The African Fertilizer Volunteers Program

PARTNER. BUILD. CHANGE.

Developing Small and Medium Enterprises to support farmer livelihoods in Africa

Stories from the field
The private sector is key to developing strong fertilizer value chains. A good example of its role is evidenced in the African Fertilizer Volunteers Program (AFVP), a collaborative initiative with the International Fertilizer Industry Association (IFA), now in its third year of operation. To date, companies have invested their time and more importantly their expertise in various professions to train agro dealers and farmers on fertilizers correct and efficient use in addition to good agronomic practices. Furthermore, the AFVP has also helped build the capacity of agricultural extension service providers – an important link to the end users (the farmers) of inputs – especially fertilizers.

I would like to pay tribute to companies and volunteers from AFAP’s private sector partners in South Africa and globally who have participated in this program, thereby endorsing its ideals of knowledge generation and sharing, skills exchange and mentorship.

AFAP is pleased to profile the work of the AFVP through some agro dealers and farmer success stories across Africa as detailed in this booklet. I invite you to read and share your comments and suggestions in expanding and enriching the program.

Jason Scarpone
Chief Executive Officer and President, AFAP
It works to establish more competitive and sustainable fertilizer markets in Africa and to contribute to an African Green Revolution. AFAP unites the expertise and dedication of the public and private sectors to increase fertilizer affordability and accessibility for African smallholder farmers. Using an innovative partnership contract, AFAP joins industry and development interests to inspire productivity, food security and prosperity in Africa. It builds on the work of the Comprehensive Africa Agriculture Development Programme (CAADP), a framework for achieving ambitious agricultural development goals set in place by African nations and leaders.

**Vision**

AFAP’s vision is to be a mechanism for AFAP Partners to engage the private sector in the development of competitive and sustainable fertilizer markets in Africa capable of providing African smallholder farmers with the incentive, initiative and capability to source and use fertilizer to improve crop production, reduce food insecurity and increase rural incomes.

**Mission**

AFAP’s mission is to reduce food insecurity and rural poverty by providing fertilizer market development assistance directly to and through the private sector in a manner that reduces costs for small holder farmers to accelerate fertilizer usage so as to increase crop production and income.
The International Fertilizer Association (IFA) is the only trade association representing the global fertilizer industry. This industry provides the crop nutrients that allow farmers to meet the world’s growing food, feed, fiber and bioenergy needs in a sustainable manner.

IFA member companies represent all activities related to the production and distribution of every type of fertilizer, their raw materials and intermediates. IFA’s membership also includes organizations involved in agronomic research and training. IFA has some 550 members in about 86 countries.

**IFA’s Mission:**

IFA promotes the efficient and responsible production, distribution and use of plant nutrients;

**IFA’s Vision:**

Productive and sustainable agricultural systems contribute to a world free of hunger and malnutrition;

**IFA’s Approach:**

IFA provides a framework for exchanges and collaboration among its members on areas of common interest, and a structure for agreeing on common positions and joint actions.
Services to Members:

- **STATISTICS & MARKET INTELLIGENCE:**
  Authoritative, comprehensive information about the industry and fertilizer markets is the basis of robust competition on the open market, trade and appropriate policies. The information provided through IFA’s statistics and analyses are critical for the industry and policymakers alike.

- **BUSINESS NETWORKING:**
  Peer-to-peer contacts remain fundamentally important for the industry’s business operations and robust competition. Networking also facilitates the exchange of best practices to drive improved performance. IFA provides open forums for networking and the exchange of knowledge and expertise.

- **BENCHMARKING & BEST PRACTICES**
  Continuous improvement is critical for the sustainable production, distribution and use of fertilizers. IFA is uniquely placed to promote best practices throughout the fertilizer value chain and to foster improvement in the industry’s own performance through benchmarking. IFA thus proposes to its members a voluntary certification called “Protect & Sustain” recognizing Members’ performance in their Safety, Health & Environmental (SHE) management.

- **INTERNATIONAL ENGAGEMENT & REPUTATION BUILDING**
  International institutions and initiatives address issues that can directly or indirectly pertain to fertilizer production, distribution and use. IFA engages with relevant agricultural, scientific and policy forums and stakeholders to gain insight into diverse viewpoints and to share the industry’s perspectives. One of IFA’s important roles is also the promotion of nutrient stewardship, i.e. the efficient planning and management of plant nutrients. IFA therefore communicates extensively on best practices and brings its support to projects and programmes that diffuse nutrient stewardship all around the world.

The Association cooperates actively with:

- Consultative Group on International Agricultural Research (CGIAR),
- Organisation for Economic Co-operation and Development (OECD),
- United Nations Environment Programme (UNEP),
- The Food and Agriculture Organisation (FAO) and the World Farmers Organisation (WFO)
The aim of this program is to transfer knowledge, build technical skills and provide management support solutions via mentoring, coaching and training to small and medium-sized enterprises (SMEs) and government organizations by high level technical volunteers from the corporate sector with a view to increasing fertilizer users and usage in Africa.

The AFVP provides a great opportunity for both retired practitioners and professionals engaged in the industry to lend a hand in building a vibrant sustainable fertilizer value chain in African countries by sharing knowledge and expertise and also experience the diversity of cultures and understand the challenges that exist.

More specifically the AFVP is intended to achieve the following objectives:

1. To mobilize expertise in support of AFAP goals of increasing smallholder fertilizer users and usage.
2. To provide a mechanism in channelling targeted capacity support across the fertilizer development value chain in Africa.
3. To strengthen the relationship between AFAP and IFA and its constituents.
4. To facilitate South to South and North to South cooperation mutual learning, and exchange of services in the fertilizer development sector in Africa.

Through the training there is consistency in the fertilizer value chain service delivery, management and the provision of greater effectiveness in resource management. Employees gain valuable and stimulating experience in new and developing markets. In addition, the program demonstrates private sector impact of the volunteer contribution to corporate social responsibility in line with their mandate, capabilities and experience.

All volunteering assignments are based on the principle of people-centred skills sharing development, committed volunteers working alongside committed local people. The African Fertilizer Volunteers come from a wide range of backgrounds and can share their expertise in project development and financing, project management, business management and planning, plant design, safety, health and environment in production, quality assurance, soil science, manufacturing, logistics, distribution and marketing.

By supporting the AFVP, organizations will be investing in a sustainable program as the AFVP works in under resourced, poor areas with high unemployment rates across Africa. The program supports local SMEs and government organizations with fundamental business and agricultural skills to increase food security and to transform the lives of thousands of smallholder farmers by uplifting them from subsistence farming to commercial agriculture through the sustainable use of fertilizer and best agricultural practices. All investments are guaranteed to be developed into projects with long term sustainability.

Should your organization be interested in sending a volunteer or would prefer to contribute financially to cover the deployment of volunteers to assignments (accommodation, return flights, living allowance), contact Sandra Pires, Regional Business Development Manager - East and Southern Africa on email: spires@afap-partnership.org
The AFVP program facilitated the recruitment and deployment of a volunteer, Pieter Haumann to provide support in training trainers, mentors and farm extension personnel for the Productivity Improvement Project for Smallholders (PIPS) project in Central Malawi.

A total of 40 personnel were trained in March 2016 which included managers and team leaders from Farmers World, a partner in the PIPS project. The trained extension personnel will in turn train farmers on the technical knowledge of fertilizers and their safe use.

A handbook for fertilizer use and crop production in Malawi was developed prior to the training and this manual was used to conduct the training of the trainers. The purpose of the training was to enable extension officers to identify and remedy certain potential physical and chemical problems in crop production soils of smallholder farmers in the PIPS project.

Two tests were conducted during the training. At the end of the training, participants took a “final” examination. The examination points gained by the candidates were used to determine the final group of managers and extension officers to be appointed. Each trained extension officer is expected to service up to 200 farmers with a crop production advisory service. Ultimately, it is expected that over 6,000 smallholder farmers in Central Malawi will receive valuable crop production advisory services and help them increase their productivity.
Thirty recently trained extension workers, armed with agronomy degrees and android phones, are dipping into the soil, scooping up samples, locking up their GPSes and shooting their soil analyses straight into the cloud.

In a lab 12 000 kilometers away at New York’s Columbia University, researchers are using that data, through a new soil testing technology called SoilDoc, to map the soil landscape of a country that’s been relying on soil analyses that are more than 30 years old.

This is an initiative that could change how Malawi farms. And it is all part of a partnership between AFAP and Malawi’s Farmers World – which operates 100 stores across the country – along with the support of AFVP, the small volunteer organization with big ambitions.

In addition, to the soil mapping, those extension workers will reach an estimated 6 000 smallholder farmers over the next three years in a knowledge sharing project.

The extension workers have been deployed to the 30 Farmers World stores located in Central Malawi, with plans for each to reach out to 200 farmers in their area. Farmers will be informed on better crop practices and the use of fertilizer and will get advice on improved technologies and sharing information about the agricultural space including accessing markets.

“A technological revolution is unfolding on smallholder farms across Central Malawi, thanks to the efforts of a Fertilizer Volunteer.”

Dr Pieter Haumann.
Thanks to the African Fertilizer and Agribusiness Partnership (AFAP), which through a Memorandum of Understanding (MoU) with MASA, has catalyzed a process establishing a functional fertilizer extension system that will support the management and proper use of fertilizers for smallholders on the scheme. RBL manages the 70,000 ha irrigation scheme of which 10,000 ha are cultivated by smallholder farmers who are growing rice, beans, potatoes and vegetables. The scheme is supporting 8,200 families, a majority of whom are women.

Under the MoU, Government Extension Officers in the Irrigation Scheme participated in a five-day Training of Trainers (ToT) during which they learnt about principles of fertilizer management, balanced and efficient fertilization, extension methods and practices related to fertilizer use.

The training was held in Xai-Xai, Gaza Province and brought together 10 government extension staff, mainly agronomists working for RBL. The training was under the African Fertilizer Volunteers Program (AFVP) was conducted by volunteer, Dr. Thomas W. Crawford Jr, a consultant with the Global Agronomy, LLC of Arizona, USA in collaboration with Mr. Sergio Ussaca, AFAP Country Director for Mozambique. Prior to commencement of the training, Dr. Crawford developed a training manual for the Training of Trainers (ToT) sessions to guide participants through the selected topics.

This was followed by presentations on various topics by Dr. Crawford including: Principles of management of

Regadio de Baixo Limpopo (RBL) Extension Officers get training boost

The lives of thousands of smallholder farmers involved in the Agricultural Technologies Transfer Program of Regadio de Baixo Limpopo (RBL) EP (Low Limpopo Irrigation Scheme), a public company under the Ministry of Agriculture and Food Security (MASA) of Mozambique will never be the same.

Top: Government Extension Officers (Agronomists), participating in the AFAP training in Xai-Xai, Mozambique, April/May 2016. Also in the picture are RBL PCA/Chairman Armando M. Ussivane, RBL Director of Operations Rogério Manhaussele, AFAP Country Director for Mozambique Sergio Ussaca and Volunteer Trainer, Mr. Thomas Crawford.
fertilisation and practical application fertilization principles; Balanced and efficient fertilization; Methods and practices related to principles of extension; and Conduct of field demonstrations of fertilizers to create demand.

After the training session, trainees visited an agrodealership, – Agro Sumbunuca - belonging to Mr. Oldemiro Nhantumbo in Bairo Chinunguine, Xai-Xai, where they ask questions based on what they had learned.

The training culminated in a field day which gave the trainees a glimpse of fertilizer trials of rice in the reproductive phase of growth. The field day was also attended by smallholder farmers in the Regadio do Baixo Limpopo area, near Xai-Xai. During the field day, Sergio Ussaca explained the use of a fertilizer briquette applicator tool to the participants.

Next Steps

AFAP, in collaboration with Greenbelt Fertilizers, is facilitating hands-on training in field techniques of conducting soil samples. This follows a request by the trainees for support in having a soil, water and plant testing laboratory in the area. RBL will develop a concept note for consideration by donors for possible support in build the laboratory. By providing timely and affordable analyses and recommendations in the RBL and surrounding crop production areas, a soil, water and plant testing laboratory will enable more efficient and profitable use of fertilizers and water resources by farmers.

“The scheme is supporting 8,200 families, a majority of whom are women.”

1. Sergio Ussaca, AFAP Country Director, Mozambique, addressing trainees in Xai-Xai, Mozambique at the start of the Training of Trainers (ToT) Training for Government Extension Staff.

2. Dr. Thomas Crawford instructing AFAP training during one of the sessions, Xai-Xai, Mozambique.

3-4. Oldemiro Nhantumbo, owner of Agro Sumbunuca agrodealership and Sergio Ussaca answer questions during the AFAP trainees visit to Agro Sumbunuca agrodealership in Chongoene near Xai-Xai.

5. Sergio Ussaca explains the use a fertilizer briquette applicator at the field day at Regadio do Baixo Limpopo near Xai-Xai.
Agribusiness support to the Limpopo Province (ASLP)

Smallholder agricultural production and productivity in South Africa remains constrained by a number of challenges. These challenges include inter alia long distances to markets and other services resulting in heavy transportation costs, limited poor access to agricultural technologies, information, credit and financing opportunities. These challenges result in limited use of agricultural inputs. The result is a situation where smallholder rural farmers are not able to secure sustainable livelihoods.

AFAP in collaboration with Agricultural Market Development Trust (AGMARK) and the FAO are working with the Limpopo Department of Agriculture (LDA) of South Africa on an Agribusiness support initiative to address some of the challenges faced by smallholder farmers in the province.

The project seeks to increase smallholder farmers’ access to agricultural inputs and create rural employment opportunities through increased small and medium rural retailing enterprises. The initiative is aimed at supporting existing efforts by the Limpopo Department of Agriculture to increase smallholder farmers’ production and productivity. The Department of Agriculture has already identified agriculture as the engine of economic growth and a suitable vehicle to improve the socio-economic conditions of the rural population in the province.

Using the hub and spoke model which has been a success in Kenya and Tanzania, the project will be implemented in the Limpopo province, supporting local agribusinesses who serve smallholder farmers in their communities.

The main feature of the hub and spoke model is that few well established large entrepreneurs invest in distribution capabilities in order to service smaller rural entrepreneurs and agents in the rural areas. This expands the rural entrepreneurs’ networks in rural areas ensuring that retailers can access the required inputs from more developed and larger rural entrepreneurs who are based within easy reach or who can organize appropriate means of distribution transport.
Mr. Mudzunga, made the warning at an entrepreneurship development support training program held for smallholder farmers and agro dealers in Limpopo Province and facilitated by Kynoch, a leading fertilizer manufacturer. The training program was part of the African Fertilizer Volunteers Program (AFVP) to raise awareness on the correct and efficient use of fertilizers.

Noting that structurally smallholder farmers have difficulties in accessing inputs, Mr. Mudzunga commended the partnership between AFAP and Kynoch – who have been this business since 1921 – which will help farmers and agrodealers gain knowledge about and access fertilizers.

“It is not that as smallholder farmers you are having challenges because you do not know how to farm, but the biggest issue is knowledge and access to inputs,” Mudzunga said. “As DAFF we have been regulating inputs since 1917 and the reason why we regulate is simple. When farmers buy the products from an agro dealer they want to make sure the product works. True we also want to make sure that the fertilizer that the farmers use will not destroy their soils. As an agro dealer when you sell these products you should have the knowledge about the product.”

Mr. Mudzunga said farmers should buy registered fertilizers which have a registration number on the bag and the name of the manufacturer. A bag of registered fertilizer will have either two numbers starting with K or B which represents the quantity of constituents in the fertilizer. If it is NPK it will normally be K and if it is calcium or boron it will be B.

“Avoid buying fertilizers that you are suspicious of, make sure the fertilizer is coming from a reputable manufacturer. If it some company you do not know or are suspicious of come to our offices to check if the product is registered and we know sometimes people buy fertilizer that has been repackaged. The trouble is that once it is repacked we do not know the manufacturer and do not even know the quality of the fertilizer,” He said, adding that, “Stay away from repacked fertilizer because you will spend lot of money as a farmer or you will spend a lot of money as the agro dealer but if there is something wrong with that fertilizer who will you go to. If you buy a fertilizer that is properly labelled then you know that fertilizer is fine. Do not go for this cheap fertilizer there is no cheap fertilizer. The moment somebody is selling you fertilizer that is cheap and you have a bargain, know you are buying fertilizer that does not work.”

Smallholder farmers should avoid buying fertilizers on the cheap or buying repackaged fertilizers which in many cases they are unable to verify its contents where original labelling does not exist, Jonathan Mudzunga, Fertilizer Registrar, Department of Agriculture, Fisheries and Forestry (DAFF) warned farmers in South Africa.
Private sector in training initiative to improve access to fertilizers to boost food security and enterprise development among smallholder farmers

Smallholder farmers in Limpopo Province - South Africa’s bread basket - are paradoxically confronted with the continuous challenges of raising their productivity to boost food security owing to limited access and low use of fertilizers, a neglected but critical input which can double yields within a single cropping season.

Fertilizers, in addition inputs such as better seed and farming practices, can be a game changer in food security among South Africa’s smallholder farmers who are battling falling harvests and unproductive soils. Research has established that for every kilogram of nutrients smallholder farmers apply to their soils, they can realize up to 30kg in additional products.

“There is a big push at the continental level to enhance agriculture productivity in Africa in line with the Maputo Declaration to increase agricultural productivity and
food security and South Africa is part of that movement,” African Fertilizer and Agribusiness Partnership (AFAP) Vice-President, Prof. Richard Mkandawire, told participants at an entrepreneurship development support training program held for smallholder farmers and agro dealers in Limpopo Province and facilitated by Kynoch, a leading fertilizer manufacturer.

“To grow and support SMEs in Africa is the pathway if we are to reduce hunger and poverty. The future of South Africa is about growing those rural enterprises that will support smallholder farmers and employment creation.”

Despite their high contribution to economic growth and job creation, SME’s are challenged by among other factors, funding and access to finance, according to the 2015/16 Global Entrepreneurship Monitor (GEM) Report. Lack of finance is a major reason for SMEs - which contribute 45 percent to South Africa’s GDP- leaving a business in addition to the poor management skills which are a result of lack of adequate training and education.

The training program is part of the African Fertilizer Volunteers Program (AFVP) run jointly by the International Fertilizer Association (IFA) and AFAP to build the capacity of smallholder farmers on production inputs and their use. In addition, the training program - an Africa-wide initiative - seeks to strengthen emerging agro dealers in the Limpopo Province and develop strong private sector networks along the fertilizer value chain. To date more than 100 agro dealers have been trained in Limpopo Province under the AFVP.

Kynoch Managing Director, Eugene Muller, Regional Head - Fertilizers and Agri Inputs said: “Kynoch, part of the ETG Fertilizer, would like to contribute and play its part in assisting the African continent feed itself by ensuring that smallholder farmers are able to use fertilizers optimally in boosting their yields.”

By using more fertilisers correctly, South Africa’s smallholder farmers can grow more and nutritious food, achieve household food security, create jobs, increase incomes and boost rural development, Prof. Mkandawire said.

Smallholder farmers and agro dealers were trained on basic knowledge about fertilisers, soils, plant nutrients, safe storage of fertilizers, environmental safety and business management skills.

Agriculturalist and trainer at Kynoch, Schalk Grobbelaar said smallholder farmers in Limpopo are applying fertilizers randomly because they lack knowledge on their correct usage.

“Fertilizer increase yields. We fertilize what crops will take away and we put back into the soil but farmers lack knowledge on the balancing fertilizers according to what crops need,” said Grobbelaar.

High transaction costs throughout Africa are one of several barriers to smallholder farmers accessing and using fertilizers, a situation AFAP is working to change through facilitating Private Public Partnerships (PPPs) models which including developing effective fertiliser markets and providing credit guarantee facilities for agro dealers.
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