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

Alliance for African Partnership
MICHIGAN STATE UNIVERSITY

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Proceedings of the National Symposium on Fertilizer **29th May 2018**

National Symposium on Fertilizer
Lilongwe Sunbird Hotel
Lilongwe

Malawi

The Role of Policies and Regulations in Stimulating Private Sector Investment in Fertilizer Value Chain

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Partnerships, Productivity, Prosperity

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TABLE OF CONTENTS

LIST OF FIGURES

ACRONYMS

CARD	:	Centre for Agricultural Research and Development
CIMMYT	:	International Maize and Wheat Improvement Centre
FISP	:	Farm Inputs Subsidy Programme
LUANAR	:	Lilongwe University of Agriculture and Natural Resources
MBS	:	Malawi Bureau of Standards
MoFEP&D	:	Ministry of Finance, Economic Planning and Development
MoIWD	:	Ministry of Agriculture, Irrigation and Water Development
MSU	:	Michigan State University
SFFRFM	:	Smallholder Farmers Fertilizer Revolving Fund of Malawi
USAID	:	United States Agency for International Development
PEMEFA	:	Partnership for Enabling Market Environments for Fertilizer in Africa
NAPAS	:	New Alliance Policy Acceleration Support
ARL	:	Agricultural Resources Limited
ReNAPRI	:	Regional Network of Agricultural Policy Research Institutes
SSA	:	Sub-Saharan Africa
AAP	:	Alliance for African Partnership

PREAMBLE

While the agricultural sector is the backbone of the many economies in sub-Saharan Africa (SSA), over the years, the performance of the sector has remained sub-optimal. Among the reasons for the underperformance of the agricultural sector has been the low agricultural output because of combined effects of climate change and declining soil fertility due to soil erosion and low adoption of soil-fertility enhancing technologies (including rotation, cover crops, intercropping, and conservation agriculture). Research has shown that increased use of improved input technologies, particularly fertilizers, along with other soil fertility management practices lead to high returns to capital and labour investments in agriculture. As such, the promotion of inorganic fertilizers has been identified as key to transforming African agriculture in SSA.

In 2017, the Centre for Agricultural Research and Development (CARD) at Lilongwe University of Agriculture and Natural Resources (LUANAR) joined a research consortium called **"Partnership for Enabling Market Environments for Fertilizer in Africa** (PEMEFA)" as a representative of the Regional Network of Agricultural Policy Research Institutes (ReNAPRI-Africa). Other members are 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). This team coined as *Partnership for Enabling Market Environments for Fertilizer in Africa* (PAMEFA) received a grant award from the Alliance for African Partnership (AAP) at the Michigan State University (MSU) toward the project titled "**Improving the Enabling Environment for Fertilizer Markets in Africa: An Institutional Collaborative Approach to Value Chain Development"**.

The goals of the Alliance for African Partnership (AAP) research awards are 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 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 sub-Saharan Africa (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 Sub-Saharan Africa (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.
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 role of policies and regulations on the private sector investment in the fertilizer value chain*** that was held on CARD held on 29th May 2018. The objective of the symposium 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.

The Symposium did not only share the finding of our research project, but also served as a platform also as a platform for sharing information on various aspects of fertilizer value chain such as quality and standards, investment climate for fertilizer industrial development, import regulations and private sector led soil-specific fertilizer blending.

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 potential 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 G.Y. Kanyama-Phiri
Vice Chancellor, LUANAR

ACKNOWLEDGEMENTS

The Lilongwe University of Agriculture and Natural Resources (LUANAR) through the Centre for Agriculture Research and Development (CARD) would like to thank all participants that attended the national symposium on fertilizer on 29th May 2018 at Sunbird Lilongwe Hotel in Lilongwe, Malawi.

In particular, CARD would like to express its sincere appreciation for the support and collaboration received from the Ministries of Agriculture, Irrigation and Water Development (MoAIWD) and of Industries, Trade and Tourism (MOITT) as well as the private sector. The fact that the Minister of Agriculture, Irrigation and Water Development, represented by Chief Director, Dr. Yanira Mtupanyama on behalf of the Principal Secretary (PS) in the Ministry graced and officially opened the symposium workshop is a clear testimony of the Government of Malawi'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 agricultural production.

CARD also deeply acknowledges distinguished resource persons who made various presentations at the symposium and 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.

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 Reginal 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, for organizing the symposium and inviting stakeholders to share their experiences and expectations, and Ms. Mary Ngwira and other staff from CARD for handling all the background logistics.

Thanks also go to the Session Chairs Dr. Flora Nankhuni from the New Alliance Policy Acceleration Support: Malawi (NAPAS) project in the Ministry of Agriculture, Irrigation and Water Development, Dr. Dominic Nkhoma from the Ministry of Agriculture, Irrigation and Water Development.

This report was produced by Symposium rapporteurs namely Mr. Joseph Kanyamuka from NAPAS project and Mr. Stevier Kaiyatsa from Ministry of Finance, Economic Planning and Development with guidance from the Professor Jumbe. We thank the Team for producing the proceedings of the symposium so fast 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 CARD, we cherish the collaboration that exists between CARD 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, though we are a newly established public University, we have capacity to make meaningful contributions to the country's 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 Malawi.

Thabbie Chilongo, PhD (Econ)
Acting Director, CARD/LUANAR

INTRODUCTION

1.0 Background

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 composing of Michigan State University (MSU), the African Fertilizer and Agribusiness Partnership (AFAP, South Africa), the Regional Network of Agricultural Policy Research Institutes (ReNAPRI), the New Markets Lab (NML, USA), and the International Fertilizer Development Centre (IFDC, USA). The principal investigators of PEMEFA are Nicole Mason (MSU), Maria Wanzala (AFAP), Charles Jumbe (ReNAPRI/CARD), Joshua Ariga (IFDC), and Katrin Kuhlmann (NML). In this collaboration, 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). This vision is in line with the gaol of the draft Malawi's National Fertilizer Policy (NFP) that recognizes the importance of the private sector in enhancing farmers access to inorganic fertilizer. The private sector is now an important partner in the government supported farm inputs support program that is directly involved in the distribution of FISP fertilizer to registered beneficiaries. 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 that is conducive to private sector investment.

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 agricultural productivity and well-being. It is against this background that CARD at LUANAR held its first national symposium on the role of policies and regulations on the private sector investment in the fertilizer value chain on 29th May 2018 at Sunbird Lilongwe Hotel.

1.2 Symposium Participants

The Secretariat had received an overwhelming interest by over 100 individuals from various organizations as well as students. The applicants had to be scrutinized by the Secretariat based on their involvement in the fertilizer value chain. The number of participants that were invited were 60 and nearly 75 percent turned-up with 45 people that attended the symposium.

Figure 1: Photo participants to the National Symposium

The participants to the National Symposium were drawn from government ministries and departments

including MoAIWD, Ministry of Industry, Trade and Tourism (MoITT), Ministry of Finance, Economic Planning and Development (MoFEP&D), Malawi Investment and Trade Centre (MITC); the academia, particularly Lilongwe University of Agriculture and Natural Resources (LUANAR); parastatal organizations such as the Malawi Bureau of Standards (MBS); development partners such as the United States Agency for International Development (USAID) and private sector such as Farmers' World of Malawi, Agricultural Resources Limited, and Smallholder Farmers Fertilizer Revolving Fund of Malawi (SFFRFM); agro-dealers; farmers; and civil society organizations, amongst others.

2.0 SESSION I: WORKSHOP OBJECTIVES, INTRODUCTIONS AND OPENING

This session was moderated by Professor Charles Jumbe of LUANAR who also happens to a Research Professor at the Centre for Agricultural Research and Development (CARD) at the Lilongwe University of Agriculture and Natural Resources (LUANAR) who is also the Principal Collaborators for PAMEFA in Malawi. The moderator presented to the audience the background to the project and what the symposium is expected to achieve.

2.1 Workshop Opening

2.1.1 Welcome Remarks by Prof. Charles Jumbe, PEMEFA Principal Investigator at CARD, LUANAR

In his welcome remarks, Professor Jumbe who also happens to be the Principal Investigator at CARD under ReNAPRI and Convener for the Symposium started with salutation. Among others, Professor Jumbe recognised presence of Guest of Honour, Dr. Yanira Mtupanyama, from the Ministry of Agriculture, Irrigation and Water Development, the Vice Chancellor of LUANAR, Prof. Goerge Kanyama-Phiri, the Acting Director for CARD, Dr Thabbie Chilongo, the Co-Director of the Alliance for African Partnership (MSU/AAP), who is also the Chairperson for the newly established National Planning Commission, Prof. Richard M. Mkandawire, the Chief of Party of New Alliance Policy Acceleration Support Project (NAPAS) hosted in the Ministry of Agricutlure Irrigation and Water Development and Associate Professor at the Michigan State University (USA), Dr. Flora Nankhuni, 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 introduction of symposium participants and a brief background to PEMEFA project.

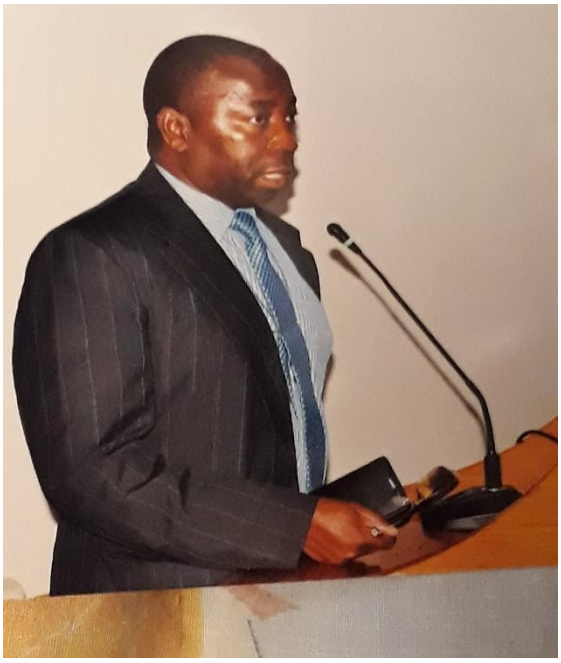

Figure 1: Professor Jumbe during the official opening

Professor Jumbe informed the participants that, on behalf of the Regional Network of Agricultural Policy Research Institutes (ReNAPRI), the Centre for Agricultural Research and Development (CARD) other researchers from 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). This team coined as *Partnership for Enabling Market Environments for Fertilizer in Africa* (PAMEFA) to carry out the project, titled **Improving the Enabling Environment for Fertilizer Markets in Africa: An Institutional Collaborative Approach to Value Chain Development"**. This group of researchers dubbed as **"Partnership for Enabling Market Environments for Fertilizer in Africa** (PEMEFA)"

research received a grant award from the Alliance for African Partnership (AAP) at the Michigan State University (MSU) for a period one year to conduct research to generate information and data for the development of a bigger a proposal to address the structural problems that impede the private sector participation and investments in the fertilizer value chain. He said that, over the past year, the researchers have carried out research to analyze the existing policies, laws and regulations that development countries implement in the agricultural sector and how such policies facilitate or frustrate private investments in the fertilizer production, blending, distribution and marketing. He informed the participants that the workshop was organized partly to share the findings of their research, but mostly as forum through which different stakeholders will share their practices and experiences in the fertilizer sector. He narrated the objectives of the symposium.

2.1.2 Symposium Objectives

According to Professor Jumbe, the national symposium was held to raise awareness on how important fertilizer regulations are creating in an enabling environment for the private sector to thrive and invest in these markets in Malawi. The symposium was expected to stimulate debate and research to fill existing knowledge gaps on fertilizer policy and regulatory issues in Malawi, generate public interest on the importance of fertilizer markets for African agricultural development, and solicit stakeholder views on the way forward. He told participants that the symposium has invited speakers that will deliver speeches on a number of aspects affecting the private sector investment and participation in the fertilizer value chain. He concluded by thanking all participants for coming to the symposium.

2.1.3 Opening Remarks by Dr. Thabbie Chilongo- Acting Director of CARD

In his opening remarks, Dr. Thabbie Chilongo indicated that the Symposium 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 (CARD) LUANAR is a member representing the ReNAPRI. The consortium is a culmination of collaborative efforts by several high-end stakeholders in the fertilizer industry of which CARD is part of. Dr. Chilongo noted CARD in particular and LUANAR value collaborations. In this global village where competition is very stiff for resources (both financial and human), collaborations are one of the best ways for survival for researchers, research institutions and many stakeholders. He therefore thanked partners in the consortium for coming up with the great initiative of PAMEFA, particularly thanked Prof. Charles Jumbe for being in forefront and making sure that things are working in the CARD portion of the consortium. The Acting Director indicated that the Symposium was expected to stimulate debate on how we can fill the existing knowledge gaps on fertilizer policy and regulatory issues in Malawi and Africa in general, more especially on the importance of fertilizer markets for African agricultural development.

Figure 2: Dr. Chilongo Making his opening remarks

Dr. Chilongo noted that the Symposium came at the right time when there is high demand for evidence-based policy formulation. It is through fora like this where evidence is presented and put to test and see whether is worthy. Thus, the symposium concurs well with CARD's mandate of research, consultancy, training and outreach. He finally encouraged active participation in Symposium's deliberations ta is vital in improving fertilizer industry operating space and thanked all the participants and presenters for their availability at the symposium.

2.1.4 Remarks by Prof. George Kanyama-Phiri, Vice Chancellor of LUANAR

Prof. George Kanyama-Phiri who also happens to be the Vice Chancellor of LUANAR was happy to welcome all participants to the national symposium that CARD as a member of PEMEFA has organized on behalf of ReNAPRI and PAMEFA. According to Professor Kanyama-Phiri, as an agricultural university, PAMEFA through CARD is implementing a project that is well aligned to the manadate for which the Centre was established. This research has come at a time when farmers soil health has been compromised by continuous cultivation and soil degradation due to soil erosion and inappropriate farming practices. To boost crop productivity, access to inorganic fertilizer for both largescale and smallholder farmers remains a key driver to agricultural growth. He pointed out that policies and regulations are a stimulus for promoting private investments in the fertilizer value chain. However, as an agronomist, Professor Kanyama-Phiri said that while fertiliser investments remain crucial to the development of Malawi's agriculture sector, other important investments have also to be made, particularly those that would complement the fertiliser investments, such as addressing depletion of soil nutrients due to soil erosion, addressing continuous mono-cropping and other inappropriate farming practices, and addressing use of low quantities and quality of fertilizers.

Figure 3: The Vice Chancellor of LUANAR-Prof. Kanyama-Phiri making His Opening Remarks

The vice chancellor was delighted to see that the draft National Fertilizer Policy addresses these complementary investments. Through high-quality research, innovative outreach approaches, and sustained policy discussions led by on-the-ground local teams, the Symposium was aimed at contributing to sustainable economic productivity in sub-Saharan Africa and Malawi was no exception. He also therefore noted that developing and implementing policies and regulations to stimulate the private sector investment in the fertilizer value chain is of paramount importance. He finally thanked Michigan State University (MSU) through Alliance for African Partnership (AAP) for providing research awards to promote collaborations with Africa partners and institutions to develop capacity for conducting international research and to promote scholarly findings.

2.1.5 Official Opening by Guest of Honour, Dr. Yanira Mtupanyama, Chief Director in Ministry of Agriculture, Irrigation and Water Development

Delivering her speech before she officially opened the national symposium, the Chief Director, Dr. Yanira Mtupanyama, who represented the Principal Secretary in the Ministry of Agriculture, Irrigation and Water Development told participants that she was delighted to preside over the opening of the NAtioanla Symposium on the role of policies and regulations in stimulating private sector investment in the fertilizer value chain. She started by reminding participants that the Ministry has just drafted the National Fertilizer Policy through NAPAS:Malawi and championed by the Department of Agricultural Research Services (DARS), and Civil Society Agriculture Network (CISANET). It was indicated the Symposium came at the right time when the Ministry is finalizing the National Fertilizer Policy and it was expected that the deliberations at the Symposium would be an input into the National Fertilizer Policy. In a special way, the Guest of Honour thanked the Chief of Party of NAPAS:Malawi, Dr. Flora Nankhuni for taking lead in drafting of not only the fertilizer policy but most of the policies being launched in the agriculture sector and for providing expertise and undivided attention to the gaps in agricultural policies.

Figure 4: Dr. Yanira Mtupanyama Making her Speech during the Symposium

The Principal Secretary pointed out that the State President, Professor Arthur Peter Mutharika recognises the role the agriculture sector plays in the economic development of the country. She mentioned that it is for this reason that, for the past twelve years, the government has consistently allocated more than 10 percent of the annual national budget to agriculture, with a lions' share being allocated to support farmers to access fertilizer through the Farm Inputs Subsidy Program (FISP). Among others, through the FISP, increased fertiliser use by smallholder farmers has increased from less than 10 kg/ha in 2006 cropping season to 55.8 kg/ha in 2016/17 season. It was also emphasized that while fertiliser investments remain crucial to the development of the agriculture sector, other important investments also have to be made, particularly those that would complement the fertiliser investments, such as addressing depletion of soil nutrients due to soil erosion, addressing continuous mono-cropping and other inappropriate farming practices. She indicated that the draft National Fertilizer Policy promotes the use of other complementary interventions and technologies to make fertilizer use more profitable. She commended organizations that are already promoting complementary interventions such as sustainable land management practices for supporting Malawi Government's efforts for enhancing agricultural productivity especially for smallholder farmers.

In her closing, she also thanked the United States Government through Michigan State University and Alliance for African Partnership for the support rendered in providing resources that is making it possible for conducting collaborative research between American and African researchers. She thanked LUANAR through CARD for undertaking the research and organizing the Symposium. She encouraged CARD to organize regular platform through which research findings could be shared among stakeholders.

3.0 SUMMARY OF PRESENTATIONS AND DISCUSSIONS

3.1 Session 2: Background to Michigan State University's Alliance for African Partnership and PEMEFA Project

This session was moderated by Dr. Dominic Nkhoma, who is the Chief Economist in the Ministry of Agriculture, Irrigation and Water Development. In this section, there were four technical presentations from various organizations and institutions.

3.1.1 The Changing Partnership Architecture in Driving Agricultural Transformation in Africa-MSU/AAP-Prof. Richard Mkandawire

In his presentation, Professor Richard Mkandawire the Co-Director of MSU/AAP and the Chairman of the National Planning Commission started by applauding CARD for organizing this important National Symposium and for inviting a wide range of stakeholders in the fertilizer value chain. He was also thankful for being given the opportunity to deliver his speech to the participants. He indicated that he chose his title of his speech to share the significant changes that are taking place to foster agricultural transformation in Africa. He observed that it is important to appreciate that things have changed in the architecture of development partnership in Africa. Despite the changing architecture and government agreeing to be party to these changes, there has not been much movement towards genuine transformation of the agricultural sector. Therefore, the government needs to look at more radical and more innovative partnerships that will genuinely lead towards transformation and there is need develop the capacity of local think tanks such

as CARD to generate the much-needed evidence for policy development. However, Prof. Mkandawire wondered whether CARD is the right and appropriate model for spearheading this transformation and driving change. Perhaps, there is need for the involvement of the private and public-sector players into CARD's research undertakings and thus appealed to donors for possible funding to realize this dream. He also observed that bureaucrats (such as government) are not capable of driving transformation on their own and thus we need external input to influence change and transformation.

Being involved in crafting the CAADP concept, Prof. Mkandawire pointed out that there have been very dramatic changes since 2003 from international community and governments. Among others, for two decades now, there have been paradigm shift in moving away from business as usual in managing the agriculture sector. Policies are now in the hands of national governments where they are taking ownership of initiatives rather been imposed from Washington and the rest of the world. This led to the 2003 alliance on donor effectiveness in aligning assistance to a defined national program.

Figure 5: Pro. Richard Mkandawire giving Bacground toMSU/AAP and PEMEFA Project

Prof. Mkandawire further noted Malawi has put in place several policies such as the National Agricultural Policy (NAP), National Irrigation Policy, National Seed Policy and is currently reviewing and developing several others (such as the National Fertilizer Policy (NFP), fertilizer bill and Act, Special Crops Act) but there have been no movement to operationalise these policies and strategies. Therefore, there is need to make sure that private sector and Civil Society Organisations (CSOs) are very central to implementation, despite that donor initiatives choose who to support and very often not aligned to government initiatives. Thus, we need to define a model of research institutions that are more radical and innovative in designing research. In addition, donors need to consider that in any research financing, CSOs are part of that particular research.

Prof. Mkandawire also indicated that MSU/AAP is currently funding 15 grants/consortium to which ReNAPRI (coordinated by Prof Jumbe) is party. Under this partnership, researchers are looking at the constraints to fertilizer development. Essential is that there should be co-creation of research agenda-including policy formulation and addressing equity and sustainability, mutual trust in the context of partnership. For instance, highly recognises the role of agro-dealers in the movement.

Prof. Mkandawire also observed that there has not been much achieved through the vision 2020. This takes us back as to who had been at the centre of formulation of the vision-was it home grown? Thus, this is a lesson as we craft the long-term agenda such as vision 2063 and those already developed such as MGDS III. This calls for the need to use local think tanks such as CARD, but not in the current arrangement of producing mere consultancy reports but to ensure that CARD becomes a consortium of individuals that are passionate in transforming the agricultural sector. In his conclusion, he said "let's move away from conventional approaches, and start to think outside the box, thinking disruptively, radical, developing new models, innovations and interventions".

3.1.1.1 Dr. Nkhoma's Summary

In his summary, Dr. Nkhoma concurred with Prof. Mkandawire's speech and echoed that its indeed right that government cannot reform itself and there is a need for movement embedded in evidence. The process of creating research agenda must be a joint process-which is a current limitation of research institutions. Dr. Nkhoma noted that implementation of policies must also consider their implementation.

3.1.1.2 Questions and Comments from the Plenary

- **Maurice (USAID):** We need to ensure that stakeholders on the ground including smallholder farmers input their feelings and concerns in formulated policy documents. While the creation of institutions is important, we need to define a clear direction-where are going and what does the vision look like?
- **Response:** In his response, Prof. Mkandawire indicated that we need to have a collective vision that is internalized and continuous engagements to create mechanisms of ensuring the vision visible at local level. Also, we need to create a culture of commitment to policy objectives.
- **Victor Mponda** (New Alliance for Food and Nutrition): Despite the need to be inclusive, we also need to look at the quality of institutions in moving policy objectives
- **Charles Govati** (Agricultural Resources Limited): Also need to consider fragmented players in the agriculture sector and the fact that donors are supporting various players doing similar things. This calls for proper coordination.

3.1.2 Background of PEMEFA and Preliminary Research Findings-Prof Charles Jumbe and Stevier Kaiyatsa

Delivering his presentation, 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. He said that PAMEFA intends to address the following objectives:

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.

Presenting the preliminary findings of the project, Mr. Stevier Kaiyatsa indicated that PAMEFA has conducted literature review on policies and regulations that are in three categories. The first category is 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 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. The 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 mis-labelled 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. 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. For example, a study by Gisselquist and Grether (1998) presents two case studies that show that deregulations 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 can stimulate technology transfer. He concluded by indicating that there is a need for additional research on Enabling Environment for Fertilizer Markets in SSA to address knowledge gaps in research to understand:

i. What are the impacts of the current regulatory environment on private sector participation and investment?
ii. 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. 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?

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).'

3.1.2.1 Questions and Comments from the Plenary

- **Dr. Flora Nankhuni (NAPAS:Malawi) :** Why didn't you also look at impact of subsidies-how they may have been implemented may have affected the performance of the fertilizer industry. Malawi is also trying to establish a fertilizer commission and there is no literature on what does it take to do so and what are the experiences in other countries with fertilizer commission.
  - ✓ **Response:** More studies have already on input subsidies. On fertilizer commission, PEMEFA team has taken note and will do the literature review in the next steps.
- **Dr. Dominic Nkhoma:** Dr. Nkhoma indicated that a major element of fertilizer costs that is passed on to consumers is largely attributable to high transport costs. We also need to focus on transport reforms moving away from road to railway network.
  - ✓ **Response:** Professor Jumbe concurred with Dr. Nkhoma's observation. The problem is to do with government priorities. He recollected that in the past, Malawi had a very robust railway network system that connected Mchinji to Lilongwe; Salima to Balaka. However, over the years, the rail transport was not in government priority. The priority was given to the road transport where government reduced import duty on imported trucks. This diverted the priority the policy attention away from rail transport which carries bulky goods.
  - ✓ According to Mr. Govati, it's just greed for one to have 600 trucks to move fertilizer instead of railway that could carry the same amount of fertilizer at one go.
- **Farmers World:** According to the World Bank study on enabling business environment indicates that it takes 913 days to register a new fertilizer product that include field testing and trials. Has the NFP taken this into account already?
  - ✓ Responding to this, Mr. kaiyatsa said that but the indicator from the World Bank Indicator suggests to skip the field testing before a product is registeres.
  - ✓ Commenting on the same, **Mr. Charles Govati (ARL)** told participants that Malawi has at least 19 fertilizer products. In registering a fertilizer product, we need to look at innovative products. In Zambia, they have 33 products and if we look at SADC region, then there is no need to register a new fertilizer product for the next 15 years.

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4.0 SESSION III: POLICIES AND REGULATORY FRAMEWORKS

This session was moderated by the Chief of Party of NAPAS-Malawi who is also the Associate Professor at Michigan State University, Dr. Flora Nankhuni based at the Ministry of Agriculture, Irrigation and Water Development.

4.1 The National Fertilizer Policy: Niche for the Private Sector Investment-Mr. Joseph Kanyamuka (NAPAS:Malawi)

In his presentation, Mr. Kanyamuka noted that whilst fertilizer usage has increased in Malawi under the FISP years from less than 10 kg/ha in 2005 to 55.8 kg/ha in 2016. This surpasses the Abuja declaration recommendation of 50kg/ha. However, agricultural productivity remains low, for instance, about 2.0 mt/ha in 2016/17 compared to a potential of 7-13 mt/ha. Among the reasons for this low productivity is underutilized soil testing technologies, limited capacity in fertilizer blending by the private sector and farmers use of low quality fertilizers that are sometimes adulterated along the fertilizer value chain. Coupled with low agricultural productivity is inefficiencies within the fertilizer regulatory framework, where among others, it takes 913 days and over 3000 percent of per-capita income to register a fertilizer product.

Mr. Kanyamuka therefore indicated that the National Fertilizer Policy (NFP) has been developed as a framework to govern the production, marketing and use of fertilizer which has remained rudimentary for decades. Further, introduction of FISP has increased the number of fertilizer dealers in Malawi hence the need for up to date regulatory framework. The NFP presents greatest opportunities for private sector to invest in the fertilizer value chain as envisioned in its seven policy priority areas: (i) Farmers' Access to High-Quality Fertilisers, (ii) Institutional Development & Coordination, (iii) Public Investments and Support, (iv) Research, Development and Extension Support, (v) Private-sector Led Fertiliser Industry Development, (vi) Fertiliser Quality Standards and Truth in Labelling and (vii) Sustainability and Environmental Management. Among others, the NFP envisions to double the value of commercial fertiliser trade (imports and exports) by providing incentives for domestic production/blending of fertilisers rather than importing finished fertiliser products through building capacity for soil analysis and mapping in the private sector, accrediting soil testing laboratories operated by the private sector and facilitating importation of quality machinery and spare parts for fertiliser production and blending. As such, the NFP aims to increase private sector investments and participation in the fertilizer industry that will in the end improve overall efficiency of the fertilizer value chain (including timely distribution and supply of quality fertilizer) and improve agricultural productivity and growth.

4.2 Fertilizer Quality and Standards-Mr. Willie Muyila (Malawi Bureau of Standards)

In his presentation, Mr. Muyila indicated that MBS plays a vital role in the fertilizer value chain by developing and enforcing standards. It collaborates with Ministries of Agriculture, Trade and Industry and other relevant ministries to implement mandatory Malawi Standards on fertilisers. Locally manufactured or imported fertilizers are subjected to conformity assessments based on the same mandatory Malawi standards. Conformity assessments include inspection, sampling, testing and certification. However, the Bureau has been encountering the following regulatory issues, among others: re-bagging expired fertilizers and altering expiry dates by some unscrupulous suppliers; adulteration of fertilizers with sand and other materials to dupe unsuspecting buyers on weight (unsubstantiated reports) and supply/import of fertilizers not covered by Malawi Standards i.e. farm specific/crop specific. He informed the private sector that the Bureau is not an impediment to its business development but provides checks and balances to ensure that farmers are able to get good quality fertilizers. In his closing, Muyila called for closer cooperation between the Bureau and the private sector to ensure that only high-quality fertilizers are imported and distributed to farmers in the country. He called upon government to fast-track the finalization of the national fertilizer policy and the Fertilizer bill country being developed by MoAIWD that will help the to address current challenges of compliance to the national quality standards to ensure that the private sector supply fertilizers that meets the national quality standards.

4.3 Fertilizer Import Regulations and Procedures-Taonga Munthali (MoITT)

In his brief presentation, Munthali pointed out there are severe steps that need to be followed if a firm wants to import fertilizer. The process requires an applicant to obtain a recommendation letter or letter of support from the MoAIWD. This letter may be obtained from the Secretary for MoAIWD or from the Director of Crops. The certification letter from MoAIWD must specify quantity and type of fertilizer the applicant intends to import. The MoAIWD takes care of quality issues and banned chemicals. At the MoITT, is required to produce a Certificate of Business Registration and Tax Payers Identification certificate.

4.4 Incentives for Private Investments in the Fertilizer Industry- Mrs. Patricia Kaupa-Coordinator of the One-Stop Centre at MITC

Mrs. Kaupa pointed out that Malawi has embarked on several policy reforms aimed at easing the processes associated with starting, operating and investing in a business. Malawi offers a wide range of incentive packages to help promote trade and investment that includes tax breaks and allowances for value addition. Some key initiatives are being undertaken to facilitate private sector-led growth, including: revitalising power infrastructure; deepening industrialisation through value addition in agro-processing and improving access to finance. She further indicated that Malawi is providing incentives to increase private sector investments, namely; financial, fiscal, and other incentives such as subsidized infrastructure, market preferences, and regulatory concessions. To increase manufacturing of fertiliser, the following incentives are being implemented: (i) Manufacturing companies may deduct all operating expenses incurred up to 25 months prior to the start of operations, (ii) Loss carry forward of up to six years, (iii) Import duty and import VAT exemption on importation of most Machinery, (iv) Import duty exemption while VAT remains payable at 16.5 percent on importation of specific type of Machinery, (v) the Industrial Rebate Scheme applies to import and excise duty exemption of raw materials for designated manufacturing industries, but VAT is payable at 16.5 percent and (vi) raw materials for the manufacture of fertilizer, medicaments and pharmaceuticals are both import and VAT free under the scheme. She called upon the private sector to take advantage of the incentives that government has put in to encourage private investments in the country.

4.5 The Role of Private Sector in the Fertilizer Value Chain: The Case for Blended Fertilizer for Malawi-Caitlin Shaw and Kumbukani (Farm Services Unit-Famers World)

Shaw noted that intense smallholder production, especially mono-cropped maize has severely depleted soil nutrient levels. Fertilizer can be applied to address nutrient deficiencies, but not all fertilizer blends match the nutrients depleted in soil. In order to revive yields, it is therefore necessary to revise fertilizer blends periodically – based on the current soil conditions to improve soil health as well as to provide crops the nutrients they need. It is against this background that the Farm Services Unit under Farmers World was established to address blanket fertilizer recommendation.

According to Shaw, the Farm Services Unit has a team of extension officers spread across the Central and Southern regions of the country where they provide farmers with latest in science and technology to make practical data-driven agronomic decisions, and generate brand awareness and loyalty for Farmers World and Agora by being the face of the company in the community. Currently, Farmers World has modern accurate blending plants with capacity of 62mt per hour translating to 284,000mt per annum. The unit emphasises on tailor made formulations based on soil analysis & fertilizer recommendations.

4.5.1 Questions and Comments

The following are comments and questions on all the presentations from session II:

- On Shaw's presentation, it was noted that 6:24:20 fertilizer for legumes was already registered and there is no need to be re-registered.
- Another participant wanted to find out why Farmers World is not producing fertilizer when it has capacity to blend fertilizer components.

Another participant wanted to find out what Farmers World is doing to reach farmers with such good information because it was a tradition in Malawi not to apply fertilizer to legumes.

- Dr. Nankhuni indicated that gender inequality is a challenge in accessing fertilizer by both women and youth.
- **In response,** Shaw indicated Farmers World and Agora are working together with government extension workers to make sure the good information from the field experiments reach farmers. At the moment, Farmers World and Agora are not producing fertilizer because of challenges relating to raw materials and economies of scale.
- **On Muyila's presentation**, it was pointed out that MBS takes time to approve certification and we need to understand well on open bags fertilizer as small-scale farmers who cannot afford a 50 kg-bag of fertilizer will not be able to access fertilizer.
- **In his response**, Muyila indicated that there are reasons for the delay at MBS but there are steps to improve its capacity in order to timely respond to clients. In order to deal with corruption, the Bureau has established toll-free numbers to report incidences of corruption.
- **Comments on Ministry of Trade presentation:** Mr. Govati commented that corruption is affecting fertilizer quality. On corruption, Mr Munthali responded that the MoITT gets pressure from the private sector to fast track their process which eventually promote corruption practices. This has resulted in giving out licenses to dealers (importers, retailers and wholesalers) that do not meet the required standards. To deal with problem the MoITT has developed a trade portal, where applications can be made and approved online to reduce the cases of corruption. He proposed that there is need to establish a sector through which private sector can raise their issues.

5.0 SESSION IV: GROUP DISCUSSIONS AND FEEDBACK

5.1 Group Discussions

The group discussion session was moderated by Prof. Charles Jumbe. The discussion centred around the following questions:

1) How do we stimulate the involvement of the private sector in the fertilizer value chain?
2) How can we make the private sector to become a vehicle for enhancing timely access to fertilizer by farmers in right quantities and qualities?
3) What policies/regulations/strategies need to be put in place (or modified, developed or implemented) to stimulate the private sector investments in the fertilizer value chain?

5.1.1 Question 1: Stimulating private sector involvement and participation in the fertilizer value chain

Under question 1, participants suggested the following as ways of stimulating private sector investments into fertilizer value chain:

i. Investments in transport infrastructure such as roads and railway network across the country;
ii. Investments in the energy sector, particularly electricity;
iii. Allowing private sector participation in fertilizer input subsidy programmes;
iv. Formulation and implementation of conducive policies in an inclusive manner that that involves the private sector;
v. Creating and providing appropriate incentives for the private sector

5.1.2 Question 2: Making the private sector to vehicle for enhancing timely access to fertilizer by farmers in right quantities and qualities

i. Developing and improving the transport warehousing infrastructure that reaches the rural areas
ii. Training and extension support for fertilizer products and increasing access to information. Among others, all government policies and other documents such as guide to agricultural production (GAP) be uploaded online (websites).
iii. Subsidising on importation of raw materials needed in the manufacturing/blending of fertilizer

iv. Issuing of fertilizer import permits timely and fast-tracking all neceesarry processes in the fertilizer supply chain

5.1.3 Question 3: What policies/regulations/strategies need to be put in place (or modified, developed or implemented) to stimulate the private sector investments in the fertilizer value chain?

i. To generate evidence to be used to influence policy makers. For example, the need for cost-benefit analysis of road transport versus railway;
ii. Reviewing policies on taxes and other factors that impinge on private sector participation and investments into the fertilizer value chain
iii. Reducing import licenses and other fees
iv. Developing guidelines on access to fertilizer on loans by smallholder farmers

5.2 Closing Feedback from Participants

Professor Jumbe gave an opportunity to representatives from the private sector, civil society organization and a farmer presentative to provide feedback on the key messages from the workshop.

5.2.1 Mr. Collings Bondo-Farmer representative

Mr. Bondo a farmer representative from Moyo Foundation applauded CARD for organizing this important symposium on fertilizer. As farmers, the issue of fertilizer quality has been raised in various forum. He lamented that poor fertilizer quality and standards is killing many farmers as many farmers are losing out because of the use of sub-standard fertilizers. Its only though the use of high quality fertilizer that farmers can improve crop yields.

5.2.2 Mrs Marobe- Agro-dealer representative

Making her comments, Mrs Marobe noted that many policies that affect the private traders are developed with little consultations with the private traders. She lamented that agro-dealers, farmers and any grassroots people need to have their ideas incorporated in the policies through bottom-up approach. Malawi is very good at formulating policies but implantation is remains a challenge. For instance, other countries who came to learn about agro-dealership in Malawi are way ahead in their countries such as Uganda-possibly their governments took a leading role in supporting them.

5.2.3 Mr. Charles Govati (Private Sector Representative)

Making his comments, Mr. Govati thanked Farmers' World for taking lead in private sector involvement in the fertilizer industry. However, he lamented the fact that there is gender inequality in the fertilizer industry. Also issues of access to credit, functioning markets and machinery. Let's also consider agro-dealers who are critical in the fertilizer value chain by putting up deliberate policies to spur agro-dealership growth and their participation in extension. Let's also consider access to quality information despite quality fertilizers. Also issues of output markets to create effective demand for inorganic fertilizer as opposed to last year (2017/18 season where a farmer had to sell 4 bags of maize to buy a bag of fertilizer. Lastly, we need one central point where the private sector can channel their concerns…e.g. the Crops Control Commission.

6.0 OFFICIAL CLOSING

6.1 Closing Remarks by -Dr. Thabbie Chilongo- Acting Director of CARD

The closing speech for the Symposium was delivered by the Acting Director of CARD, Dr. Thabbie Nyilongo. In his closing remarks, Dr. Nyilongo thanked all the participants for their contributions made at the meeting. Dr. Chilongo called for continuous engagement with the private sector so as to move towards private dominance rather than public dominance in the fertilizer industry. He also challenged symposium partcipants that things have changed and as African countries we need to take responsibility for our own destiny and move from policy formulation to operationalisation that takes everyone on board.

Annex 1: Papers presented at the Symposium

Annex 1.1 Background of PEMEFA and Preliminary Research Findings

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

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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.

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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.

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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.

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

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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)

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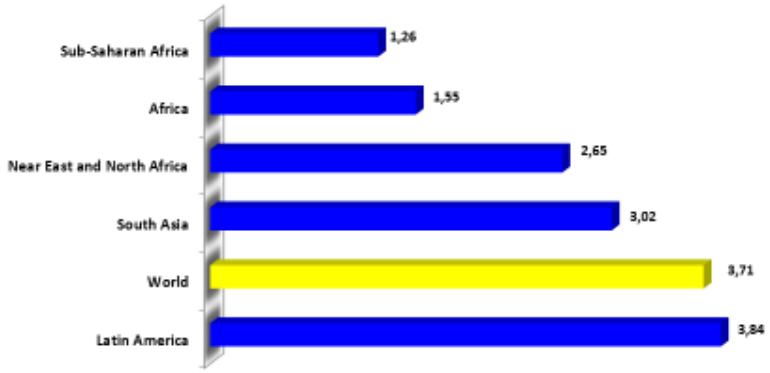
Cereal Yields (tons/ha): Africa and Rest of the World



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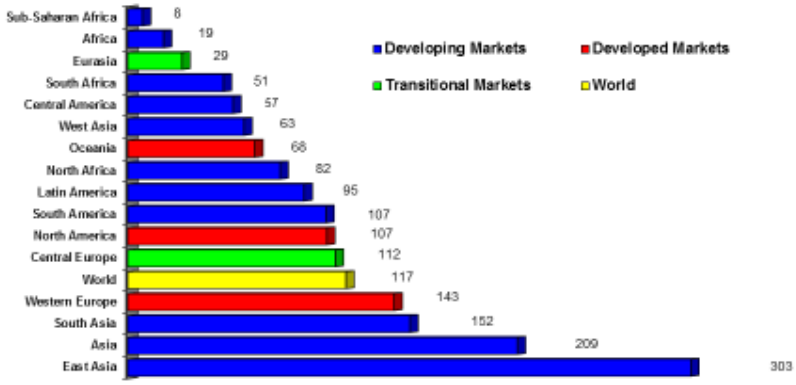
Per Hectare Fertilizer Use by Markets, 2010



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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

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Flow of Fertilizer from Supplier to Farm-Gate

Physical Flow of Fertilizer		Conduct (Coordination)	Performance (Profitability)
		Functions	Transaction Costs
Procurement from overseas fertilizer manufacturers		Procurement (by tender or negotiation) and financing	FOB cost
↓ International shipping		Ocean freight	Freight costs
↓ Seaport in coastal country in Africa		Handling, bagging, inspection, customs clearance	Port charges
↓ Warehousing in port vicinities		Local transport, unloading, stacking, inventory finance	Warehousing costs

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Flow of Fertilizer (cont'd)

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

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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 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.

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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.

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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

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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.

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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

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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

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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**

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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**

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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

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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

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Evidence from Literature so Far

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

What we know

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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.

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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.

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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.*

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The EBA (2017) findings:

- How is Malawi performing on EBA fertilizer indicators?:
  - Malawi follows regulatory good practices such as:
    - Requiring fertilizer product registration and
    - Having no time limitation to the fertilizer product registration.
  - However, Malawi has the lengthiest and most expensive fertilizer registration process.
    - It takes 913 days and 3030.48% of income per capita to register a new fertilizer product due to lengthy field testing. What are the implications on private sector?

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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.

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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.

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Second and third Category of Literature

- **What kind of reforming regulations can Malawi 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.

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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)

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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.	

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THE NATIONAL FERTILIZER POLICY: NICHE FOR PRIVATE SECTOR INVESTMENT

Wilkison Makumba (MoAIWD),
Joseph S. Kanyamuka (NAPAS: Malawi), and
Flora J. Nankhuni (Michigan State University & NAPAS: Malawi)

National Symposium on Fertilizer

May 29, 2018, Sunbird Lilongwe

Presentation Outline

- Introduction
- Rationale for Developing the NFP
- Policy Content
  - Policy Goal
  - Policy Outcomes
  - Priority Areas
  - Policy Statements
- Conclusion

Introduction

- Agriculture is considered a key engine of economic growth in Malawi
- Introduction of the FISP has increased fertilizer usage in Malawi
  - from less than 10 kg/ha in 2005 to 55.8 kg/ha in 2016 -- surpassing the Abuja declaration recommendation of 50kg/ha (ASPR 2017).
- Low agricultural productivity
  - About 2.0 mt/ha in 2016/17 compared to a potential of at least 13 mt/ha.
  - Among reasons for this low productivity is underutilized soil testing technologies and limited blending of fertilizers by the private sector and farmers use of low quality fertilizers that are sometimes adulterated by the private sector (especially at the aglodealer level)
  - Productivity is also low due to low Nutrient Use Efficiency (NUE) of the fertilizers applied, mainly due to poor quality of the soils.
- The World Bank ranked Malawi low on the efficiency of the fertilizer regulatory framework because it takes 913 days and 3030.48% of income per capita to register a fertilizer

Rationale for the National Fertilizer Policy

- Framework governing the production, marketing and use of fertilizer has remained rudimentary for decades.
  - The legislation that existed , "The Fertilisers, Farm Feeds and Remedies Act of 1970" was repealed during World Bank / IMF Structural Adjustment Programmes
  - A Fertilizer Bill was drafted but lacked a supporting fertilizer policy document
- Introduction of FISP has increased fertilizer dealers in Malawi hence demand for up to date regulatory framework

Broad Policy Directions

Policy Content

Policy Goal

- To sustainably increase commercial supply, access to and efficient use of high-quality fertilizers for increased agricultural production and productivity

Policy Outcomes

1. Improved timely availability and accessibility of high-quality fertilizers for farmers.
2. Increased fertilizer use efficiency.
3. Increased use of appropriate cutting-edge technologies in the fertilizer industry including soil testing and fertilizer blending.
4. Improved enabling environment for the fertilizer industry.
5. Increased compliance with required standards for all types of fertilizer products.
6. Increased access to objective and truthful information about fertilizer products and fertilizer use.
7. Reduced negative environmental impact caused by fertilizer production and use.

Policy Objectives

1. To increase, by 75 percent, the number of farmers timely accessing high-quality fertilisers through commercial channels.
2. To increase the use of soil analysis and fertiliser testing services by 50 percent.
3. To increase the volume of high quality domestic fertiliser production and blending based on soil tests, by 50 percent.
4. To increase the number of farmers, frontline extension staff, and agrodealers accessing information on the appropriate fertiliser formulations and use.
5. To increase the number of private sector investors in the fertiliser industry by 100 percent.
6. To double the value of commercial fertiliser trade involving Malawian firms.
7. To increase the value of public investments to support the fertiliser supply chain in Malawi by 30 percent.
8. To enhance investments to improve environmental stewardship and reduce pollution and harm to natural resources by 20 percent.

Policy Priority Areas

1. Farmers' Access to High-Quality Fertilisers
2. Institutional Development & Coordination
3. Public Investments and Support
4. Research, Development and Extension Support
5. **Private-sector Led Fertiliser Industry Development**
6. Fertiliser Quality Standards and Truth in Labelling
7. Sustainability and Environmental Management

POLICY PRIORITY AREAS

PPA 1: Farmers' Access to High-Quality Fertilisers

- Facilitate timely & equitable farmers' access to high quality fertiliser through:
  - Encouraging private sector to package fertilisers in different sizes to suit different categories of farmers, depending on land size and income levels
  - Improving efficiency of input subsidy programs.
  - Disseminating information on availability and use of various fertiliser products to farmers to enhance crop productivity.

POLICY PRIORITY AREAS

PPA 2: Institutional Development & Coordination

- Ensure establishment of the National Fertiliser Regulatory Commission (NFRC):
  - Semi-autonomous body responsible for administration & enforcement of the Fertiliser Act & regulations
  - Will require modern infrastructure: laboratories, equipment and capacity building

POLICY PRIORITY AREAS Cont'...

PPA 3: Public Investments and Support

- Create an enabling environment for increased and accelerated private sector investments in the fertiliser industry through:
  - Reducing the time taken to register fertiliser products by reviewing the relevant legislation
  - Reviewing tax incentives for the fertiliser industry
  - Facilitating establishment of new public-private partnerships in the industry

POLICY PRIORITY AREAS Cont'...

PPA 3: Public Investments and Support cont...

- Facilitate public investments in infrastructure that will promote development of private sector & increase access to affordable & profitable fertilisers for farmers in Malawi through:
  - Support the establishment of an agricultural investment bank
  - Promoting development & use of national & regional railway network for fertiliser transportation
  - Support of upgrading of rural road infrastructure to lower transportation costs.

POLICY PRIORITY AREAS Cont'...

- **PPA 4: Research, Development and Extension Support**
  - Ensure that fertiliser formulations and blends are evidence-based through soil testing, Production and dissemination of soil fertility maps, formulation/blending of area and crop specific fertilisers
  - Support innovation in fertiliser product development and dissemination through:
    - Developing new fertiliser production technologies

POLICY PRIORITY AREAS Cont'...

- **PPA 5: Policy Priority Area 5: Private-Sector Led Fertilizer Industry Development**
  - Facilitate access to financial services, including credit and insurance for actors in the fertilizer industry
    - Promoting access to information on financing sources for investments
    - Attracting venture capital funds to invest in the fertilizer industry
    - Creating financing facilities to cater for agro-dealers and SMEs
  - To double the value of commercial fertiliser trade (imports and exports) involving Malawian firms
    - Provide incentives for domestic production/blending of fertilisers rather than importing finished fertiliser products

POLICY PRIORITY AREAS Cont'...

▶PPA 5: Policy Priority Area 5: Private-Sector Led Fertilizer Industry Development

- Encourage private sector production & blending of fertilizers to supply a wide range of evidence-based fertilizer formulations for specific markets:
  - Building capacity for soil analysis and mapping in the private sector
  - Accrediting soil testing laboratories operated by the private sector
  - Facilitating importation of quality machinery and spare parts for fertiliser production and blending

POLICY PRIORITY AREAS Cont'...

▶PPA 5: Policy Priority Area 5: Private-Sector Led Fertilizer Industry Development Cont...

- Facilitate fertilizer trade that benefits Malawian farmers and enterprises in the fertilizer industry.
  - Prioritising intra-African trade (imports and exports) of high-quality fertilisers by removing trade barriers within regional economic communities
  - Facilitating private-sector sourcing of high-quality fertiliser products and technologies
  - Promoting efficient and competitive transportation and distribution of fertilisers
  - Promoting investment in and efficient management of fertiliser warehousing facilities, especially in remote rural areas

POLICY PRIORITY AREAS Cont'...

- **PPA 6: Fertiliser Quality Standards and Truth in Labelling**
  - Support development of private sector initiatives for fertiliser product quality enhancement through:
    - Establishing internal quality controls
    - Branding of fertiliser products and services

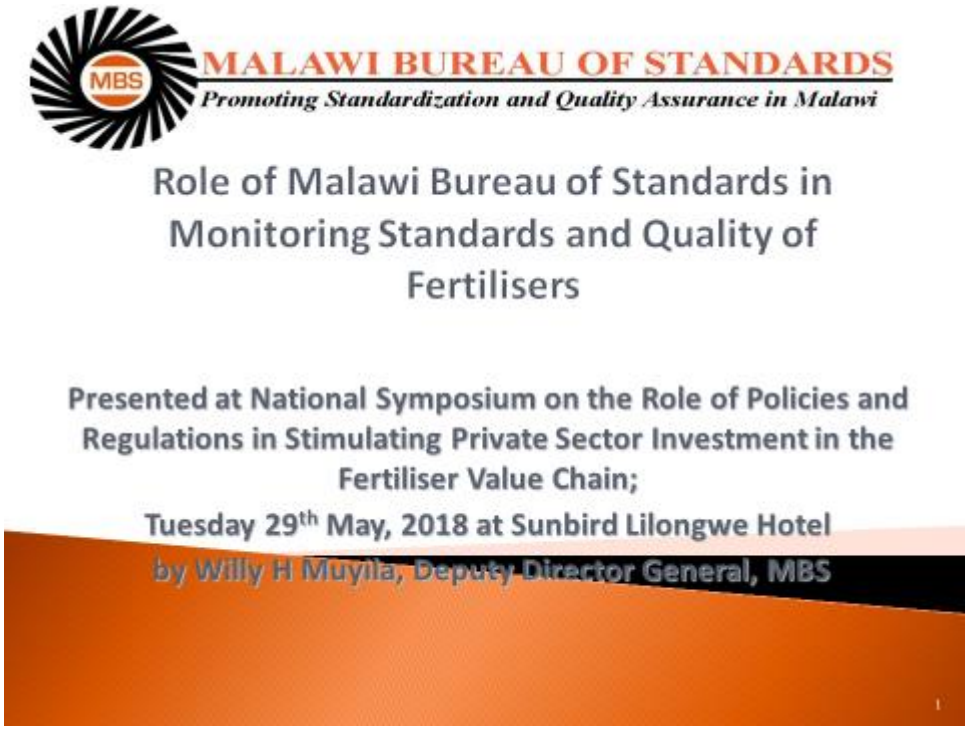
- **PPA 7: Sustainability and Environmental Management**
  - Promote investments in and adoption of complementary interventions such as integrated soil fertility management practices/technologies through:
    - Promoting liming or lime products to address soil acidity

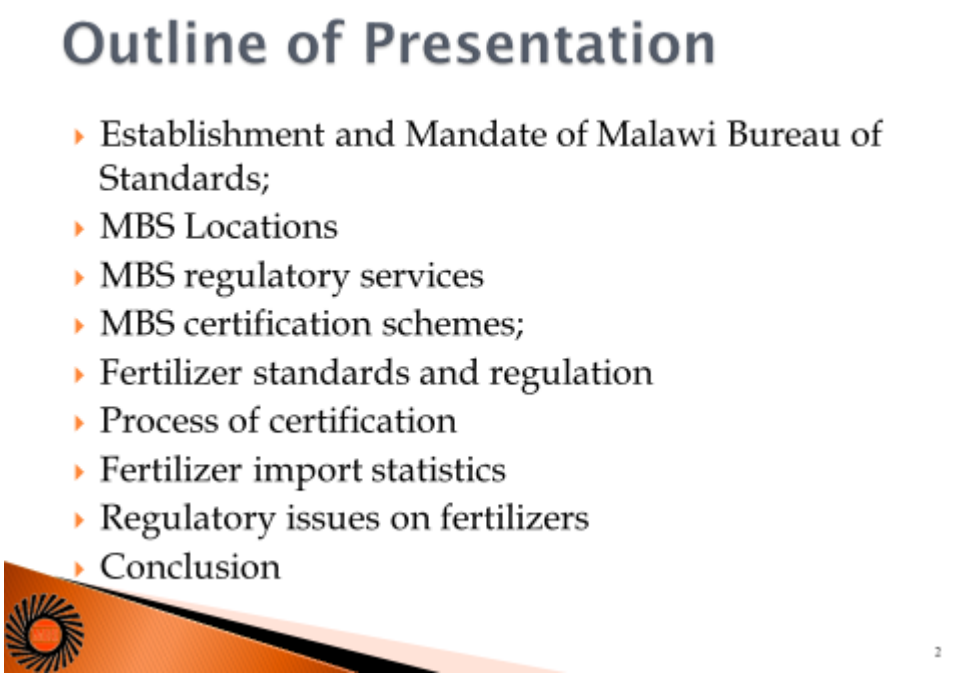
CONCLUSION

- The NFP recognizes the crucial role played by the private sector in the fertilizer industry
- If approved, this will be the first Fertilizer Policy for Malawi
- It aims to increase private sector investments and participation in the fertilizer industry
- This will contribute to overall efficiency of the fertilizer value chain (timely supply, distribution, etc) and thus will contribute to improved agricultural productivity and growth.

Zikomo Kwambiri
for your attention!!!

Annex 1.3 Fertilizer Quality and Standards





Establishment and mandate of the MBS

- Established by an Act of Parliament in October 1972 (MBS Act, Cap 51:02 of the Laws of Malawi), Revised in July 2012 (Act No. 14 of 2012)
- Mandate:
  "To promote metrology, standardization and quality assurance of commodities and of the manufacture, production, processing or treatment thereof; and further to provide for matters incidental to, or connected with, the foregoing"

3

Establishment and mandate of the MBS

- The MBS also enforces the Weights and Measures Act (Cap 48:04 of the Laws of Malawi enacted in 1959) superceded by The Metrology Act No. 10 of 2016.
- The Metrology Services Department (MSD) formerly called Trade Metrology Division (TMD) until 2010 is responsible for enforcement of this Act formerly division under the Ministry of Industry and Trade until it was transferred to the MBS in 1997.

4

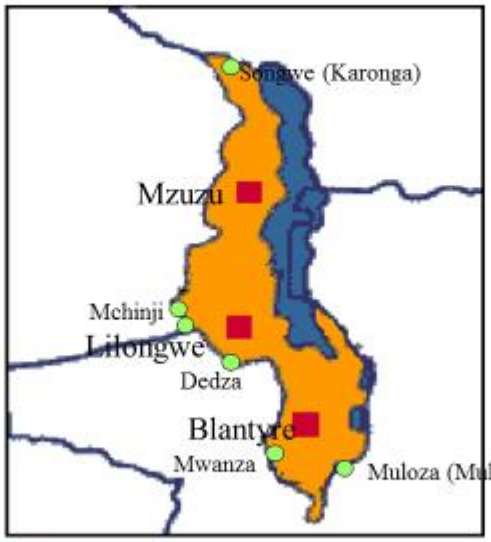
Establishment and mandate of the MBS

The mandate was given as a means of:

- Advancing the national economy;
- Benefiting the health, safety and welfare of the public;
- Assisting and protecting consumers;
- Facilitating domestic and international trade; and
- Furthering international cooperation in the field of standardization

2 June 2018

Office locations



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Office Locations

- MBS is found in all 3 regions of the country:
  - Blantyre (Head Office & Regional Office - South)
  - Lilongwe (Regional Office -Central)
  - Mzuzu (Regional Office –North)
- 5 main border points
  - Mwanza, Dedza, Mchinji, Muloza and Songwe;
- 1 satellite office
  - Liwonde

7

Departments

- **Standards Development**: formulates national standards in all fields. It is secretariat for standards development technical committees
- **Quality Assurance Services**: responsible for monitoring implementation of standards; to ensure consumer protection through various schemes
- **Testing Services:** Operates several labs for testing products for MBS and other clients
- **Trade Metrology:** Provides legal and industrial metrology services to protect consumers from unfair trade practices due to measurements
- **Finance and Administration**: support functions

8

Regulatory activities of the MBS

- Include but not limited to:
  - Standards development;
  - Providing testing services for products, commodities and materials;
  - Enforce quality/safety standards in relation to products, processes and services through CERTIFICATION, INSPECTION and MARKET SURVEILLANCE ACTIVITIES;
  - Verification of weights and measures used in trade and industry

9

Regulatory activities of the MBS

- The MBS uses the following derivatives of the MBS Act to implement its regulatory activities on both local and imported products:

a) The Certification Marks Regulations;
b) The Imports Quality Monitoring Regulations; and
c) Malawi Standards

10

MBS Regulatory Services Roles

MBS performs its regulatory roles mainly through two departments:

i. The **QASD** is responsible for monitoring quality of products and services to assure the public that these meet requirements

ii. The **MSD** ensures consumers are protected in trade by ensuring that measuring instruments are calibrated or verified for use such as scales and fuel tanks

2 June 2018

MBS Certification Schemes

- Local Certification Scheme
  - Certification of locally produced products and services
- Import Quality Monitoring Scheme
  - Certification of imported products
- Exports Certification scheme
  - Certification of products meant for export, mostly based on client specifications
- Management System Certification Scheme

  Certification of management systems. e.g. ISO 9001-QMSI SO 22000- FSMS

12

Other Schemes

- **Market surveillances**: acts as follow up to local and import certification schemes; to ensure products found on the market are complaint

- **Consumer complaints handling**: investigate claims made by consumers regarding quality of a product; The is verified with similar batches on the selling point and product is tested to verify the problem

13

Regulation of fertilisers by MBS

- MBS collaborates with Ministries of Agriculture, Trade and Industry and other relevant ministries to implement mandatory Malawi Standards on fertilisers
- Fertilisers **locally manufactured** or **imported** are subjected to conformity assessments based on the same **mandatory Malawi standards**
- **Conformity assessments**: inspection, sampling, testing and certification

14

Mandatory Standards for fertilisers

Following standards specify requirements for each type of fertilisers as below:

a) **MS 255- Compound fertilisers** specification:

- NPK
- Ammonium Nitrate
- Ammonium Sulphate
- Muriate of Potash
- Magnesium based tobacco fertiliser (gypsum)
- Organic fertilizer

b) **MS 272 - CAN**

c) **MS 351- Urea**

d) MS 355- Sulphate of Potash

e) MS 722- Packaging and Labelling requirements

15

Achieving Local certification.....

Application into the MBS Certification Scheme & Application Review

Initial Audit Assessment ← MS 21, 19 & Product standard

MBS-Pre-certification Approval
MBS Pre-certification Mark

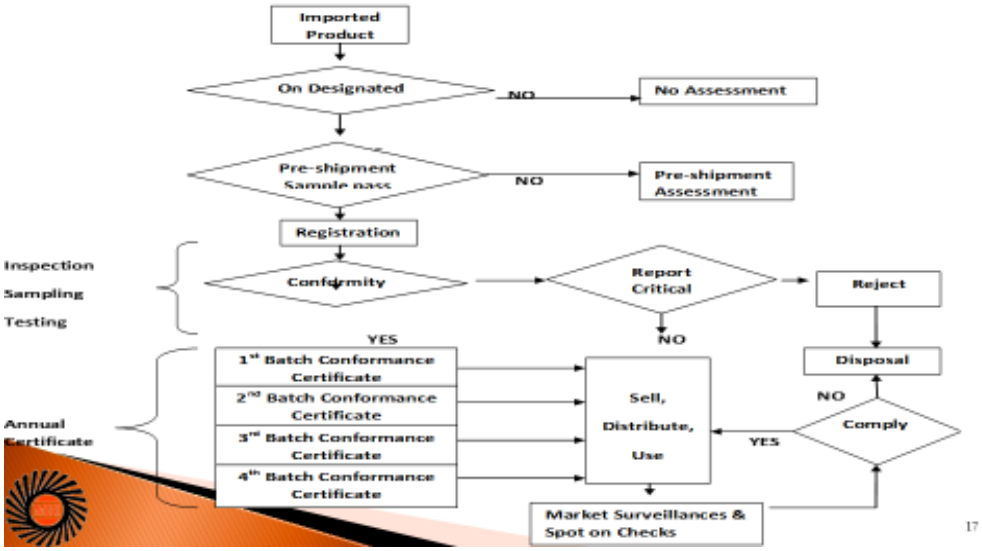
Continuous Audit Assessments

MBS-Certification
Allow use of MBS Quality Mark

Renewal/Withdrawal

16

Achieving Import certification.....



Local certification

- Mainly two manufacturers of compound fertilisers (e.g. NPK) under the Local
  - Optichem Malawi Ltd
  - Malawi fertiliser Company
- Others simply re-package imported fertilisers such as CAN, Urea, NPK

18

Imports Certification

Most fertilisers used in Malawi are imported from
- Switzerland (Africa Investment Group)
- Mozambique (Greenbelt Fertiliser Ltd)
- Egypt (Mediterranean company)
- United Arab Emirates (FZC Group)
- RSA (Bridge Procurement)

- Types include: UREA, CAN, DAP, NPK, sulphates of potash and ammonia
- Importation permit is obtained from the Ministries of Agriculture and Industry and Trade)

19

Fertiliser Import statistics for 2017/18

153 consignments of fertilisers were registered under IQMS in BT, LL, Mwanza, Liwonde and Muloza of which in the year:

UREA- 57
CAN- 19
NPK- 65
Ammonium sulphate- 21
Sulphate of Potash- 10

- These were inspected and sampled from

and 67.5% fertilisers assessed passed

- Failures mostly observed in pH & moisture content, however some fertilisers fail in main nutrient-e.g. nitrogen (44% vs 46%) and phosphorus (5.22% vs a range of 13-17%)

20

Regulatory issues on fertilizers

- Rebagging expired fertilizers and altering expiry dates by some unscrupulous suppliers;
- Adulteration of fertilizers with sand and other materials in order to dupe unsuspecting buyers on weight (unsubstantiated reports);
- Supply/Import of fertilizers not covered by Malawi Standards i.e farm specific/crop specific;
- Use of non-trade scales and unverified scales;
- Need for ongoing improvement on testing capacity addressed through SQAM Project and other MBS ongoing efforts;

21

Future MBS Laboratory and Office Complex

Regulatory issues on fertilizers

Remedies

(1)Appropriate remedies applied based on MBS Act and Metrology Act

(2) Liaison with MoA to deal with any regulatory conflicts –Aware of Fertilizer policy and bill in offing;

(3) Demand for revision of standards to address change of fertilizer formulations;

23

Conclusion

- MBS plays a vital role in the fertilizer value chain through developing standards and enforcing the standards;
- MBS works mainly with Ministries of Agriculture and Ministry of Industry, Trade and Tourism in regulating fertilizers in the country;
- Concerted efforts are required in order to ensure high quality fertilizers throughout the value chains;
- Fertilizer policy and bill under formulation by MoAIWD need hastened to address current issues;

24

End of Presentation

25

Purpose of the Presentation

Malawi operates an automatic investment incentives regime in various sectors including fertilizer blending/manufacturing

Presentation Outline

- This presentation provides information on Malawi's investment incentives in the fertiliser industry.
- Specifically the presentation outlines
  - General Investment Incentives
  - Manufacturing Investment Incentives

Overview of Malawi's Enabling Environment –
Introduction

The GoM has initiated key policy reforms aimed at improving the regulatory environment for the private sector

Strategic Direction, policy Reforms, Incentives in Brief

- **Strategic direction** for the development of the country is **clearly articulated in key national and sector specific policies** such as Malawi Growth and Development Strategy, and National Export Strategy (NES)
- Malawi has embarked on a number of policy reforms **aimed at easing the processes associated with starting, operating and investing in a business**
- Malawi offers a **wide ranging incentive package to help promote trade and investment** that includes tax breaks and allowances for value addition
- A number of key initiatives are being undertaken to **facilitate private sector-led growth,** including
  - Revitalising power infrastructure
  - Deepening industrialisation through value addition in agro-processing
  - Improving access to finance

Investment Incentives
Definition

Incentives are offered to spur private capital formation

What is an Investment Incentive?	- **Investment incentive**, policy implemented by Government to promote the establishment of new businesses or to encourage existing businesses to expand or not to relocate elsewhere
But why Incentives?	1. to influence the locational decisions of investors and thus to reap the positive effects of private direct investment 2. to shape the benefits from DI (direct investment) by stimulating investors to operate in desired ways or to direct them into regions or industries considered in need of investment ❑ Incentives may be selective and discriminate on the basis of size of the investment or its origin
Types of Incentives	1. financial incentives, such as various grants and loans; 2. fiscal incentives, such as tax holidays and reduced tax rates; 3. other incentives, such as subsidized infrastructure, market preferences and regulatory concessions

Other Incentives Applicable to Fertilizer Investments

Malawi is actively seeking to attract inward investment

Investment Protection	- Constitution guarantees protection of foreign investors' assets - Member of the Multilateral Investment Guarantee Agency (MIGA)
Repatriation of profits & income	- Possible under EPZ rules and as foreign exchange regulations - Approx. 66% of income may be externalized
Land & Property Rights	- Based on Malawian Constitution.

Specific Tax Incentives Applicable to Fertilizer Investments

Industrial Rebate Scheme	3. If the industry is already under the listed industries in the scheme, and the manufacturing entity's raw materials are presently provided for under the scheme, the investor should submit an application to the Commissioner General of MRA to be registered as an operator under the scheme
Domestic Tax Incentives	**Pre-business expenses of up to 18 months are allowable expenses** This provision allows an investor in the manufacturing sector to claim expenses incurred '18 months prior to commencement of production' against income, thereby reducing the Corporate Income Tax paid. **Losses are carried forward for six years to encourage investment in profitable business ventures** This provision allows an investor to carry forward business losses and factor in the previous years' losses into current years' profits. This results in an overall reduction of the tax liability at the time the business starts making profits, hence working capital is not adversely affected. **Capital Allowances are allowable on various capital items for the manufacturing sector.** Covering investment , initial and annual allowances

General Tax Incentives Applicable to Fertilizer Investments

Malawi is actively seeking to attract inward investment

Tax Incentives	- Tax Incentives for fertilizer investment fall under manufacturing sector - Tax incentives are aimed at enabling business establishments to grow, and expand their operations, thereby contributing to the overall social-economic development of Malawi
General Tax Incentives on Fertiliser Manufacturing	- Manufacturing companies may deduct all operating expenses incurred up to 25 months prior to the start of operations - Loss carry forward of up to six years - Import duty and import VAT exemption on importation of most Machinery. - Import duty exemption while VAT remains payable at 16.5% on importation of specific type of Machinery. - Import duty and import VAT exemption on importation of special purpose motor vehicles other than those principally designed for transport of persons or goods. Examples of special purpose vehicles are concrete mixer lorry, mobile drilling vehicles, etc. - Solar products are import duty free while VAT remains payable at 16.5%. Examples of such solar products include solar batteries and solar energy lamps.

Specific Tax Incentives Applicable to Fertilizer Investments

Customs Tax Incentives- *Industrial Rebate Scheme*	▪ The Industrial Rebate Scheme applies to import and excise duty exemption of raw materials for designated manufacturing industries, but VAT is payable at 16.5%. ▪ Raw materials for the **manufacture of fertilizer**, medicaments and pharmaceuticals are both import and VAT free under the scheme. ▪ In order to qualify for the incentives under the Industrial Rebate Scheme, the following conditions should be met:- 1. The manufacturing entity should be registered as an operator under the Industrial Rebate Scheme as detailed under 2 below. 2. Plant and machinery must be in place at the premises. 3. Value addition of 20% minimum. Determination of the value addition is based on assessment of production cost. The investor should therefore submit this information to Malawi Revenue Authority (MRA) prior to benefiting from the Industrial Rebate Scheme. ▪ In order to benefit from the Industrial Rebate Scheme the procedure is as follows:- 1. If the industry is <u>not</u> already under the listed industries in the scheme, the investor should submit an application to the Commissioner General of MRA for <u>inclusion</u> of the new industry. 2. If the industry already exists under the listed industries in the scheme, and the manufacturing entity's raw materials are <u>not</u> presently provided for under the scheme, the investor should <u>firstly</u> submit an application to the Commissioner General of MRA to be <u>registered</u> as an operator under the scheme. After being registered as an operator, the investor should then submit an application for <u>inclusion</u> of the additional raw materials for that specific industry.

Specific Tax Incentives Applicable to Fertilizer Investments

Industrial Rebate Scheme	3. If the industry is already under the listed industries in the scheme, and the manufacturing entity's raw materials are presently provided for under the scheme, the investor should submit an application to the Commissioner General of MRA to be registered as an operator under the scheme
Domestic Tax Incentives	**Pre-business expenses of up to 18 months are allowable expenses** This provision allows an investor in the manufacturing sector to claim expenses incurred '18 months prior to commencement of production' against income, thereby reducing the Corporate Income Tax paid. **Losses are carried forward for six years to encourage investment in profitable business ventures** This provision allows an investor to carry forward business losses and factor in the previous years' losses into current years' profits. This results in an overall reduction of the tax liability at the time the business starts making profits, hence working capital is not adversely affected. **Capital Allowances are allowable on various capital items for the manufacturing sector.** Covering investment , initial and annual allowances

Annex 1.5 The Role of Private Sector in the Fertilizer Value Chain: The Case for Blended Fertilizer for Malawi

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Role of Private Sector in the Fertilizer Value Chain

The Case for Blended Fert in Malawi

FARMERS WORLD AGORA

fsu **The Case for Blended Fertilizer in Malawi**

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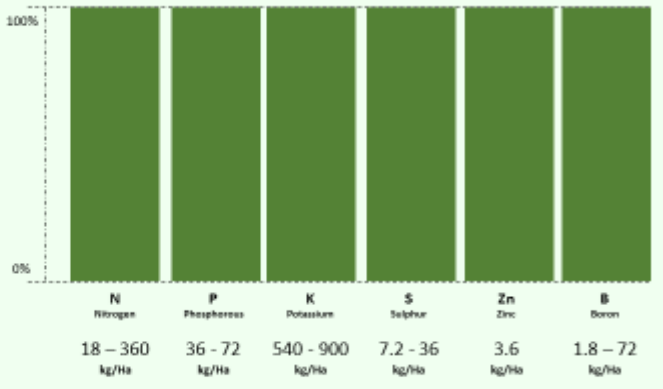
Healthy soils are characterized by a certain level of nutrients.

The "ideal" soil would have 100% of all nutrients needed for crop growth



Nutrients supplied by fertilizer
Unhealthy Soil nutrient Levels
Healthy Soil nutrient Levels

Soil bulk density assumed to be 1200 kg/m3. Maize Active Root System assumed to be 30 centimeters long

Sector: Production, Distribution, and Extension : Meet FSU!

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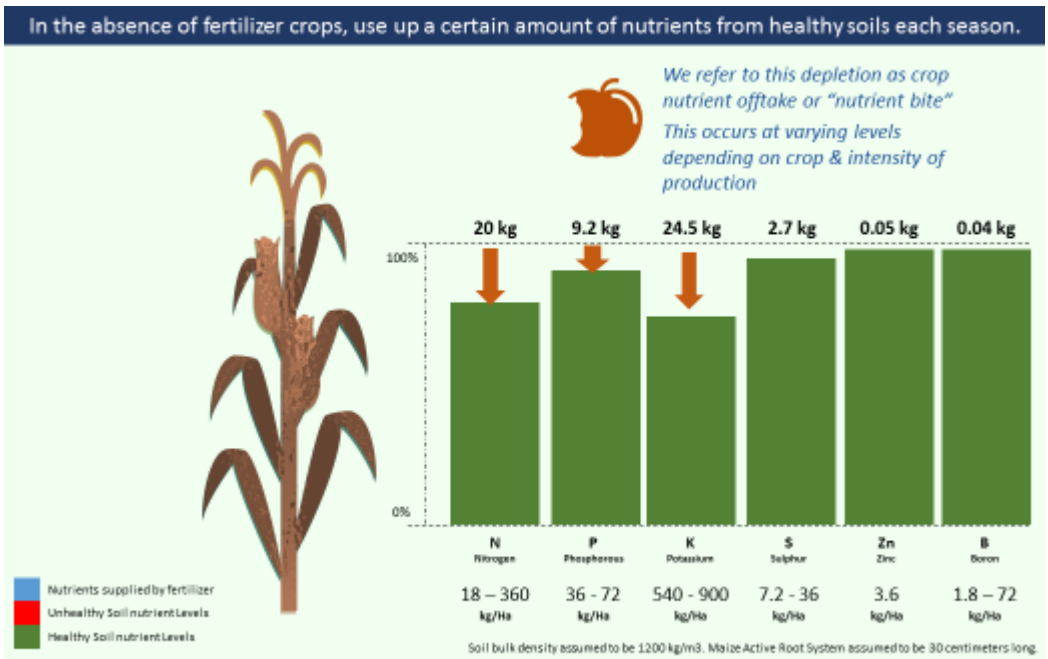
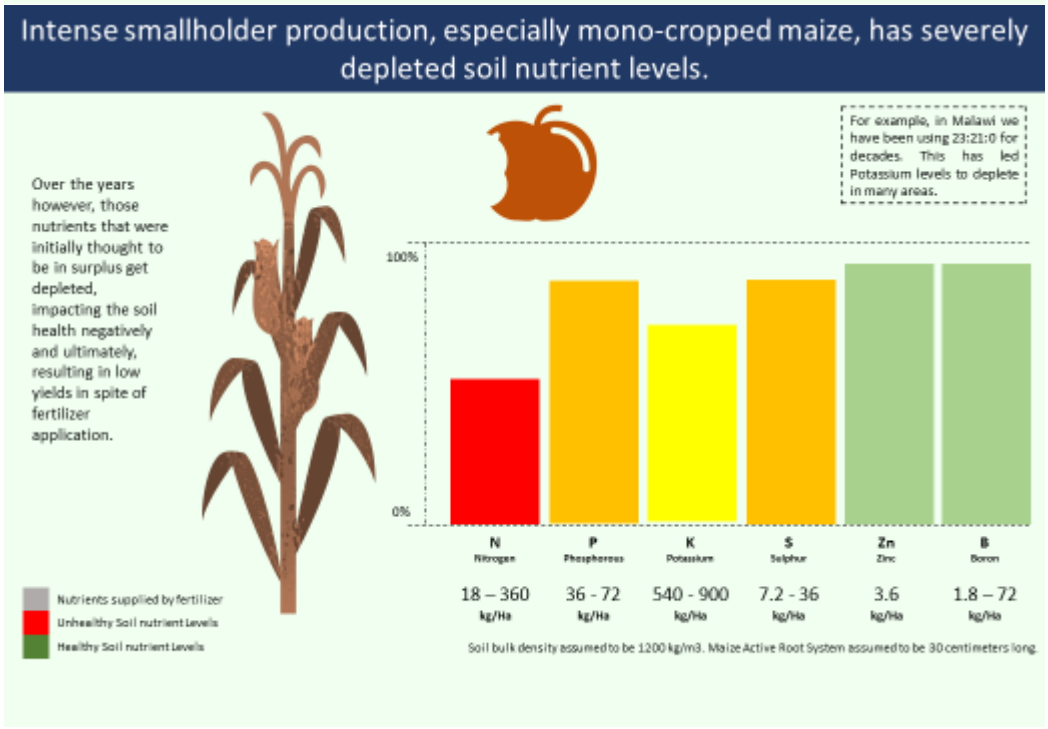
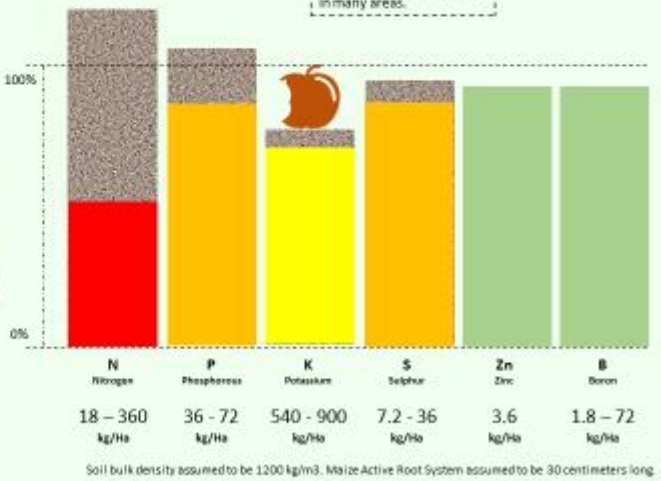

In the absence of fertilizer crops, use up a certain amount of nutrients from healthy soils each season.
We refer to this depletion as crop nutrient offtake or "nutrient bite"
This occurs at varying levels depending on crop & intensity of production
20 kg
9.2 kg
24.5 kg
2.7 kg
0.05 kg
0.04 kg
100%
0%
N Nitrogen
P Phosphorous
K Potassium
S Sulphur
Zn Zinc
B Boron
18 – 360 kg/Ha
36 - 72 kg/Ha
540 - 900 kg/Ha
7.2 - 36 kg/Ha
3.6 kg/Ha
1.8 – 72 kg/Ha
Nutrients supplied by fertilizer
Unhealthy Soil nutrient Levels
Healthy Soil nutrient Levels
Soil bulk density assumed to be 1200 kg/m3. Maize Active Root System assumed to be 30 centimeters long.


Intense smallholder production, especially mono-cropped maize, has severely depleted soil nutrient levels.
Over the years however, those nutrients that were initially thought to be in surplus get depleted, impacting the soil health negatively and ultimately, resulting in low yields in spite of fertilizer application.
For example, in Malawi we have been using 23:21:0 for decades. This has led Potassium levels to deplete in many areas.
100%
0%
N Nitrogen
P Phosphorous
K Potassium
S Sulphur
Zn Zinc
B Boron
18 – 360 kg/Ha
36 - 72 kg/Ha
540 - 900 kg/Ha
7.2 - 36 kg/Ha
3.6 kg/Ha
1.8 – 72 kg/Ha
Nutrients supplied by fertilizer
Unhealthy Soil nutrient Levels
Healthy Soil nutrient Levels
Soil bulk density assumed to be 1200 kg/m3. Maize Active Root System assumed to be 30 centimeters long.

Not all fertilizers have the same impact on yield.

Fertilizer can be applied to address nutrient deficiencies, but not all fertilizer blends match the nutrients depleted in soil

For example, in Malawi we have been using 23:21:0 for decades. This has led Potassium levels to deplete in many areas.

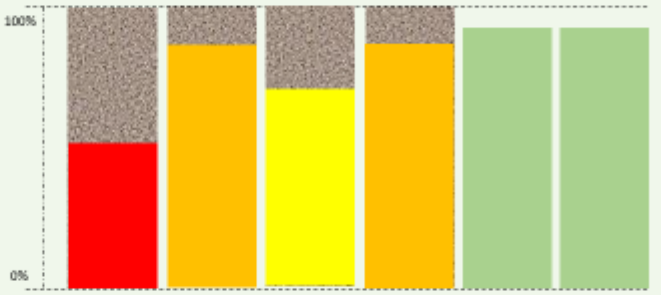


Nutrients supplied by fertilizer
Unhealthy Soil nutrient Levels
Healthy Soil nutrient Levels

Soil bulk density assumed to be 1200 kg/m3. Maize Active Root System assumed to be 30 centimeters long.

A wide range of customized blends are needed to address long-term soil health.

In order to revive yields, it is therefore necessary to revise fertilizer blends periodically – based on the current soil conditions to improve soil health as well as to provide crops the nutrients they need.



Nutrients supplied by fertilizer
Unhealthy Soil nutrient Levels
Healthy Soil nutrient Levels

Soil bulk density assumed to be 1200 kg/m3. Maize Active Root System assumed to be 30 centimeters long.

Our Unique Blending Capacity

Basics of Blending

- Blending is the physical mixing of concentrated granular raw materials to a pre-determined recipe
- A blended compound would be N-P-K + S + micronutrients
  - 3 types of nutrients
    - Macro
    - Secondary
    - Tertiary – micro
  - For example, for Nitrogen, you would use Urea (46% N)
  - For Potassium, P2O5, you would use DAP (N-P-K 18-46-0)
- Apart from physical materials, can coat in micronutrients or add as granules
- **Only** blending can provide you the flexibility of blends tailored to soil needs

Blending facilities | Malawi

Blending facilities | Malawi

Ready for market

Laboratories

Blending Operations

Malawi Fertilizer Company offers:

- High-quality fertilizer brand, SuperFert
- Import raw materials & blend on-demand
- Modern accurate blending plants with high capacity per hour 62 MT per hour = **284,000 MT per annum**
- Emphasis on tailor made formulations based on soil analysis & fertilizer recommendations
- Backed by modern laboratory testing facilities on site
- *Future:* Infrared soil testing linked to blend recommendations

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Soil Testing Efforts to Date

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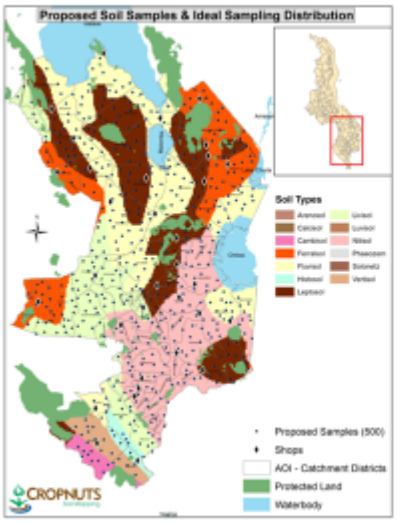
Representative Soil Sampling (Southern Region)



- Over 500 soil samples across all of Agora catchment area
- Includes all districts in the Southern Region
- Gives a representative pictures of soil nutrient levels across wide area

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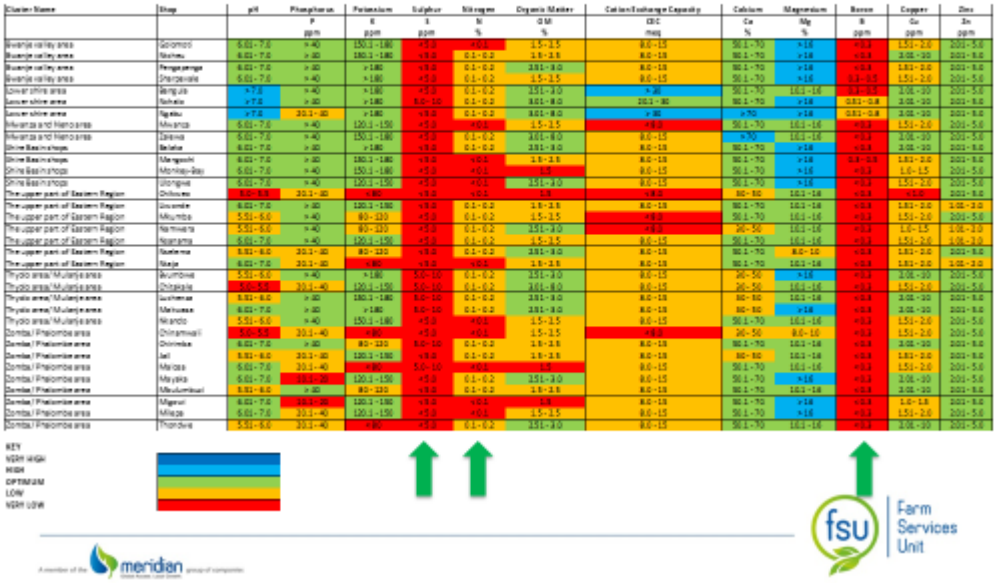
Summary of Soil Health (Southern Region)



Cluster Name	Shop	pH	Phosphorus P ppm	Potassium K ppm	Sulphur S ppm	Nitrogen N %	Organic Matter OM %	Cation Exchange Capacity CEC meq	Calcium Ca %	Magnesium Mg %	Boron B ppm	Copper Cu ppm	Zinc Zn ppm
Bvumbe valley area	Solomon	6.01 - 7.0	> 40	150.1 - 180	< 5.0	< 0.1	1.5 - 2.5	8.0 - 15	50.1 - 70	> 16	< 0.3	1.51 - 2.0	201 - 5.0
Bvumbe valley area	Nesmo	6.01 - 7.0	> 40	150.1 - 180	< 5.0	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50.1 - 70	> 16	< 0.3	2.01 - 10	201 - 5.0
Bvumbe valley area	Pengapenga	6.01 - 7.0	> 40	> 180	< 5.0	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50.1 - 70	> 16	< 0.3	1.51 - 2.0	201 - 5.0
Bvumbe valley area	Shangavale	6.01 - 7.0	> 40	> 180	< 5.0	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50.1 - 70	> 16	0.3 - 0.5	1.51 - 2.0	201 - 5.0
Lower shire area	Bengula	> 7.0	> 40	> 180	< 5.0	0.1 - 0.2	2.51 - 3.0	> 20	50.1 - 70	10.1 - 16	0.3 - 0.5	2.01 - 10	201 - 5.0
Lower shire area	Nchalo	> 7.0	> 40	> 180	5.0 - 10	0.1 - 0.2	3.01 - 8.0	20.1 - 30	50.1 - 70	> 16	0.51 - 0.8	2.01 - 10	201 - 5.0
Lower shire area	Ngabu	> 7.0	30.1 - 40	> 180	< 5.0	0.1 - 0.2	3.01 - 8.0	> 30	> 70	> 16	0.51 - 0.8	2.01 - 10	201 - 5.0
Mwanza and Neno area	Mwanza	6.01 - 7.0	> 40	120.1 - 150	< 5.0	< 0.1	1.5 - 2.5	< 8.0	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
Mwanza and Neno area	Zalewa	6.01 - 7.0	> 40	150.1 - 180	< 5.0	0.1 - 0.2	3.01 - 8.0	8.0 - 15	> 70	10.1 - 16	< 0.3	2.01 - 10	201 - 5.0
Shire Basin shops	Balaka	6.01 - 7.0	> 40	> 180	< 5.0	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50.1 - 70	> 16	< 0.3	2.01 - 10	201 - 5.0
Shire Basin shops	Mangochi	6.01 - 7.0	> 40	150.1 - 180	< 5.0	< 0.1	1.5 - 2.5	8.0 - 15	50.1 - 70	> 16	0.3 - 0.5	1.51 - 2.0	201 - 5.0
Shire Basin shops	Monkey Bay	6.01 - 7.0	> 40	150.1 - 180	< 5.0	< 0.1	< 1.5	8.0 - 15	50.1 - 70	> 16	< 0.3	1.0 - 1.5	201 - 5.0
Shire Basin shops	Ulongwe	6.01 - 7.0	> 40	120.1 - 150	< 5.0	< 0.1	2.51 - 3.0	8.0 - 15	50.1 - 70	> 16	< 0.3	1.51 - 2.0	201 - 5.0
The upper part of Eastern Region	Chitedze	5.0 - 5.5	30.1 - 40	< 90	< 5.0	< 0.1	1.5	< 8.0	30 - 50	10.1 - 16	< 0.3	< 1.0	201 - 5.0
The upper part of Eastern Region	Dowa	6.01 - 7.0	> 40	120.1 - 150	< 5.0	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
The upper part of Eastern Region	Mkumba	5.51 - 6.0	> 40	90 - 120	< 5.0	0.1 - 0.2	1.5 - 2.5	< 8.0	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
The upper part of Eastern Region	Nathenje	5.51 - 6.0	> 40	90 - 120	< 5.0	0.1 - 0.2	2.51 - 3.0	< 8.0	30 - 50	10.1 - 16	< 0.3	1.0 - 1.5	201 - 5.0
The upper part of Eastern Region	Nsamala	6.01 - 7.0	> 40	120.1 - 150	< 5.0	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
The upper part of Eastern Region	Ntchema	5.51 - 6.0	30.1 - 40	90 - 120	< 5.0	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
The upper part of Eastern Region	Ntaja	6.01 - 7.0	30.1 - 40	< 90	< 5.0	< 0.1	1.5 - 2.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
Thyolo area/Mulanje area	Bvumbwe	5.51 - 6.0	> 40	> 180	5.0 - 10	0.1 - 0.2	2.51 - 3.0	8.0 - 15	30 - 50	> 16	< 0.3	2.01 - 10	201 - 5.0
Thyolo area/Mulanje area	Chitakale	5.0 - 5.5	30.1 - 40	120.1 - 150	5.0 - 10	0.1 - 0.2	3.01 - 8.0	8.0 - 15	30 - 50	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
Thyolo area/Mulanje area	Luchman	5.51 - 6.0	> 40	150.1 - 180	5.0 - 10	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50 - 60	10.1 - 16	< 0.3	2.01 - 10	201 - 5.0
Thyolo area/Mulanje area	Mchuwa	6.01 - 7.0	> 40	> 180	5.0 - 10	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50 - 60	> 16	< 0.3	2.01 - 10	201 - 5.0
Thyolo area/Mulanje area	Nkando	5.51 - 6.0	> 40	150.1 - 180	< 5.0	< 0.1	1.5 - 2.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
Zomba / Phalombe area	Chinamwali	5.0 - 5.5	30.1 - 40	< 90	< 5.0	< 0.1	1.5 - 2.5	< 8.0	30 - 50	8.0 - 10	< 0.3	1.51 - 2.0	201 - 5.0
Zomba / Phalombe area	Chimoka	6.01 - 7.0	> 40	90 - 120	5.0 - 10	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	2.01 - 10	201 - 5.0
Zomba / Phalombe area	Jali	5.51 - 6.0	30.1 - 40	120.1 - 150	< 5.0	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50 - 60	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
Zomba / Phalombe area	Malosa	6.01 - 7.0	30.1 - 40	< 90	5.0 - 10	< 0.1	< 1.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	1.51 - 2.0	201 - 5.0
Zomba / Phalombe area	Mayaka	6.01 - 7.0	20.1 - 30	120.1 - 150	< 5.0	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50.1 - 70	> 16	< 0.3	2.01 - 10	201 - 5.0
Zomba / Phalombe area	Mkulumbuzi	5.51 - 6.0	> 40	90 - 120	< 5.0	0.1 - 0.2	1.5 - 2.5	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	2.01 - 10	201 - 5.0
Zomba / Phalombe area	Mgeru	6.01 - 7.0	20.1 - 30	120.1 - 150	< 5.0	< 0.1	1.5	8.0 - 15	50.1 - 70	> 16	< 0.3	1.0 - 1.5	201 - 5.0
Zomba / Phalombe area	Milepa	6.01 - 7.0	30.1 - 40	120.1 - 150	< 5.0	< 0.1	1.5 - 2.5	8.0 - 15	50.1 - 70	> 16	< 0.3	1.51 - 2.0	201 - 5.0
Zomba / Phalombe area	Thondwe	5.51 - 6.0	30.1 - 40	< 90	< 5.0	0.1 - 0.2	2.51 - 3.0	8.0 - 15	50.1 - 70	10.1 - 16	< 0.3	2.01 - 10	201 - 5.0

KEY
VERY HIGH
HIGH
OPTIMUM
LOW
VERY LOW

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FSU Overview

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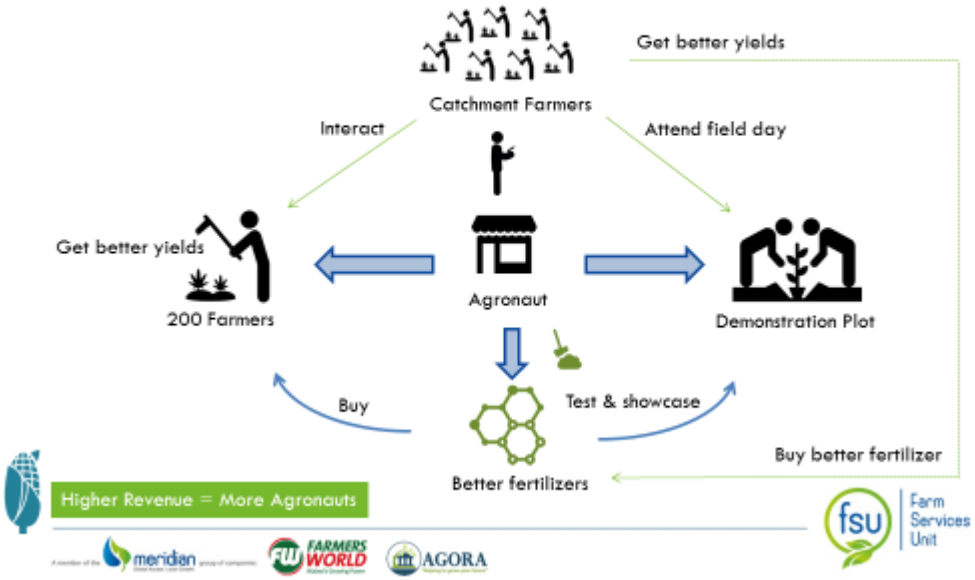
How does the FSU model work?



What is an Agronaut?

FSU Reach Smallholders Through Retail Network

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fsu Fertilizer Trials & Blends

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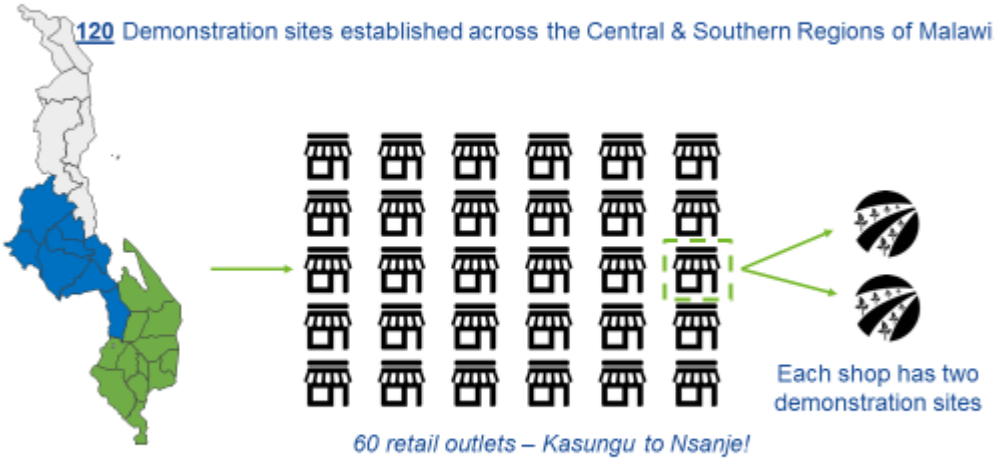
Demonstration Plot Locations (2017-18)

120 Demonstration sites established across the Central & Southern Regions of Malawi.



60 retail outlets – Kasungu to Nsanje!

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Our Customized Blends

Mwininthaka

"Owners of the soil"

Maize	Soybean	Groundnuts	Sweet Potato
Basal 15:23:16 + 6S + 0.5Zn + 0.3B	Basal 6:20:24	Basal 6:20:24	Basal 10:20:20 + 6S
Top Dressing 30:0:16			Top Dressing 25:0:27

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Fertilizer Treatments

Each crop is demoed under 4 treatments for an extensive control test analysis.

MAIZE

	Plot 1	Plot 2	Plot 3	Plot 4
	MH 26 No Fertilizer	MH26 23:21:0+4s + 46% N	MH26 15:23:16 + 6S + 30:0:16 + Lime	MH26 15:23:16 + 6S + 30:0:16 + Lime
Yield Target (/Ha)		3MT	3MT	6MT
Basal Rate (/Ha)		150KG	175KG	350KG
Top Rate (/Ha)		100KG	150KG	300KG

SOYBEANS

	Plot 1	Plot 2	Plot 3	Plot 4
	Tikolore No Fertilizer	Tikolore 6:20:24	Tikolore 6:20:24 + Lime	Tikolore 6:20:24 Lime
Yield Target (/Ha)		1.5MT	1.5MT	2.5MT
Basal Rate (/Ha)		150KG	150KG	250KG
Top Rate (/Ha)		-	-	-

GROUNDNUTS

	Plot 1	Plot 2	Plot 3	Plot 4
	CG7 No Fertilizer	CG7 6:20:24	CG7 6:20:24 + Lime	CG7 6:20:24 Lime
Yield Target (/Ha)		1.5MT	1.5MT	2.5MT
Basal Rate (/Ha)		200KG	200KG	300KG
Top Rate (/Ha)		200KG	200KG	100KG

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Maize Yield Results

Fertilizer usage showed statistically significant increase in yields.
Recommended usage of Mwininthaka showed significantly better
yields than government recommendation.

Treatment	Average Yield (MT/Ha)
Plot 1 No Fertilizer	2.47 MT
Plot 2 Govt. Recommendation 3 MT	4.69 MT
Plot 3 FSU - Mwininthaka 3 MT	5.50 MT
Plot 4 FSU - Mwininthaka 6 MT	7.09 MT

In all cases yields exceeded the intended target. This can be attributed to careful agronaut management

Our customized Mwininthaka basal & top dressings performed **18%** better than standard fertilizers

A double application of Mwininthaka led to an additional 29% higher yield

Average calculated after controlling for management and soil conditions. Bowe – Outlier

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Mwininthaka Bag Lineup!

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Zikomo Kwambiri!

For more information, please contact us:

Regional Manager
Kumbukani.Munthali
@farmersworld.net

Coordinator
Caitlin.Shaw@
farmersworld.net

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Annex 2: Speeches

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

OPENING 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

NATIONAL SYMPOSIUM ON THE ROLE OF POLICIES AND REGULATIONS IN STIMULATING PRIVATE SECTOR INVESTMENT IN THE FERTILIZER VALUE CHAIN

Tuesday, 29 May – Sunbird Lilongwe Hotel

The Moderator of the National Symposium, Prof Charles Jumbe;
Our Guest of Honour, Chief Director of Agriculture, Irrigation and Water Development, Dr Yanira Ntupanyama;
The Vice Chancellor of LUANAR, Prof. George Yobe Kanyama-Phiri
All Government Officials from various departments;
The Co-Director of the Alliance for African Partnership, Prof Richard Mkandawire;
The Donor Community represented here;
The Private Sector Representatives;
Development Organisations and Institutions represented here;
The Staff, Students and LUANAR alumni and other members of the Academia;
Members of the Media;
Ladies and Gentlemen.
I welcome all of you to this "**NATIONAL SYMPOSIUM ON THE ROLE OF POLICIES AND REGULATIONS IN STIMULATING PRIVATE SECTOR INVESTMENT IN THE FERTILIZER VALUE CHAIN"**

This Symposium has been 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 (CARD) of the Lilongwe University of Agriculture and Natural Resources (LUANAR) is a member representing the Regional Network of Agricultural Policy and Research Institutes (RENAPRI).

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 CARD is proud to be part of.

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.

This Symposium is expected to stimulate debate on how we can fill the existing knowledge gaps on fertilizer policy and regulatory issues in Malawi and Africa in general, more especially on the importance of fertilizer markets for African agricultural development.

This Symposium is coming at the right time when there is high demand for evidence-based policy formulation. It is through for a like these where the evidence is presented and put to test if it is worthy the salt.

The Symposium also augurs well with CARD's four core mandates of Research, Consultancy, Training and Outreach. This activity mostly falls under the Research and Outreach pillars of the Centre.

Our Guest of Honour, VC, ladies and gentlemen, I would therefore like to encourage to actively participate in these deliberations. Your contribution will be vital in improving the Fertilizer industry operating space.

I would like to thank our Guest of Honour … and our Vice Chancellor (Prof. George YobeKanyama-Phiri) for accepting to grace this symposium. We are not taking this for granted. We know how busy your offices are but you still chose to honour us with your presence. Thank you for this.

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.

To everyone, thank you very much for honouring our invitations. Without you, our dear audience, we wouldn't call this a symposium. Thank you very much and wishing you a fruitful symposium.

Thank you very much.

Annex 2.2 Remarks by Prof. George Kanyama-Phiri, Vice Chancellor at LUANAR

SPEECH DELIVERED BY THE VICE CHANCELLOR: LILONGWE UNIVERSITY OF AGRICULTURE AND NATURAL RESOURCES (LUANAR) - PROF GEORGE Y. KANYAMA-PHIRI

AT THE NATIONAL SYMPOSIUM ON THE ROLE OF POLICIES AND REGULATIONS IN STIMULATING PRIVATE SECTOR INVESTMENT IN THE FERTILIZER VALUE CHAIN

Tuesday, 29th June 2018 – Sunbird Lilongwe Hotel

The Moderator of the National Symposium, Prof Charles Jumbe;
Our Guest of Honour, Chief Director in the Ministry of Agriculture, Irrigation and Water Development, Mr. Gray Nyandule-Phiri
All Government Officials from various departments;
The Co-Director of the Alliance for African Partnership, Prof Richard Mkandawire;
The Donor Community represented here;
The Private Sector Representatives;
Development Organisations and Institutions represented here;
The Acting Director of CARD, Dr Thabbie Chilongo;
The Staff, Students and LUANAR alumni and other members of the Academia;
Members of the Media;
Ladies and Gentlemen.

I am humbled this morning on this occasion to be Guest Speaker during the opening session of the National Symposium on: "**The Role of Policies and Regulations in Stimulating Private Sector Investment in the Fertilizer Value Chain**".

Ladies and gentlemen, the Centre for Agricultural Research and Development (CARD) at Lilongwe University of Agriculture and Natural Resources (LUANAR) joined a research consortium called "**Partnership for Enabling Market Environments for Fertilizer in Africa ((PEMEFA)**" as a representative of the Regional Network of Agricultural Policy Research Institutes (ReNAPRI-Africa). Other members are 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). PEMEFA is implementing a project to support 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 in order to increase private sector participation in these markets, thereby improving the availability, accessibility and incentives to use fertilizers by smallholder farmers in sub-Saharan Africa. PEMEFA intends to implement the following actions:

1. Generating empirical evidence to inform policy and regulatory changes;
2. Guiding capacity to generate and use that evidence to improve fertilizer policies and regulations;
3. Engaging policymakers and other stakeholders via sustained dialog and outreach; and,
4. Monitoring and assessing the impact of policy and regulatory changes on private sector investment, smallholder access to fertilizer and other income.

Ladies and gentlemen, while fertiliser investments remain crucial to the development of the agriculture sector, other important investments have also to be made, particularly those that would complement the fertiliser investments, such as addressing depletion of soil nutrients due to soil erosion, addressing continuous mono-cropping and other inappropriate farming practices, as addressing use of low quantities and quality of fertilizers. I am delighted to see that the draft National Fertilizer Policy addresses these complementary investments.

Achieving sustainable economic growth for our nation, ladies and gentlemen, is a principal policy goal for virtually all African Governments and development organizations. Many African Governments including Malawi are seeking close guidance from reputable teams of international and African analysts. Through high-quality research, innovative outreach approaches, and sustained policy discussions led by on-the-ground local teams, the Symposium is aimed at contributing to sustainable economic productivity in sub-Saharan Africa and Malawi is no

exception. Improving the agricultural enabling environment is of paramount importance in achieving sustainable productivity growth not only in Malawi, but also in the entire Africa region.

Ladies and Gentlemen, developing and implementing policies and regulations to stimulate the private sector investment in the fertilizer value chain is of paramount importance. Again, finding sustainable solutions to the declining soil fertility heavily affected by climate change that leads to low agricultural productivity, will go a long way to achieve sustainable economic development of the country.
During this Symposium, Ladies and Gentlemen, the Government of Malawi, the Private Sector and Non-Governmental Organisations shall share with participants some of the policies and procedures which would stimulate private investments in the fertilizer chain value. Thank you that you will actively participate and make contributions as necessary.

I want to thank the Michigan State University (MSU) through the Alliance for African Partnership (AAP) for providing research awards to promote collaborations with African partners and institutions to develop capacity for conducting international research for MSU researchers and African partners and promote scholarly findings.
May I commend CARD's technical team for deciding to invite various speakers to share their experiences on this very important topic so identify areas for their research to ensure that our farmers have access to inorganic fertilizers timely and in the right quantity and quality. I strongly believe that CARD will continue to collaborate with other international institutions in future and that it will also continue to spearhead research engagements for the benefit of not only LUANAR, but our nation Malawi, as a whole.
With these few remarks, Ladies and Gentlemen, I welcome you all to the National Symposium on Fertilizer.

Thank you for your audience and God bless you all!

Annex 2.3 Official Opening by the Guest of Honour, Dr. Yanira Mtupanyama, Chief Director at MoAIWD

GOVE

SPEECH BY THE

CHIEF DIRECTOR OF AGRICULTURE IRRIGATION AND

WATER DEVELOPMENT

DR. YANIRA NTUPANYAMA

AT THE

NATIONAL SYMPOSIUM ON FERTILIZER

AT SUNBIRD LILONGWE HOTEL, LILONGWE, MALAWI

29TH MAY 2018

- The Moderator, Professor Charles Jumbe who is the Principal Investigator and Convener for this symposium.
- The Vice Chancellor of the Lilongwe University of Agriculture and Natural Resources, Professor George Kanyama-Phiri.
- The Acting Director for the Centre for Agricultural Research and Development, Dr Thabbie Chilongo.
- The Co-Director of the Alliance for African Partnership who is also the Chairperson for the National Planning Commission, Prof Richard Mkandawire.
- The Chief of Party of New Alliance Policy Acceleration Support Project: Malawi Dr Flora Nankhuni.
- All Government Officials present here.

- The Development Community represented here.
- The Private Sector Representatives.
- Development Organizations including NGOs and other Institutions represented here;
- Representative of Farmer and Civil Society Organizations.
- Research and Academic Institutions.
- Members of the media.
- Distinguished Guests, Ladies and Gentlemen.

Good morning! Moni Nonse!

It gives me great pleasure to stand before you today and preside over the opening session of the **National Symposium on the Role of Policies and Regulations in Stimulating Private Sector Investment in the Fertilizer Value Chain**.

Ladies and Gentlemen, improving access to inorganic fertilizers has remained central to government of Malawi since the introduction of the introduction of starter-pack program in 2005 to the present Farm Inputs Subsidy Program (FISP) a long-term agricultural development strategy for boosting agricultural production. As you are aware, my Ministry has just drafted the National Fertilizer Policy through the **New Alliance Policy Acceleration Support Project (NAPAS-Malawi)** and championed by the Director of Agricultural Research Services (DARS) here, Dr. Wilkison Makumba with facilitation and expertise from Dr Flora Nankhuni. This symposium has therefore come at the right time as we are finalizing this National Fertilizer Policy and I am sure that the deliberations at this symposium will be an input into the National Fertilizer Policy.

Ladies and Gentlemen, The State President Professor, Professor Arthur Peter Mutharika recognises the role the agriculture sector plays in the economic development of the country. It is for this reason that, for the past twelve years, the government has consistently allocated more than 10 percent of the annual national budget to agriculture, with a lions' share being allocated to support farmers to access fertilizer through the Farm Input Subsidy Programme (FISP). I am pleased to inform you that through this program, fertiliser use by smallholder farmers has increased from less than 10 kg/ha in 2006 cropping season to 55.8 kg/ha in 2016/17 season. I am also proud to report that the rate of fertilizer uptake is considered to be among the highest in Africa and surpassing the target of 50 kg/ha adopted in the 2006 Abuja Declaration. This investment by Malawi has been has catalysed an increase in productivity of maize from 0.8 t/ha in 2005/06 seasons to 2.0 t/ha in 2016/17 seasons, doubling the harvest albeit fluctuations in performance owing to weather.

Ladies and gentlemen, while fertiliser investments remain crucial to the development of the agriculture sector, other important investments also have to be made, particularly those that would complement the fertiliser investments, such as addressing depletion of soil nutrients due to soil erosion, addressing continuous mono-cropping and other inappropriate farming practices, like COVAMS addressing use of low quantities and quality of fertilizers. The draft National Fertilizer Policy promotes the use of other complementary interventions and

technologies to make the fertilizer more profitable. It is gratifying to learn that many development organizations in the agricultural sector are already promoting these complementary technologies. I commend these organizations for supporting Malawi Government's efforts for enhancing agricultural productivity especially for smallholder farmers. We need to roll out these technologies that improve (increase) soil fertility with minimal fertilizer application.

I am informed that this National Symposium has invited eminent people in the agricultural sector to discuss how to stimulate private sector investment in the fertilizer chain. As you are aware, smallholder farmers continue to face significant constraints to accessing high-quality fertiliser products from the markets. Government looks up to the private sector as a partner in achieving government's long-term goal of enhancing farmers access to high-quality fertilisers through commercial channels while the Government will continue to support smallholder farmers through a reformed fertiliser subsidy programme and implementing a new innovative loan-based fertiliser programmes that integrate the private sector to encourage the development of the commercial fertiliser industry.

Ladies and Gentlemen, increasing the private sector investment in enhancing access to and use of quality fertilisers in a profitable manner by our smallholder farmers is a principal focus in the fertilizer value chain. As you may be aware, the Ministry recognizes our farmers grow different crops on soils that have different nutrient deficiencies. If farmers are to increase the productivity of these crops, there is need to support the private sector investment in fertilizer blending and packaging. I therefore call upon the private sector to tap onto this opportunity to invest in blending fertilizers to produce fertilizer blends that can be accessed by our farmers to boost their yields. If we can achieve this, it will contribute to increased sustainable agricultural production and productivity, a key priority area under the National Agriculture Policy (NAP).

Further, the private sector investment in fertilizer value chain will also facilitate reforms of various institutions, organisations, public and private entities to be engaged in the fertiliser industry of Malawi. If properly structured and funded, such investments will help to remove some of the inefficiencies that are associated with the current underfunded system.

Distinguished Guests, Ladies and Gentlemen, let us seize this opportunity to provide our inputs that will inform our National Fertilizer Policy, as I am sure you can see how important this symposium is. As a country, we need policies and regulatory frameworks that can unlock private sector investments in the fertilizer value chain. It is my hope that the deliberations from this symposium will highlight areas that need to be considered for improving the availability, accessibility and incentives to use fertilizers by smallholder farmers. I therefore invite you to actively engage in all the sessions of the symposium. Your contributions, wherever possible, will enrich the discussions in this Symposium.

Let me take this opportunity to thank the USA Government through Michigan State University and Alliance for African Partnership for the support rendered in providing resources that has made it possible for conducting collaborative research between American and African researchers. Many thanks should go to the Lilongwe University of Agriculture and Natural Resources (LUANAR) through the Centre for Agricultural Research and

Development (CARD) for undertaking this research and organizing this symposium. I challenge LUANAR and its constituents to establish a regular platform through which research findings should be shared among various stakeholders to inform policy decisions as well as develop strategies for addressing challenges affecting the agricultural sector.

I will be failing if I did not thank Dr Flora Nankhuni for taking lead in drafting of not only the National Fertilizer Policy but most of the policies being launched now in our sector. We are grateful for your expertise and undivided attention to the gaps in our policies.

With these remarks, it is now my singular honour and privilege to declare the **National Symposium on the Role of Policies and Regulations in Stimulating Private Sector Investment in the Fertilizer Value Chain** officially opened.

Thank you for your attention and God Bless you all.

Annex 3: Workshop Programme and Participants

Annex 3.1 Workshop Programme

National Symposium on Fertilizer **Theme**: *The Role of Policies & Regulations in Stimulating Private Sector Investment in the Fertilizer Value Chain* **Tuesday, 29th May 2018 – Sunbird Lilongwe Hotel, MALAWI** FINAL PROGRAMME		
Time	**Activity**	**Responsibility**
Session I: Opening **Chair: Prof C. Jumbe; Rapporteur: Mr. Stevier Kaiyatsa**		
08:00	Registration of Participants	Ms. Mary Ngwira
08:30-09:00	Welcome Remarks and Self Introductions	Prof Charles Jumbe
	Opening Remarks	Dr. Thabbie Chilongo
	Remarks by the Vice Chancellor (LUANAR)	Prof George Kanyama-Phiri, VC-LUANAR
	Official Opening- Ministry of Agriculture, Irrigation and Water Development (MoAIWD)	Dr. Yanira Mtupanyama-PS
09:00-09:30	**Health Break**	
Session II: MSU/AAP/PAMEFA: **Chair: Dr. Dominic Nkhoma; Rapporteur: Mr. Joseph Kanyamuka**		
09:30-10:15	The Changing Partnership Architecture in Driving Agricultural Transformation in Africa-MSU/AAP	Prof Richard Mkandawire
	Background of PEMEFA & Preliminary Research Findings	Prof Charles Jumbe & Stevier Kaiyatsa
	Discussions: Questions and Answers	Participants
Session III: Policies and Regulatory Frameworks **Chair: Dr. Flora Nankhuni; Rapporteur: Mr. Stevier Kaiyatsa**		
10:15-11:45	The National Fertilizer Policy: Niche for the Private sector investment	Mr. Joseph Kanyamuka/Dr. F. Nankhuni-NAPAS/MoAIWD
	Fertilizer Quality and Standards	Mr. Willie Muyila-MBS
	Fertilizer import regulations and procedures	Tawonga Munthali -MOIT
	Incentives for private investments in the fertilizer industry	Mr. Noel Lihiku-MITC
	The role of private sector in the fertilizer value chain: The Case for Blended Fertilizer for Malawi.	Caitlin Shaw- Farm Services Unit- Farmers World
	Discussions: Questions and Answers	Participants
Session IV: Group Discussions (Prof Charles Jumbe)		
11:45-12:15	**Groups:** ➢ **Group 1:** How do we stimulate the involvement of the private sector in the fertilizer value chain? ➢ **Group 2:** How can we make the private sector to become a vehicle for enhancing timely access to fertilizer by farmers in right quantities and quality? ➢ **Group 3:** What policies/regulations/ strategies need to be put in place (or modified, developed or implemented) to stimulate the private sector investment in the fertilizer value chain?	Participants
Session V: Feedback from Group Discussions **Chair: Mr. Readwell Musopole; Rapporteur: Mr. Joseph Kanyamuka**		
12:15-12:45	Plenary: ➢ Report back from groups	Participants
Session VI: Closing		

Chair: Professor Jumbe; Rapporteur: Mr. Stevier Kaiyatsa	
12:45-13.00	Remarks by the Private Sector Representative: Mr. Charles Govati- Agricultural Resources Limited
	Remarks by Farmer representative Mr. Collings Bondo-Moyo Foundation
	Remarks by Agro-dealer representative Mrs M. Malobe- RUMARK
	Closing Remarks by Dr Thabbie Chilongo, CARD Director
13:00	**Lunch and Departure**

Annex 3.2 List of Participants

	NAME	Organisation	Position
	Stanley Zibophe	LUANAR	Student
	Jonas Chatsika	LUANAR	Student
	Ipyana Mwangomba	LUANAR	Student
	Davie Makavalo	LUANAR	Student
	Michael Mwale	CARD Actalliance	Irrigation Officer
	R. Khataza	LUANAR	Lecturer
	Kumbukani Munthali	Farmers World	Regional Manager
	Collins Bondo	Moyo Foundation	Project Officer
	Deyo Kamwaza		Farmer
	Charles Govati	Agricultural Resources Limited	Market and Development Officer
	Andrea Gondwe Mjuma	LUANAR	Student
	Morut martin Isyagi	Press Agriculture	CEO
	Willy Muyila	Malawi Bureau of Standards	Deputy Director General
	G.M. Chapola	RUMARK	MD
	Davie Ngoma Mussah		Agro-dealer
	Brian Ntakati	ADSA	Deputy Director
	Dominic Nkhoma	MoAIWD	Chief Economist
	M.C. Marobe	RUMARK	MD
	Elizabeth Sibale	Ag Div	Deputy Chief Party
	Dorothy Chisusu	LUANAR/AAP	Intern
	Caitlin Shaw	Farmers World	Coordinator
	Jacob Nyirongo	FUM	Director of Program Development
	Ian Nankhuni	Mituka Seed	Director
	Flora Nankhuni	MSU-NAPAS	Chief of Party
	B. Mwaibasa	RAB Processors	Manager
	Fredda Nyirenda	MITC-OSSC	Tax Specialist
	Patricia Kaupa	MITC	Senior Investment Officer
	Joseph Kanyamuka	NAPAS-Malawi	Research Analyst
	Isaac Jali	MBC	Reports
	A.N. Kalinde	SFFRFM	CEO
	George Keffa	European Union	Programme Manager
	Maurice Shines	USAID	Deputy Director - Agriculture
	Abel Chiwatakwenda	LUANAR	Head ESM
	Victor Mponda	MoAIWD-New Alliance	Coordinator
	Janet Matemba	Sakata Trading	Agro-dealer
	Fatsani Gunya	The Nation	Journalist
	Tawonga Munthali	Ministry of Industry and Trade	Principal Trade Officer
	Ruth Keffa	MBC	Reporter
	Violet Mtaza	CISANET	Program Officer
	Noel Sangole	AGRA	Deputy Country Coordinator
	Dinnah Kapiza	Tisaiwale Trading	CEO
	Benjamin Chisama	DARS	Technology Dissemination Coordinator
	Brahms Swanepoel	Farmers World	
	Harvey Phiri	Agro-dealer	
	Prof. Richard Mkandawire	Alliance for African Partnership	Co-Director
	Prof. Charles Jumbe	CARD-LUANAR	Principal Investigator
	Stevier Kaiyatsa	Ministry of Finance, Economic Planning and Development	Economist