI. We therefore, from time to time do collaborative work, this Seminar being one such initiative.
7. Our Guest of Honour, Ladies and Gentlemen, CARD in particular, and LUANAR in general, value these collaborations. In this global village coupled with stiff competition for research resources (both financial and human), collaborations are one of the best ways of survival for researchers, research institutions and all stakeholders. I would therefore like to thank all the partners in the Consortium for coming up with this initiative.
8. This Seminar is expected to stimulate debate on how we can fill the existing knowledge gaps on fertilizer policy and regulatory issues in the Region and Africa in general, more especially on the importance of fertilizer markets for African agricultural development.
9. This Seminar is coming at the right time when there is high demand for evidence-based policy formulation. It is through fora like these where the evidence is presented and put to test if it is worthy the salt.
10. Ladies and gentlemen, I would therefore like to encourage you to actively participate in these deliberations. Your contribution will be vital in improving the Fertilizer industry operating space.
11. I would like to thank our Guest of Honour, for accepting to grace this Seminar. We are not taking this for granted. We know how busy your office is but you still chose to honour us with your presence. Thank you for this.

12. I would also like to thank the Executive Director of IAPRI, Mr. Chance Kabaghe and his team for accepting to host this Seminar. Despite the short notice, you still accepted and here we are ready for this important event.
13. Special thanks also to IAPRI's Director of Outreach, Mr. Ballard Zulu, for coordinating all the preparations for this event. Thank you very much.
14. I would also like to thank all the presenters for accepting to be part of this important event. I know you are busy people but you managed to find time in your busy schedules to find time to make presentations for this event.
15. More thanks go to Prof. Jumbe of CARD, LUANAR for taking overall lead in this initiative.
16. To everyone, thank you very much for honouring our invitations. Without you, our dear audience, we wouldn't call this a Seminar. Thank you very much and wishing you a fruitful seminar.
17. Thank you very much! *Zikomo kwambiri!*

Annex 2.2: Official Opening by Mr. Kaunda Kapepak, Assistant Director at MoA

SPEECH BY THE PERMANENT SECRETARY FOR THE
MINISTER OF AGRICULTURE,
MR JULIUS SHAWA AT THE
**“SEMINAR ON THE ROLE OF REGULATION IN STIMULATING
PRIVATE SECTOR DEVELOPMENT IN THE FERTILIZER VALUE
CHAIN”**

HELD AT INTERCONTINENTAL HOTEL ON
THE JULY 6TH OF 2018

~~»SALUTATIONS«~~

THE DIRECTOR OF CEREMONIES

THE DIRECTOR FOR THE CENTRE FOR AGRICULTURAL RESEARCH AND
DEVELOPMENT AT THE LILONGWE UNIVERSITY OF AGRICULTURE AND NATURAL
RESOURCES, DR THABBIE CHILONGO

THE REPRESENTATIVE FOR THE PARTNERSHIP FOR ENVIRONMENT FOR
FERTILIZER IN AFRICA (PEMEFA), MR KILLIAN BANDA

THE EXECUTIVE DIRECTOR FOR THE INDABA AGRICULTURAL POLICY
RESEARCH INSTITUTE, MR CHANCE KABAGHE

GOVERNMENT OFFICIALS FROM THE MINISTRY OF AGRICULTURE AND STAFF
FROM OTHER GOVERNMENT INSTITUTIONS

REGIONAL STAKEHOLDERS WHO HAVE TRAVELLED FROM OTHER COUNTRIES
TO BE WITH US

REPRESENTATIVES FROM THE PRIVATE SECTOR AND OTHER NGOS

THE MEDIA HOUSES PRESENT, LADIES AND GENTLEMEN

I WELCOME YOU TO THE SEMINAR ON THE ROLE OF REGULATION IN
STIMULATING PRIVATE SECTOR DEVELOPMENT IN THE FERTILIZER VALUE
CHAIN ORGANIZED BY THE PARTNERSHIP FOR ENVIRONMENT FOR FERTILIZER
IN AFRICA (PEMEFA) & THE INDABA AGRICULTURAL POLICY RESEARCH
INSTITUTE (IAPRI).

IAPRI'S ROLE TO LINK FACTUAL ANALYSIS TO POLICY DISCUSSION IN THE
AGRICULTURAL SECTOR IS DIRECTLY RELATED TO THE MINISTRY OF
AGRICULTURE'S MISSION. MY MINISTRY'S MISSION IS TO FACILITATE AND
SUPPORT THE DEVELOPMENT OF A SUSTAINABLE, DIVERSIFIED AND
COMPETITIVE AGRICULTURAL SECTOR THAT ASSURES FOOD AND NUTRITION
SECURITY, CONTRIBUTES TO JOB CREATION AND MAXIMISES THE SECTOR'S
CONTRIBUTION TO GDP.

LADIES AND GENTLEMEN: FACTS ARE AT THE BASIS OF CARRYING OUT OUR
MISSION.

I AM RELIABLY INFORMED THAT THE PARTNERSHIP FOR ENVIRONMENT FOR
FERTILIZER IN AFRICA (PEMEFA) AIMS AT TO INVESTIGATE HOW GOVERNMENTS

IN SUB-SAHARAN AFRICA CAN INCREASE PRIVATE SECTOR INVESTMENT IN FERTILIZER VALUE CHAINS BY DEVELOPING MORE PRIVATE SECTOR-FRIENDLY REGULATORY FRAMEWORKS.

LADIES AND GENTLEMEN: THE AIM OF PEMEFA SITS WELL WITH OUR MISSION AND POLICY.

~~»PURPOSE OF THE WORKSHOP«~~

LADIES AND GENTLEMEN: I AM AWARE THAT THERE IS NO COUNTRY IN THE WORLD THAT HAS ACHIEVED SUBSTANTIAL BOOSTS IN CROP PRODUCTION WITHOUT THE USE OF CHEMICAL FERTILIZERS. AT THE HEART OF THE GREEN REVOLUTION IN ASIA WAS THE INCREASED USE OF CHEMICAL FERTILIZERS.

INDEED CHEMICAL FERTILIZERS HAVE CLIMATIC PITFALLS BUT WE NEED TO USE THEM IF WE AS ZAMBIA ARE TO ACHIEVE OUR OWN GREEN REVOLUTION. WE HAVE TO DO IT IN A WAY THAT MINIMISES DAMAGE TO THE ENVIRONMENT.

LADIES AND GENTLEMEN: THE DESIRE TO DEVELOP THE AGRICULTURAL SECTOR IN ZAMBIA IS ENSHRINED IN THE SECOND AGRICULTURAL POLICY.

THE SECOND AGRICULTURAL POLICY HAS EIGHT OBJECTIVES. A NUMBER OF THESE OBJECTIVES RELATED DIRECTLY TO WHY WE ARE GATHERED HERE TO DAY. I WILL MENTION A FEW.

THE FIRST ONE IS TO INCREASE AGRICULTURAL PRODUCTION AND PRODUCTIVITY. UNDER THIS OBJECTIVE ONE OF THE SUB OBJECTIVES IS THE PROMOTION OF THE EFFICIENT USE OF FERTILIZERS AND AGROCHEMICALS.

THE FOURTH OBJECTIVE IS TO IMPROVE THE EFFICIENCY OF AGRICULTURAL MARKETS FOR INPUTS AND OUTPUTS. UNDER THIS OBJECTIVE ONE OF THE SUB OBJECTIVES IS TO PROMOTE PRIVATE SECTOR PARTICIPATION IN AGRICULTURAL MARKETS FOR INPUTS AND OUTPUTS.

LADIES AND GENTLEMEN: AS YOU CAN SEE FROM THESE TWO OBJECTIVES WE AS A MINISTRY EXPECT THE SEMINAR TO GIVE US INSTRUCTIVE STEPS OF HOW TO ACTUALIZE THE ZAMBIAN GOVERNMENT'S AGRICULTURAL POLICY.

WHAT HAS WORKED IN OTHER TERRITORIES AND HOW CAN WE BENEFIT FROM THESE INSIGHTS? THIS SHOULD BE OUR FOCUSS.

SEMINAR OUTCOMES«~~

LADIES AND GENTLEMEN

AS I END MY OPENING STATEMENT I WANT TO URGE YOU TO FOCUS ON DEVELOPING INSTRUCTIVE RESOLUTIONS BASED ON FACTS THAT WE CAN USE TO ACHIEVE SUSTAINABLE GROWTH IN THE SECTOR AS IT RELATES TO FERTILIZER USE.

~~»**CONCLUSION**«~~

WITH THESE FEW WORDS I NOW DECLARE THE WORKSHOP OFFICIALLY OPEN.

Annex 3: Workshop Programme and Participants

Annex 3.1: Workshop Programme

Seminar of the Role of Regulation in Stimulating Private Sector Development in the Fertilizer Value Chain

Date: Friday, 6th July 2018 **Time:** 08:00am – 12:00hrs **Venue:** Intercontinental Hotel, Lusaka

Time	Activity	Responsible
8:00-08:30	Registration	Indaba Agricultural Policy Research Institute (IAPRI)
08:30-08:35	Welcoming Remarks and Introductions	Mr Ballard A.M Zulu, IAPRI Outreach Director
08:35-08:45	Remarks by Centre for Agricultural Research and Development (CARD) Lilongwe University of Agriculture and Natural Resources (LUANAR), Director on CARD's involvement and workshop objectives	Dr Thabbie Chilongo, Director, CARD, LUANAR
08:45-08:55	Remarks by IAPRI	Mr Chance Kabaghe, Executive Director IAPRI
08:55-09:10	Official Opening of the Seminar	Permanent Secretary, Ministry of Agriculture, Mr Julius Shawa
09:10-09:20	Background of Partnership for Environment for Fertilizer in Africa (PEMEFA) and progress to date	Mr. Killian Banda, African Fertilizer & Agribusiness Partnership (AFAP)
09:20-09:50	PEMEFA Preliminary Project Research Findings	S. Kaiyatsa & Prof C. Jumbe
09:50-10:15	Structure of the Zambian Fertilizer Market	Dr Rhoda Mofya Mukuka, Acting Research Director, IAPRI
10:15 -10:30	Health Break/Group Photo Hotel Premises	
10:30 -11:00	<u>Group Discussions (Round Robin)</u> <ul style="list-style-type: none"> • How do we stimulate the involvement of the private sector in the fertilizer value chain? • How do we make the private sector an efficient partner in development? • What policies/regulations need to be changed developed or implemented to stimulate the private sector's investment in fertilizer value chain? 	Mr Ballard A.M Zulu, IAPRI Outreach Director
11:30 -12:00	Plenary/Presentation of Group Work	Mr Ballard A.M. Zulu, Outreach Director (IAPRI)
12:00 -12:15	Remarks by a member of the Zambia Association for Fertilizer & Plant Nutrition	Industry Member, TBA
12:15 -12:30	Way Forward & Closing Remarks	Mr Chance Kabaghe, IAPRI Executive Director
12:30 -14:00	Lunch Hotel	

Director of Events: Mr Ballard A.M. Zulu, Outreach Director, IAPRI

Annex 3.2: List of Participants

Name	Organisation	Position
Stanley Silwimba	Conservation Farming	Commercial MGR
Killian Banda	AFAP	Policy Research
Rodah Mofya Mukuka	IAPRI	
Chance Kabagle	IAPRI	ED
Chola Chintu	University of Lusaka	Student
Cardinal Hachikona	IAPRI	Liberian
Stephen Kabwe	IAPRI	Researcher
Brian Tembo	Aurum quiver	Director
Kachunga Diana	University of Lusaka	Student
Samson Muyembe	Private	
Prof Charles Jumbe	Luanar/ Card	Professor
Ruth Alice Jangulo	University of Lusaka	Student
Andrew Sinyangwe	MUSIKA	Manager
Lewis baufwe	AFDB	Senior agric. C
Nathan Tembo	Palm Associates	Researcher
Muma Emmanuel	CTPD	P.O
Timothy Mboneka	CTPD	student
Kaunda kapepak	MOA	Assistant Director
Paul Samboko	IAPRI	Research Assistant
Auckland Kuteya	IAPRI	Researcher
Alefa Banda	IAPRI	Researcher
Jairos Sambo	IAPRI	Researcher
Stevier Kaiyatsa	MoFEP&D	Economist
Mulako Kabisa	IAPRI	Researcher
Zulu Alfred	ZANIS	Journalist
Markson Moomba	zANIS	journalist
Douglas Mwasi	CRS	Manager Agric liveli
Emmah N Stuart	Pheonix	Journalist
Mwazi Chilasha	CTPD	Researcher
Noel Simukonde	NUSAFZ	Admin Manager
Frank M Kayula	NUSAFZ	DG
Joshua	MUSIKA	Operator Dierctor
Francina Phiri	Times of Zambia	Journalist
Sundulwayo Banda	Cotton Board	Business manager
Gerald Kachali	Cotton association	Extension & Training
Hambulo Ngma	IAPRI	RF
Best Jere	ZNBC RADIO	Journalist
Kryticious Nshudano	CSPR	Director
Rebecca Jessica Jangulo	University of Lusaka	Student
Peter Sichamba	YARAFERT	Agri
Kelly Njombo	Daily mail	reporter
Brian Mwiinga	CTPD	HOP
Mwila Chriseddy	CTPD	Researcher
Chena Mukwimba	CUTS	CC
Precious Mwangu	ZAMACE	compliance
Clive nsolito	Freelance	Journalist

Andesen Mwewa	MUSIKA	Driver
Chrisi Tony Philip	University of Lusaka	Student
Kaleyi Calvin	ZNFU	PR-Media
Tabbie Chilongo	Luanar/ Card	Director
Violet Malama	VILMA ENT LTD	Director
Kennedy Tembo	Photojournalist	Photographer