



# STRENGTHENING DELIVERY SYSTEMS FOR SEED AND FERTILIZER TECHNOLOGIES

**Impact Stories from AGRA's work in Malawi**

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Authors: Dr. Felix Lombe, Driana Lwanda,  
Godfrey Pumbwa, Peter Nahuwo, Oscar Ulii

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# Contents

<b>Contents</b> .....	<b>3</b>
<b>Chapter 1: Introduction</b> .....	<b>4</b>
<b>Chapter 2: Impact Stories</b> .....	<b>5</b>
<b>2.1 Strengthening Seed Technology Delivery Systems</b> .....	<b>5</b>
Reaping the Fruits of Improved Seed Systems .....	5
VBAs Accelerate Adoption of Improved Agricultural Technologies.....	7
<b>2.2 Strengthening Input Distribution and Technologies</b> .....	<b>11</b>
The Village Savings and Loans Association (VSLAs) Enhance Access to Inputs.....	11
Chilewo Traders Increase Sales and Revenues Through Community Input Promotions .....	12
CAAs Play a Vital Role Assisting Farmers in VSLA Groups to Access Improved Inputs .....	14
Community Agribusiness Advisors (CAAs) for Improved Inputs Distribution and Farmer Organizations .....	16
Transformation of VSLAs through record-keeping .....	18
<b>2.3 Strengthening Public, Private Sector Engagement and Extension Services</b> .....	<b>19</b>
Private Sector Participation Scales up Crop Production in Districts .....	19
Public Private Partnerships Key to Development and Commercialization of Soil Health Technologies: The Case for New Area Specific Fertilizer Blends in Malawi .....	21
Creating Demand Through Private Extension Workers .....	22
Youths Embrace the VBA Model to Provide Agricultural Products and Services for Communities .....	25
<b>2.4 Strengthening Fertilizer Technology Delivery Systems</b> .....	<b>26</b>
Increasing Crop Productivity Through the Composition of Inorganic and Organic Manure .....	26



# Chapter 1: Introduction

Malawi's economic growth is highly dependent on agriculture. The sector contributes about 27% to the country's GDP and generates over 80% of national export earnings. More than 83% of the population living in rural areas are dependent on agriculture for their livelihoods. With Malawi's annual population growth at 2.9%, and the national poverty headcount at about 50%, agriculture remains key to the country's development, hence its prioritization in the Malawi Growth and Development Strategy III (MGDS III).

Despite the vital role played by the sector, it faces numerous challenges such as low productivity and production. This emanates from the limited adoption of improved technologies. Even where farmers are willing, agricultural commodities fail to avail the quality required to enable farmers earn considerable incomes.

Malawi's is a youthful and growing population of about 18 million, of which 40% are youth. Urbanization is estimated at 16.5% with more people moving into towns and cities to seek alternative sources of income after the disappointment of unrewarding proceeds from agriculture.

Malawi's agriculture is dominated by small-scale farmers practicing subsistence agriculture on less than 1.2 hectares of land and reliant on the single three-month rainy season. Productivity is estimated at 40% below potential yield. This is made worse by weak agricultural systems that fail to sustainably deliver quality products and services to farmers resulting in unstable production and forcing government intervention through subsidies and food trade restrictions.

AGRA has operated in Malawi since 2009, implementing various programs in improved seed and market development involving 31 improved varieties, six local seed companies and the development over 2000 agro-dealers. However, several gaps were identified with the potential to erode the gains achieved under previous investments. The gaps included: Weak and outdated regulatory frameworks; Weak institutions to support agricultural transformation; Limited access to markets, extension services and finance; Poor coordination monitoring and evaluation resulting in the duplication of efforts and unharmonized extension message delivery; Vulnerability to climate change and post-harvest losses.

These disparities also informed AGRA's 2017-2021 Strategy. The Malawi strategy and business plan sought to catalyze and sustain an inclusive agricultural transformation by building and strengthening the capacity of government and stakeholders to better coordinate and deliver services to farmers for improved productivity and increased incomes. AGRA Malawi streamlined its catalytic support to focus on three areas: (i) Policy and State Capability, (ii) Systems Development and, (iii) Partnerships.

AGRA in Malawi partners with government through the Ministry of Agriculture, private sector partners such as Seed Traders Association of Malawi, African Fertilizer Agribusiness Partnership (AFAP) and Agro-dealers to build a sustainable seed system that is well-regulated to deliver quality improved seed technologies to farmers. This publication contains some of the selected impact stories documenting AGRA's achievements through the 2017-2021 Strategy.

## Chapter 2: Impact Stories

### 2.1 Strengthening Seed Technology Delivery Systems

#### Reaping the Fruits of Improved Seed Systems

A key innovation in seed systems development is the use of early generation seed, which includes breeder and foundation seed. As Malawian farmers become increasingly aware of the advantages of improved seed, the existing seed supply systems have been unable to cope with the demand. The emerging private seed companies do not have research and product development programs of their own but are dependent on publicly developed varieties. However, the limited quantities of seed produced by public seed agencies are insufficient to meet the needs of farmers. To address the gap, AGRA provided farmer extension services through a series of new, private sector-led methods for informing large numbers of farmers about the value of adopting improved seed in practical and convincing ways. This included regularly mounting demonstration plots in smallholder farmers' fields and on public sites frequented by farmers, as well as the distribution of hundreds of thousands of packages of seed of improved varieties of maize and leguminous crops for testing by farmers on their own land. Building farmer awareness on the value of new seed, coupled with seed supply in local shops, has fuelled an increased demand among farmers and created a new, demand-driven channel for the supply of seed and other inputs. AGRA recognized this shift and begun working

with the private sector to set the stage for improvements aimed at taking seed markets to scale.



*Mr. Sandram Msokasoka (VBA) working in a demonstration field managed by Chiutsi Farmers Club in Mtosa EPA*

One of the beneficiaries of AGRA's *Strengthening Seed and other Farm Inputs Distribution Systems for Improved Food Security and Incomes of Smallholder Farmers in Malawi* project is Chiutsi Farmers Club, a group of farmers from Benga Section in Mtosa Extension Planning Area (EPA). Its members are from Jesitala Village, Traditional Authority (T/A) Mwadzama in Nkhotakota District. Through the AGRA project's Village Based Advisor (VBA) approach, the well-established farmers clubs select lead farmers to represent them in their communities.

In 2017, Multi Seed Company (MUSECO), a Malawian seed company dealing with early generation seed, identified Sandram Msokasoka as a potential lead farmer. MUSECO provided 200kg certified seed to Chiutsi Farmers Club to cover a one-acre portion of land, on which the club cultivated CG-7 groundnuts and maize. At the end of the season, the club harvested 300kg of groundnuts and 1000kgs of maize, compared to previous yields of 100kg for groundnuts and 510 kg for maize, respectively. Following Sandram Sokasoka's success, MUSECO confirmed him as a Village Based Advisor (VBA). He has since received several trainings from MUSECO, covering good agriculture practices, pesticide spraying and grain quality standards, all of which have helped him improve his farming techniques.

In 2018, Chiutsi Farmers Club increased their acreage from one to two acres. The club, which consists of 21 members (10 male; 11 female), cultivated one acre each of maize and CG-7 groundnuts. The club adopted improved technologies and its yields for that year increased to 550kgs for groundnuts and 2000kgs for maize. In 2019, at least 98 (52 male; 46 female) members from Chiutsi Farmers Club grew certified seed in their individual farms and applied all the protocols and technologies that were adopted by the club. They produced so much maize and groundnuts, enabling Efilida Jailosi a host farmer and a member of Chiutsi Farmers Club, to generate enough money from the proceeds of surplus sales to build a house. "I built my house and roofed it with iron sheets and yet there was still

enough food for my family. I am a proud and satisfied beneficiary of the MUSECO interventions. May Allah bless MUSECO and their sponsors to continue to guide us to greater heights,” enthused Efilida. In the Jesitala community, where the walls of most of the houses are built with mud and roofed with thatch, because of low incomes. Therefore, it is no mean achievement to have a house with an iron sheet roof.

“This year I ploughed two acres of maize, and two acres of legumes,” says Efilida. “I planted yellow maize seed as well as CG-7 groundnuts in double-rows and applied the recommended fertilizer.” On the day of the interview, the crops were about 60 days old, and Efilida was feeling confident about her efforts. “I cannot hide my story,” she adds.

Moving forward, plans are underway at Chiutsi Farmers Club to become a Farmer Field School that will transfer acquired best farming practices to other smallholder farmers within the community to strengthen their capacity and increase farm yields.

## **VBAs Accelerate Adoption of Improved Agricultural Technologies**

For the past two years, the Alliance for a Green Revolution in Africa (AGRA) and the International Fund for Agricultural Development (IFAD) have reached out to numerous smallholder farmers across Malawi with improved technologies and facilitated access to markets to catalyze agriculture transformation, and the enhancement of food and nutrition security. Both AGRA and IFAD have supported projects promoting the production and delivery of Early Generation and Certified Seed for the improved livelihoods of smallholders in the farming communities supported by IFAD under the Sustainable Agricultural Production Programme (SAPP) project in Malawi. However, the majority of farmers that have benefited from such interventions are located in remote areas. Crop yields of most smallholder farmers in various locations of Malawi have been very low consistently because farmers use unimproved crop varieties, inappropriate fertilizers, and poor agronomic practices.

This is worsened by an ineffective public extension service delivery. Currently it is estimated that there is just one government extension officer to 2,000 farmers; meaning that only a few farmers are visited and trained on improved crop varieties and how to improve their agronomic practices. This lack of awareness causes farmers to travel long distances to access appropriate farm inputs. It is against this background that AGRA and the various partners in Malawi introduced a private sector-led extension approach, involving the identification and training of VBAs to demonstrate improved crop

varieties, fertilizer blends, and to practically teach farmers good agronomic practices (GAPs).



*Mr. Lyford Kasiya (VBA) showing a groundnut demonstration plot facilitated by Chikondi Farmers' Club in Ukwe EPA*

Lyford Kasiya from Mphandauyo Village, T/A Kabudula is one of the VBAs offering his services to some of the farmer groups such as Chikondi Farmers' club in Ukwe EPA, in Lilongwe West. Lyford has been a VBA for three years, engaging fellow farmers in seed production and the adoption of other improved agricultural technologies. Lyford has gained popularity by encouraging farmers to plant unshelled groundnuts. "I always advise farmers to plant groundnut seed that is unshelled up until a farmer is ready to plant it in his or her farm," explained Lyford. Farmers are taught to store unshelled groundnuts, only shelling them by hand when they are ready to plant the seed. This process minimizes damage to the seed and promotes the groundnut germination rate. "Other than encouraging farmers to plant groundnut seed that had been stored in its unshelled state, I also advise farmers from Chikondi Farmers' Club to plant their groundnuts using the double-row method of planting," added the VBA. The double-rows planting method enables farmers to produce more yields on small pieces of land.

In collaboration with various partners over the past two years, AGRA has identified and trained 60 VBAs, who have assisted directly in reaching over 3,000 (1,200 females: 1,800 males) smallholder farmers with the promoted interventions in agricultural inputs. Seed and fertilizer Companies have worked hand-in-hand with VBAs to provide inputs for their demonstration farms. By embracing this system, various seed and fertilizer companies have used it as an entry point to the introduction of

their products to smallholder farmers, with the additional benefit of increasing their



*Weckson Sambo (Host farmer) and Lyford Kasiya (VBA) work together in a soybean demonstration field*

sales. These actions enhance AGRA's capacity to support the seed system since it also provides the necessary structural design that facilitates access to seed and other agro-inputs through a downstream agro-inputs distribution system. As a result of their efforts to demonstrate improved maize and legume varieties, and to teach farmers GAPs, 18 VBAs (12 male; 6 female) have graduated to either become agro-dealers or agro-dealers agents supplying inputs to farmers.

## **Increasing groundnut and soybean productivity through double-row planting and the distribution of unshelled groundnut seeds**

It is the tendency of most smallholder farmers to use recycled seeds, maintain poor agronomic practices as well as employing conventional methods of farming in their fields. Whilst these practices are eminent in most developing countries such as Malawi, productivity is usually low and accompanied by an escalation of the poverty levels. To increase the productivity of soybean and groundnuts through the Sustainable Agricultural Production Programme (SAPP), AGRA partnered with Global Seeds to facilitate access to improved seeds for smallholder farmers, promote double-row planting and the distribution of unshelled groundnut seeds for planting. Double-row planting has a proven track record of increasing yields on small pieces of land, reducing labor costs due to the use of smaller land sizes, increasing the levels of nitrogen fixation as well as providing cover for ridges thus discouraging weed proliferation and reducing labor costs for farmers. On the other hand, when groundnut seeds are left unshelled, and only hand-shelled and sorted a day before the farmer wants to sow, it eliminates the occurrence of skinned, immature, mouldy, broken, or small seeds. Keeping

improved groundnut seeds in their unshelled state increases the germination rate, enhances resistance to diseases such as rosette and reduces aflatoxin levels.

Lucy Kanjere is a groundnut farmer in her early thirties. She hails from Undi village, T/A Kaphuka in Dedza District, about 150 kilometers from Malawi's capital city, Lilongwe. She started growing groundnuts in 2011 to meet her household's the pressing needs. However, Lucy had been practicing conventional methods of groundnut farming, one of which was planting shelled groundnuts. Despite the laborious hours in the groundnut field, productivity was frustrating, and she was not making ends meet. Rather than improve her living standards, the poor farming practices only added to her poverty levels. She had been growing the crop for lack of another productive enterprise.



*Groundnut is left unshelled until the day of planting to increase germination rate.*

In 2018, Lucy joined Gwengwere Cooperative where she got an opportunity to adopt the technology of planting seed which has been kept unshelled up until it is ready to be planted. The VBA recommended that she plant CG9 groundnut seed supplied by Global Seeds that had been kept unshelled awaiting planting time. "Growing unshelled groundnuts increased the germination rate of my groundnuts," she recalled. "Previously, my groundnut seeds had a 60% germination rate and I used to harvest little." The new method has

increased the germination rate of Lucy's seeds to 95%. "Since I adopted the new technologies, my groundnut produce usually has low levels of aflatoxin, and I easily meet recommended standards," she added. Through this intervention, Lucy's produce has almost doubled, and she is now able to source extra funds from groundnut surplus sales. Lucy is but one of the many farmers that have realized that keeping unshelled groundnuts for seeds has a high potential of transforming lives and livelihoods.

Thanganjati Cooperative is another entity under SAPP that has changed peoples' lives with the adoption of double-row planting. Located in Kachono Village, in T/A Chadza area in Lilongwe district, the cooperative has been growing groundnuts since 2012, but production turnaround only occurred in 2017 when Global Seeds engaged it in seed production for sand groundnuts. Dora Kanyemba, Thanganjati Cooperative's secretary is one of the farmers that has experienced a turnaround through



*Dora in front of her house which is still under construction*

this initiative. "I have seen the real fruits of double-row planting. My production increased drastically, labor costs dropped and from the proceeds I have been able to build a house; something that I could not



have managed in the past before this initiative,” revealed Dora. From her piece of land, the yield increased by 25%, as did her monetary proceeds from the surplus. Dora is now one of the cooperative's model farmers, and she provides farming advice to other farmers in the surrounding areas geared towards increasing their productivity.

## 2.2 Strengthening Input Distribution and Technologies

### The Village Savings and Loans Association (VSLAs) Enhance Access to Inputs

The Village Savings and Loans Association (VSLA) approach implemented by Community Agribusiness Advisors (CAAs) has enabled smallholder farmers that did not previously have access to formal banking services are able to save and purchase agricultural inputs to increase productivity. For the past two years CAAs in Malingunde have nurtured eight vibrant VSLAs with a membership of 145 (89 female; 56 male) beneficiaries where 65 of the beneficiaries are youths. The groups received training in savings management, book-keeping, leadership, and group formalization. CAAs received training on VSLA management and in turn they trained members of VSLAs in record-keeping and other activities to ensure the sustainability of the groups after the exit of the project. Limbani Potifala, a CAA and Malawi School Certificate of Education (MSCE) holder, received training as a VSLA volunteer to support four VSLAs with 145 beneficiaries. One of Potifala's roles is linking his VSLAs to agro-dealers for easy access of inputs.



*Limbani Potifala (CAA) standing in front of a maize demonstration field managed by Naowe Farmers' Club in Mitundu EPA*

Limbani successfully linked two groups (Ngowe VSLA in Kansikidzi Section and Mikango 2 VSLA from Msera Section) to HK Agro-dealer in Mitundu Trading Center in the 2018/2019 fiscal year. The two groups had a total savings of MWK1,532,000.00 (\$1,944.64) for Ngowe VSLA, and MK 682,000.00 (\$866) for Mikango 2 VSLA respectively. Potifala played an instrumental role liaising with both the agro-dealer and the VSLA groups to mobilize funds for savings, further earning him their trust when he influenced the registration of the VSLAs as cooperatives.

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“I am grateful for the training I received from Rural Market Development Trust (RUMARK). The skill set I received through their trainings and activities have enabled me to be active, many years after completing my secondary education. I am also glad that the VSLA groups have seen the need to

register as cooperatives so that they can easily enrol into the formal banking sector to access credit and other facilities,” said Limbani.

“This season (2020/21) I have linked all eight VSLAs within my reach to private seed companies,” he explained. “I also got a seed loan of MWK 6,750,000.00 (\$8,568.10) for the eight VSLAs.” Five of the VSLAs belong to women only while the remaining three have both men and women in their membership.

Currently, Limbani Potifala is in the process of merging and registering the eight VSLAs as cooperatives. This action will increase farmers’ opportunities to access loans from financial institutions and input suppliers. Through this intervention farmers’ livelihoods have improved, as they are now able to easily purchase certified seed and other inputs. Many input suppliers have confidence in the VSLAs, and they are always ready to extend input loans to them.

Limbani has mobilized 10 (7 male; 3 female) agro-dealers in Mitundu Area to work hand-in-hand with the VSLAs he is facilitating. He has also shared his experiences on VSLA linkages with financial institutions. AGRA, in partnership with RUMARK, has used the VSLA approach to enable smallholder farmers purchase improved inputs to increase their yields and income. The CAAs recruit members who are interested and are committed to save at least MK 500.00 on a monthly basis to be used to purchase inputs during the growing season. Smallholder farmers are allowed to borrow twice the amount of money saved after six months and are required to repay it with a 10% monthly interest. The interest accrued is recorded in the member’s book to increase his/her savings as well as securing their chances of procuring more inputs during the growing season. New groups are still being established and the necessary guidance is provided by CAAs to empower group members (smallholder farmers) economically.

The AGRA-supported project, under the IFAD-AGRA Improving Delivery of Seed and Soil Fertility Technologies (IDSST) partnership, has facilitated various trainings for 12 CAAs (8 male: 4 female) in Mitundu Extension Planning Area (EPA). A number of rural agro-dealers that benefited from this initiative have improved the agro-dealer density and drastically reduced the distances covered by farmers from about 20 km to less than 6 km, since their shops are located within the respective farming communities. Thus, the crowding in of CAAs in the downstream inputs distribution system is bearing fruit. The CAA model also includes business linkages between retail agro-dealers and existing CAAs as well as the hub agro-dealers to strengthen the inputs supply chain. This enables hub agro-dealers to give inputs on suppliers’ credit to retailers, and the latter does the same for the CAAs.

## Chilewo Traders Increase Sales and Revenues Through Community Input Promotions

Community Input Promotion events are organized by agro-dealers trained by Rural Market Development (RUMARK) to increase farmers’ access to improved inputs by bringing input dealers into the communities. The events take place when the farmers’ VSLAs choose a date to share out their savings. Chilewo Traders is one of the agro-dealers implementing this initiative

with technical expertise from RUMARK, an AGRA partner.



*Ms. Matilda Chitete's daughter at Chilewo Traders' Shop in Dwangwa Trading Center*

Owned and operated by Matilda Chitete, a 71-year-old woman from Chinunkha Village, T/A Mwaumbia in Chitipa District, Chilewo Traders is an input dealer conducting business with farmers around Dwangwa Township in Nkhosha. It was only after Matilda was trained by RUMARK during the *Strengthening Seed and other Farm Inputs Distribution Systems for Improved Food Security and Incomes of Smallholder Farmers in Malawi* project, that she was able to withstand the competition from other agro-dealers and excel in the business. Supported by AGRA under the IFAD-AGRA IDSST partnership, the project introduced Chilewo Traders to farmers in nine remote communities where the VSLAs organized savings sharing events. Chilewo Traders has since gained growing recognition from this linkage and the RUMARK trainings have added an edge to the growth of its business share in Dwangwa.

Chilewo Traders have been participating in community input promotion events organized in different locations in Dwangwa. More than 400 smallholder farmers, mostly women, use part of their savings to purchase inputs such as seeds, herbicides, and sprayers during each of the promotions. After participating in the input promotion event, Matilda's daily sales, which averaged MWK100,000 (\$127.42) per day in 2018, increased to an average of MWK 200,000 (\$254.84) per day in 2019, representing a 50% increase. With the expertise acquired from RUMARK, she now covers more than 10 additional communities in the district and reaches out to about 1,000 (540 female; 460 male) farmers with inputs including fertilizer, seeds, agrochemicals, and insecticides. Ms. Matilda excitedly narrates: "The community input promotion facilitated by RUMARK is very good," she enthuses. "Within two days I can make MWK 400,000 (\$ 509.68) in profits from the promotion event because the community agribusiness advisors make follow-up contacts at my shop to buy more inputs," she explains. As more people visit the shop, the sales rise. This trend has attracted more private seed companies seeking to do business with Chilewo Traders. "They are confident about my capacity and

I have received regular consignments from SEEDCO, DEMETA and MONSANTO,” she adds, “I am happy and thankful to RUMARK for identifying me.”

To further improve relationships with farmers and increase sales, Chilewo Traders bought five hectares of land where part of the land is used as a demonstration site for maize and other legume crops to train about 600 (360 female, 240 male) smallholder farmers from Dwangwa in Nkhotakota District in good agricultural practices and the use of improved seed. In the 2020/21 growing season, Chilewo Traders supported farmers’ clubs such as Chigunda and Kaongozi in Dwangwa and Matilda looks forward to extending further support to more clubs through the CAA Model.

## CAAs Play a Vital Role Assisting Farmers in VSLA Groups to Access Improved Inputs

Formal banks usually avoid smallholder farmers citing high transaction costs and the high risk associated with these transactions. Among other things, smallholder farmers do not usually keep adequate records of their earnings and spending from past farming activities, leaving banks reluctant to lend them funds. The underlying fear being farmers being unable to raise the revenues to repay their loans.

Sydney Khando, the owner of Kasungu Market Resource Center (KMRC) has made it his mission to ensure that smallholder farmers have access to finance. The resource center promotes village savings and loans for smallholder farmers, to simplify the route to financial access and consequently enable them to purchase improved inputs. KMRC is a hub agro-dealer that received capacity strengthening support from the African Fertilizer and Agribusiness Partnership (AFAP) under AGRA’s Strengthening Fertilizer Systems in Malawi. It promotes VSLAs for smallholder farmers to encourage them save funds in order to easily access farm inputs. In the 2019/20 growing season, KMRC with assistance from 42 (33 male and 9 female) CAAs, 12 VSLA groups were formed with a membership of 180 (121 female; 59 Male) beneficiaries. The groups were trained in record-keeping, savings management, group dynamics and leadership. The VSLAs beneficiaries have testimonies of the benefits gained through this arrangement. Smallholder farmers affirm that they can now afford to buy inputs for agriculture production.

“We now manage our funds more effectively, and procure improved inputs which we previously deemed expensive,” narrated Janet Katundu, a smallholder farmer in the jurisdiction of T/A Mpoma.



*Stocks on display at one of the Kasungu Market Resource Center shops in Kasungu Boma*

“We have saved MWK1,950,000.00 (\$2,484.67) to invest in the recommended agricultural production practices we had seen through Global Seed and MUSECO field demonstrations,” remarked a member of Veyo VSLA Group, from T/A Mpoma in Chatoloma Kasungu. During the share-out (the period in which funds contributed are disbursed) in 2020, KMRC facilitated a community input promotion event where KMRC representatives promoted their products for the benefit of community members. The farmers purchased seeds produced by Global Seeds, MUSECCO and other private seed companies, effectively turning their backs on the temptation to use recycled seeds from the previous growing season.

“We have also learned the importance of planting legume crops using the double-row method which has increased the quantity of our production,” said Mary, a member of Veyo VSLA.

Smallholder farmers expressed their joy during the input promotion event where they used their VSLA savings to purchase certified seeds. According to Lingilirani Phiri, yet another member of Veyo VSLA, she was able to invest in farm inputs and land for production from the proceeds of her VSLA savings. This action doubled the size of her farm, from one acre in 2018 to two acres in 2020, and she expects to expand to three acres in the next farming season.

“Using part of my savings, I bought certified seeds, and patronized new technologies like the use of inoculant and Aflasafe,” she explained, “I could still hire a spray service provider and expect a total of MWK1, 400,000.00 (\$1,783.86) from 80 bags of maize and 30 bags of groundnuts.” This is in contrast to the norm of MWK540, 000.00 (\$688.06) from 30 bags of maize and 12 bags of groundnuts during past production.

Besides its contribution to increasing agriculture production, either the money saved, or loans secured from VSLAs is used to pay the educational bills of beneficiaries’ children as well as other

social needs. KMCR setting up new groups and continues to use the VSLA approach for smallholders to purchase production inputs to increase their yields and income.

## Community Agribusiness Advisors (CAAs) for Improved Inputs Distribution and Farmer Organizations

Located in Southern Africa, Malawi is a landlocked country, that shares borders with Mozambique, Zambia and Tanzania. The World Bank estimates the country's population at 18.6 million. Malawi's is a fast-growing and youthful population (approximately 60%), with high dependency ratios and widespread and deep poverty. Economically, Malawi is highly dependent on agriculture. However, most of her agricultural production is carried out by smallholder subsistence farmers amid low productivity. Among other factors, smallholder farmers' productivity continues to dwindle due to low access to improved inputs, the use of traditional methods of farming as well as limited access to better extension services. The ratio of government extension workers to smallholder farmers hovers around 1:3,000 against the recommended ratio of 1:500. This situation further threatens the livelihoods of Malawi's smallholder farmers who constitute 80% of Malawi's population.



CAAs in hub agro-dealer branded T-shirts posing with a private extension worker in front of a hub agro-dealer shop in Natherenje, Lilongwe.

To reduce the negative effects that smallholder farmers face due to low access to improved inputs and extension services, AGRA has supported its partners including the African Fertilizer Agribusiness Partnership (AFAP), who have established and strengthened CAAs in different communities through private extension workers attached to

hub agro-dealers. The CAAs have been vital in linking smallholder farmers to hub agro-dealers who sell improved inputs and offer over-the-counter extension messages. In the model, which is well integrated into the Lead Farmer model, each CAA who is like a Master Lead farmer has five lead farmers attached to them and each lead farmer has an average of 20 follower farmers.

"We are equipped with knowledge in fertilizer use as well as other inputs, the benefits of following good agronomic practices, which we teach other farmers in our communities. We do awareness activities that provide knowledge to farmers in terms of which inputs our agro-dealers stock and the benefits of using those inputs," explained Samuel Joseph, a CAA based in Kaluzi Village, T/A Mazengera Lilongwe.

Among some of the awareness creation activities hosted by CAAs are mother demonstrations for good agronomic practices, the use of improved seed and quality fertilizer as well as other inputs which the farmers can access from the hub agro-dealer that the CAAs are linked to. The demonstration acts as a learning point for follower farmers and others in the community, and the CAAs hold field days at

the land preparation, vegetative stages of the crop and again at maturity.



A CAA sharing insights during a field day in Dedza

Beyond awareness creation on improved inputs, CAAs host baby demonstrations to showcase good agricultural practices for other farmers to borrow a leaf from. The CAAs also form clubs/groups through which smallholder farmers procure improved inputs from agro-dealers. “We form clubs/groups and record inputs that each of the members wants to buy before making bulk procurement from the agro-dealer,” explained a CAA from Machite Club, T/A Mazengera Lilongwe. “We usually get discounts on the inputs bought as a group and free transport to our communities, including commissions on the sales we make.”

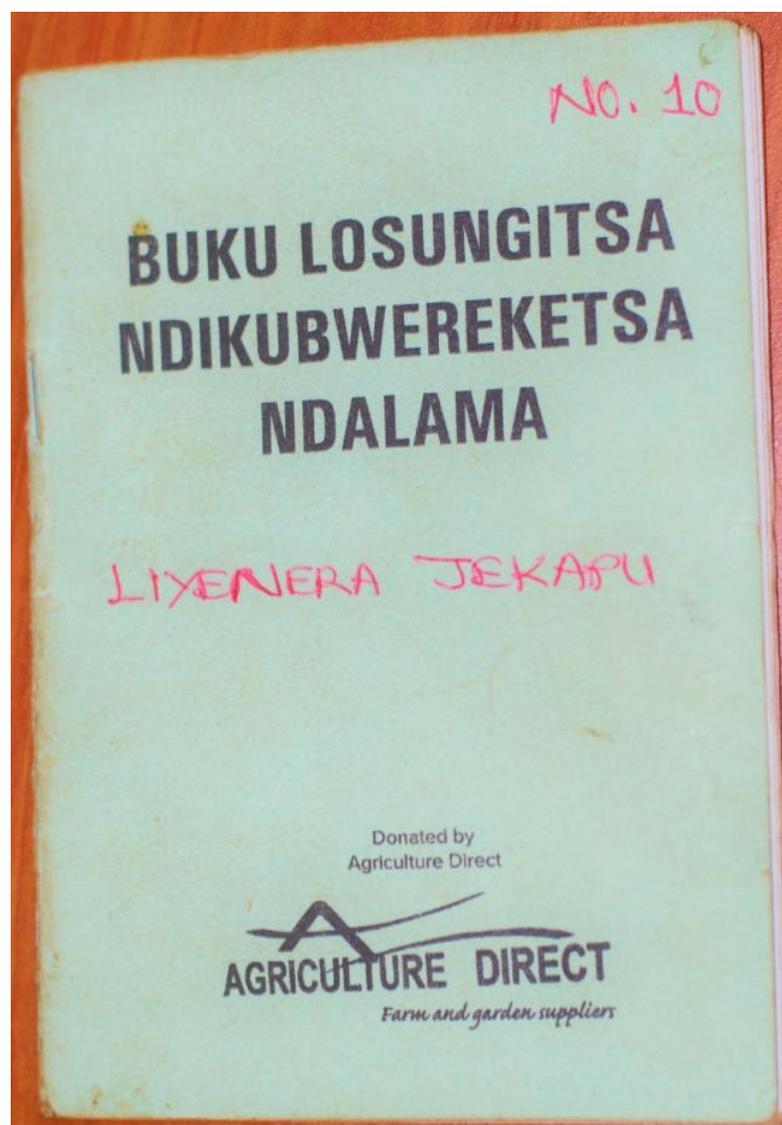
The CAAs encourage each farmer to save money to procure bags of fertilizer as well as improved seeds for the next growing season through their groups. “Most farmers cannot afford to pay for inputs all at once, thus we encourage a saving culture through the groups/clubs,” said one CAA in Mwanza. This is how many smallholder farmers were able to access improved inputs. For instance, 43 (35 male; 8 female) CAAs in Nathenje reached out to 4,300 farmers who benefited from the distribution of improved inputs in the 2019/20 growing season alone. Out of these smallholder farmers, 215 organized farmer groups have been formed to facilitate easy access to improved inputs. John Sipikwa is one of the farmers in Nathenje, Lilongwe who was used to buy small amounts of inputs from vendors but was later able to buy bags of fertilizer and improved seeds through the groups/clubs formed by CAAs.

“I had never bought fertilizers by the bagful in my entire life,” he said. “*Timangodziwa kugula feteleza ndi mbewu yoyezetsa ife koma pano zimenezo ndi mbili yakale.*” (‘I expect bumper yields from my field this year thanks to buying improved inputs through the groups. Thanks to our CAAs who do not tire helping us,’ added Sipikwa.

## Transformation of VSLAs through record-keeping

In Malawi, poverty is widespread in rural areas, where economies are characterized by long time spans between input and output of the agricultural production, uncertainty and weather dependency.

This situation makes strategies for smoothening consumption, credit access, and employing risk coping mechanisms a priority. Although there has been a significant increase in access to financial services through the growth of the microfinance industry over the last few decades, many of these institutions often underserve rural communities.

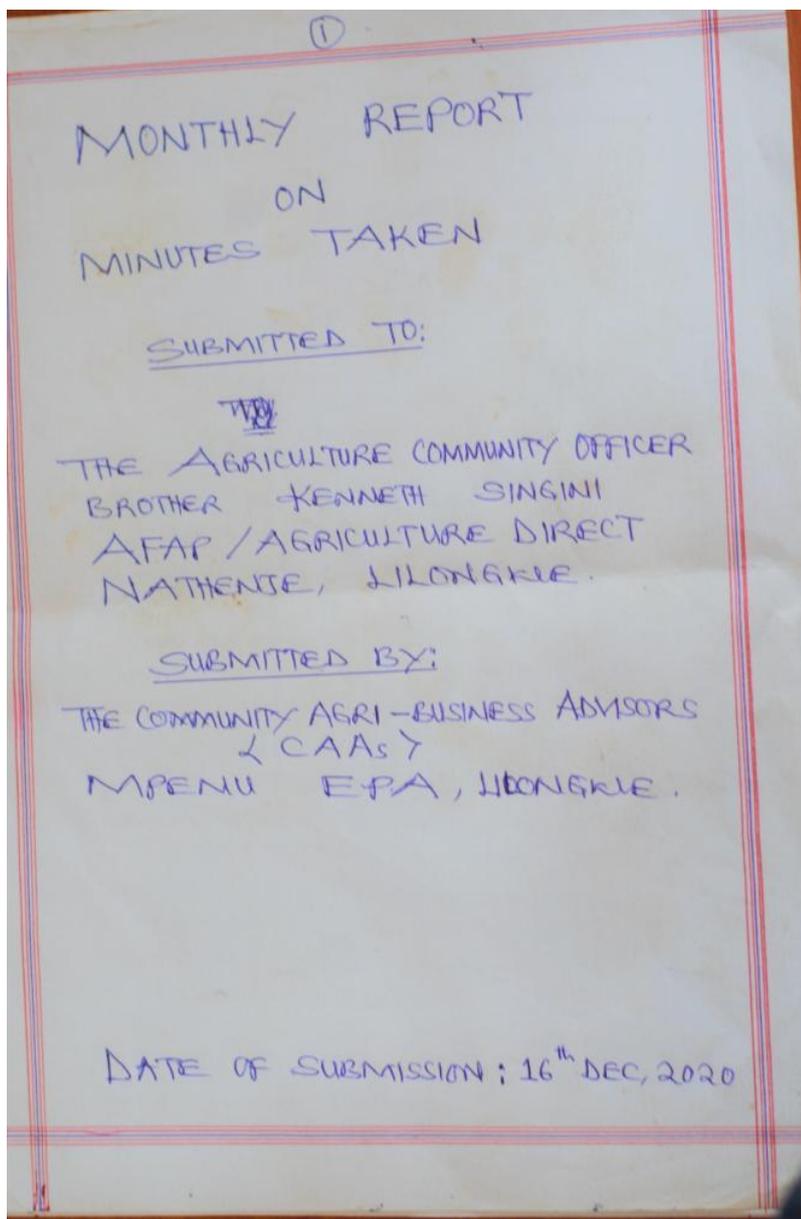


Therefore, these gaps tend to be filled by community level arrangements, VSLAs, which are groups of people pooling their savings in order to have a source of funds for lending. VSLA groups combine a variety of services normally provided by the formal financial market, including savings accounts, access to loans, and insurance. In order to provide credit and insurance to its members, VSLAs need to raise sufficient amounts of savings, that are guaranteed through compulsory minimum contributions.

AGRA has been promoting VSLAs in the different communities through its partners. VSLAs have been promoted to simplify access to improved inputs and to facilitate easier input distribution. Different hub agro-dealers, through the private extension workers and CAAs have facilitated the formation and formalization of VSLAs in communities in collaboration with CAAs to enable farmers buy improved inputs easily. In Nathenje alone, 215 VSLAs have been established in to facilitate inputs distribution. "I conduct monitoring among VSLAs every month

end to ensure that they are making significant progress," said Kenneth Singini, a private extension worker for Agri-Inputs agro-dealers. "Every VSLA is given booklets, folders and report forms to keep records up to date. This helps them to see how much progress they have made," he added.

The VSLAs are equipped with financial management and record-keeping skills to account for all the monies they are able to save. Machite Club of Kaluzi Village, T/A Mazengera is one of the VSLAs under this initiative. The club sells shares to its members at MWK500 (\$0.641.00) per share. In the 2020/21 growing season, the club bought improved inputs worth MWK 864,750 (\$1,102.99) that was distributed to the members according to how much they had saved. Currently, Machite VSLA has already started preparing for the 2021/22 growing season by saving MWK865,000 (\$1,108.91) over a six-week period. Takondwa Club is another VSLA that saved MWK1.5 million (\$1,904.02) and procured improved inputs for its members in the current growing season. The club saved MWK1.3



million (\$1,650.15) in 24 weeks in preparation for the next growing season. Umodzi club of Gondwa Village, T/A Mazengera is another VSLA that saved MWK957,000 (\$1,214.77) for the next growing season.

The VSLAs are linked to agro-dealers selling improved inputs in their areas through the CAAs who in turn assist the VSLAs with information on the inputs stocked by agro-dealers. When the VSLAs choose the inputs they wish to buy, the CAAs link the VSLAs to agro-dealers for discounted bulk orders. “We aggregate the inputs that all VSLA members want and we advise the agro-dealer on inputs that are most in demand. The agro-dealer offers the groups discounts on bulk purchases and transport to the villages,” explained a CAA in Lilongwe. Under these arrangements, the VSLAs access improved inputs easily and are spared transaction costs since the agro-dealer delivers the inputs to the villages. Stellia Magombo is a smallholder farmer who has greatly benefited from this input distribution arrangement. “I used to struggle to find money to buy inputs,” she

recalled, “Until our VSLA intervened and simplified the process of accessing improved inputs by encouraging me to save.” She added, “I don’t incur transport costs anymore since the CAAs facilitate transportation of inputs to our households. We wait for the deliveries at home.” Stellia is but one of the numerous smallholder farmers that have been able to access improved inputs through VSLAs that are linked to agro-dealers through CAAs and most smallholder farmers of T/A Mazengera area anticipate bumper yields at harvest time, thanks to this initiative.

## 2.3 Strengthening Public, Private Sector Engagement and Extension Services

### Private Sector Participation Scales up Crop Production in Districts

Smallholder farmers in Malawi continue to recycle their seeds, experiencing minimal yield increases of about 8.8% per year. Although various technologies have been implemented to promote access to improved varieties of seed, access to the certified or improved seeds, fertilizer and pesticides remains a constraint for farmers. Increased awareness among smallholder farmers is critical to increasing farmer demand for improved farming technologies, particularly for seed and fertilizers. Low productivity and the huge yield gaps recorded among many farming systems in Malawi are attributed mostly to low adoption rates of improved seeds and related technologies. Thus, the productive potential of improved seeds and possible opportunity to increase farmers' incomes has is lost to smallholder farmers due to lack of knowledge of the existence of improved varieties and what these varieties can offer, as well as limited access to inputs. AGRA and its partners have developed an effective approach and a methodology in Malawi to increase awareness among farmers to trigger the adoption of improved varieties and other related technologies. The approach is distinguished by its relevance to how smallholder farm producers process new information on crop varieties and improved agronomic practices; essentially breaking down barriers between public and private actors and allowing thousands of farmers in remote villages to gain an appreciation of the value of improved technologies before adopting them.

To improve the seed system, AGRA partnered with seven private firms to train over 3000 (1900 female; 1100 male) farmers in good agricultural practices and seed production using various



*Mzungu Farmers' Club members taking care of their maize demonstration plot in Chilaza EPA.*

demonstration sites. The private sector firms that included Global Seed Company, Multi Seed Company and AFAP contributed seeds, fertilizer, herbicides, and inoculants to establish the demonstrations. In availing these inputs, the private sector firms promoted their products to the farmers, increased sales and received feedback for improved product design and distribution. This has also led to increased sales for both seeds and fertilizer. To ensure that their beneficiaries learn and adopt appropriate technologies and/or management practices, Ministry of Agriculture officials and VBAs in targeted locations partnered with the private sector to set up the demonstrations. The farmers provided their land, land preparation services and contributed to the workforce to establish the demonstration plots.

With the knowledge acquired at the demonstration sites during the training and field days, the farmers have increased their yields and subsequently their incomes by applying what they have learned. The collaboration has also created awareness and an increased demand for seed, fertilizer, herbicides, and inoculants among smallholder farmers.

## Public Private Partnerships Key to Development and Commercialization of Soil Health Technologies: The Case for New Area Specific Fertilizer Blends in Malawi

Malawi's economy is highly dependent on agriculture. However, the fertilizer system, an important component in agriculture, is less developed due to among other things; the lack of area specific blends; an inconducive policy environment for the fertilizer blending business; a requirement new fertilizer blends undergo a three-year period of crop testing prior to registration, which is too long for private investors; and weak controls for fertilizer quality because the laws are currently not in place. Additionally, fertilizer mapping in Malawi stalled due to the absence of partnerships, since government was the only entity conducting this exercise. Having reviewed these gaps, AGRA partnered with IFAD to support the SAPP, an IFAD supported investment in Malawi, to finalize the soil mapping exercise



*Gomani talking about ASFBs during a field day in Dedza*

and development of fertilizer recommendations among other activities.

As part of its interventions, AGRA convened key stakeholders involved in the soil mapping exercise in Malawi where a National Soil Mapping Taskforce was formed to spearhead and escalate the exercise, ensuring completion and tabling the fertilizer recommendations. The Taskforce, currently headed by the Department of Land Resource

Conservation through its Deputy Director, Gilbert Kupunda, comprises key stakeholders from the Department of Agriculture Research Services (DARS), Department of Land Resource Conservation (DLRC), Department of Agriculture Extension Services (DAES), Fertilizer Association of Malawi, Malawi Fertilizer Company and OPTICHEM, with AGRA as the secretariat.

“Through these partnerships, we now have a protocol for fertilizer trials that we use to validate new area specific fertilizer formulations for maize production in Malawi,” said Franklin Gomani, the Land Resource Conservation Officer for Dedza Agriculture during one of our field visits. “On the other hand, AFAP, another of AGRA’s partners is strengthening the capacity of the Fertilizer Association of Malawi.”

In the same vein, Story Workshop Education Trust (SWET), another AGRA partner, raises awareness among stakeholders about the appropriate area specific fertilizers. “We have been conducting community dialogues, road shows as well as radio programs on promotion of new fertilizer blends,” said Ambele Kayuni, Director of Programs at SWET.

AGRA’s interventions have included spearheading partnerships with private sector players, and the finalization of soil mapping and analysis; five area specific fertilizers have been developed and are undergoing validation. Private companies such as Malawi Fertilizer Company, Export Trading Group (ETG) and YARA have committed one ton each to be used in area specific fertilizer validation.



*Area specific fertilizer trial in Demera EPA, Lilongwe*

The area specific fertilizer trials were conducted in Karonga, Rumphi and Mzimba in the Northern region and in Kasungu, Nkhonkhotakota, Lilongwe and Dedza in the Central region as well as Balaka, Chiradzulu, Mwanza and Nsanje in the South. The selection of districts was based on their agro-ecological zones and they are representative of all the agro-ecological zones across the country. This will ensure that all developed Area Specific Fertilizer Blends (ASFBS) are well validated and marketed to all farmers across the country.

“Once the ASFBS are validated, Malawi is expected to have maize bumper yields because these fertilizers will answer the soil needs of each area,” said James Kadaya, the Assistant Land Resource Conservation Officer for Balaka Agriculture.

## Creating Demand Through Private Extension Workers

Established in 2009, Agri-Direct Agro-dealer has been selling various agro-inputs to a diverse number of other agro-dealers and farmers in Lilongwe. Founded and run by Robert Gomonda, a former director of research at ICRISAT, Agri-Direct Agro-dealer has been making positive strides as well as an annual turnover of MK 1 billion (\$ 1, 274, 185.64) on average. The business specializes in fertilizer and other inputs distribution, transportation and selling construction materials in all its four

outlets which are located in Area 47, Kanengo and Nathenje.



*Kenneth Singini, a private extension worker for Agri-Input Agro-dealers*

With AGRA funding delivered through AFAP to strengthen fertilizer systems through the promotion of appropriate fertilizers, Agri-Direct Agro-dealer employed two private extension workers to operate in the areas of Likuni and Nathenje. AFAP's support to Agri-Direct caters for salaries, as well as administrative and travel costs to enable the private extension workers reach more farmers in the community.

Kenneth Singini is a private extension worker employed by Agri-Direct to man the Nathenje area. "Ever since I was employed, there has been an increased demand for inputs in the Agri-Direct shops," narrated Kenneth. He also noted that the Agri-Direct Nathenje shop alone had sold an extra 10 tons of fertilizer and five tons of seed in the current growing season. "I have been visiting different farmers to market Agri-Direct products, as a result more farmers identify with us in their quest to use reliable inputs," added Kenneth.

His employer, Robert Gomonda said of his employee; "Should the project phase out, I will retain his services," having taken note of the gains made to the company through Kenneth, the extension worker.

Mawindo Enterprises is another agro-dealer that has registered exceptional gains from the demand created by private extension workers. Specialized in selling farm inputs, the enterprise has outlets in



Lobi, Kabwazi, Kaphuka, Linthipe, Chafumbwa and Chimbiya. “With support from AFAP, we have been able to mount demonstration plots and this has helped create demand since farmers learn how improved inputs perform against their traditional inputs and

*Maize and soybean demonstration site managed by Mawindo Enterprises*

farming techniques,” said Mawindo, the owner of Mawindo Enterprises. “Our private extension worker organizes field days in collaboration with government agriculture officials to raise awareness on the improved inputs we stock as well as promoting good agricultural practices.” The enterprise once suffered public backlash following unverified rumours about selling fake products, but according to Mawindo, this perception has since been changed with the active engagement of the private extension worker with farmers.

Collina Msongole, a private extension worker with Mawindo Enterprises, noted that beyond hosting demonstration plots at the agro-dealer level, she had also facilitated demonstration plots hosted by CAAs among communities.

“Most communities are located far away from one other and we thought of using CAAs to host extra demonstration plots for more farmers to learn new ways of farming,” explained Collina. “Most farmers now have confidence in the inputs sold by Mawindo Enterprises, and I receive calls almost on a daily basis from CAAs asking for stock availability.” Noting that the demand for Mawindo Enterprises inputs has increased by a large margin, she added that for the first time since Mawindo Enterprises started the business, it registered over MWK 20 million (\$25, 483.7127) from the sale of seed on two consecutive days during the growing season despite participating in the Affordable Inputs Programme

(AIP). Lauding Collina’s efforts with the smallholder farmers, Mawindo the proprietor agreed: “We have never before reached this sales mark. This is proof of the big increase in demand for our inputs.”



Fajo Investments is another enterprise that has attributed an increase in demand for their inputs arising from the engagement of private extension workers. “Our business is growing. We registered a turnover of MWK 150 million (\$191,127.845)], indicating a 40% increase in our turnover through this initiative,” said Samuel Mkwate, the proprietor of Fajo

*Collina Msongole interacting with farmers during a field day investments.*

## Youths Embrace the VBA Model to Provide Agricultural Products and Services for Communities

The Village-Based Advisors approach has improved productivity by promoting good farming practices among smallholder farmers, with the larger goal of increasing their food security and resilience to environmental shocks. The intervention identifies keen, hardworking farmers at the village level and develops them into agro-entrepreneurs, known as Village-based Advisors (VBAs) who provide inputs (such as improved seed), services (extension) and advice on good farming practices for their communities. These interventions offer the double benefit of creating rural employment opportunities and building a sustainable system for delivering agricultural technologies. Francis Majoni was no different from any other person in Champanikiza village, T/A Chiseka in Lilongwe where everyone grew crops without following the principles of good agricultural practices due to low exposure and access to extension services.

Residing at the heart of farming activities in Mitundu and having dropped out of school at a tender age owing to financial challenges, he engaged himself fully in agriculture. This was his primary and



*Francis Majoni showcases his demonstration plot.*

sole source of income. Mitundu Extension Planning Area (EPA) is one of the largest EPAs in Lilongwe District. However, extension workers are few and unable to reach each and every farmer. The of farmers have no access to extension services.

*The Strengthening Seed and other Farm Inputs Distribution*

*Systems for Improved Food Security and Incomes of Smallholder Farmers in Malawi* project was supported by AGRA under the IFAD-AGRA IDSST partnership. Several interventions were introduced through MUSECO and Global Seed Company with the aim of enhancing the improved seed system in this area, where Francis Majoni and forty-three other farmers had formed Chingoli Farmers' Club to start adopting the improved technologies. Majoni was chosen as a leader and later approved as a VBA. Since then, he has showcased good agricultural practices on behalf of Chingoli Farmers' Club through a demonstration plot he hosts within the village.

The project has since transformed many farmers from subsistence to commercial farming. Farmers in Champanikiza village started growing early generation seeds resulting in bumper harvest yields. "We were introduced to planting groundnuts using double-rows in order to have bigger yields within a small piece of land," explained Majoni. The technology has transformed livelihoods. Previously, farmers could expect four bags of groundnuts worth MWK80,000 (\$101.94) from the same acreage of land, whereas now it is not uncommon to harvest more than 10 bags worth not less than MWK 100,000 (\$127.42). Ever since the club became involved in seed production, no one buys seeds from other vendors. Majoni is just one of several other successful farmers linked to the AGRA-supported project that has made tangible impacts through successful interventions among farmers across Malawi.

## 2.4 Strengthening Fertilizer Technology Delivery Systems

### Increasing Crop Productivity Through the Composition of Inorganic and Organic Manure

The importance of fertile soils and the need to understand the suitable application rate of both organic and inorganic manure, time, and site selection among smallholder farmers needs to be enhanced. It is against this background that AGRA under the IFAD-AGRA IDSST partnership supported an intervention that introduced activities to make farmers understand the use of Mbeya manure – a mixture of both inorganic and organic manure - as one way of promoting soil fertility management. The intervention was implemented through AFAP and RUMARK, ensuring that

comprehensive organic and inorganic manure recommendations are gradually replaced by site-specific recommendations. It should be noted that, the composition of organic and inorganic manure has multiple benefits of balancing the supply of nutrients due to increased chemical and microbial activities in the soil. The composition of organic and inorganic manure promotes the decomposition of harmful elements, soil structure improvements and root development. It also increases the soil's ability to retain moisture.



*William Mazengera showing maize cultivated using Mbeya manure*

One of the farmer groups engaged in the intervention is Chiwondo Farmers' Club chaired by William Mazengera. The Club is from Chiwondo village, T/A Chadza in Lilongwe. "We have been doing farming as a source of income, but the high cost of agro-inputs, especially fertilizer has always been a setback," said William Mazengera. This was until RUMARK intervened in partnership with AFAP to introduce Mbeya manure. "It has simplified everything," added Mazengera. The field officers have been emphasizing that Mbeya

manure is designed to improve soil health, increase yields, and ultimately boost incomes. "At the time, we were applying inorganic fertilizer, but the crop stand was not quite impressive." He explained, "but look at how well the maize is growing on my one-acre field," exclaimed Mazengera with obvious pride in his voice.

A female smallholder farmer, Alineti Fransisco from Chiwondo Village, T/A Chadza is also a beneficiary of this initiative. Previously, she had faced challenges with procuring inorganic fertilizer and subsequently struggled to keep her family fed after suffering yield losses. Upon hearing that RUMARK in partnership with AFAP had introduced a farmers' club to equip farmers with agricultural technical expertise, she didn't think twice about joining this group. This is where she learned technologies such as making Mbeya manure using locally available resources from agricultural residues such as groundnuts shells, husks, and animal dung, and planting unshelled groundnuts in double-rows. After using Mbeya manure in 2019, Alineti's crops, comprising maize on one acre and two acres of groundnut and soybean surprised her, bringing a smile to her face.

"I went from being an ordinary farmer to one of the highly admired women in Chiwondo Village because of achieving food security throughout the year," she explained. Alineti realized MWK500,000.00 (\$637.75) in 2019 compared to the previous years when she did not use Mbeya manure and it was not uncommon to make less than \$350 for an entire year.

Alineti has since built a house for her family. "I am a happy person today," she exclaims. "Look. I have managed to build a beautiful house. This was only achieved after gaining knowledge about improved agricultural technologies from RUMARK and AFAP field officers. "I am highly indebted to them," she said. Standing next to her house, it is obvious that she appreciates how far she has come and is genuinely grateful for the benefits of the project on herself and family. Alineti has shown that women in her society can do great things if given the support and expertise to achieve their dreams. Today the Alineti family no longer have sleepless nights because the roof over their house is intact. The quality of life has immensely improved and they are an apt example for other families, and especially

women. The project has proved that that women can be financially empowered if extension services are offered to them consistently and effectively.

