

Lessons Learned on Service Delivery, Marketing and Capacity building



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introduction

page 4-11

01

Service Delivery
Models and Agri-Fin

page 12-16

Uganda - Farmis
Zimbabwe -
EcoFarmer
Indonesia - LISA

02

Ensuring Supply of
Bundled services

page 18-25

Case Study
- Generating
additional incomes
through bundled
services

Key strategies used
to ensure supply of
bundled services

Achievements

Lessons Learnt

03

Marketing Bundled
Services

page 26-30

Introduction

Case Study -
Accelerated
behaviour change
and adoption
of good farming
practices among
smallholder farmers
in Zimbabwe.

04

Partner Capacity
building

page 31-37

Introduction

Training sessions
carried out since
program inception

Focus on
agricultural digital
payments services

Lessons learnt

05

Research

page 38-43

Introduction

Focus On Linkages
To Financial
Institutions

Case study
- Fostering
financial access
to smallholder
farmers

conclusion

page 44-45

To Our Stockholders

We would like to thank the Governments of Uganda, Zimbabwe and Indonesia for their continued support throughout the three year project. The staff of the Ministries of Agriculture in the respective countries who provided significant technical support, countless district officials smoothed the way for this project to reach all our districts and or regions of operation. The Agri-Fin Mobile program partners in the different countries who have enabled this project achieve its goal. This report was made possible by the generous support of the Swiss Agency for Development and Cooperation (SDC). The contents are the responsibility of Mercy Corps, and do not necessarily reflect the views of SDC or the Swedish Government.



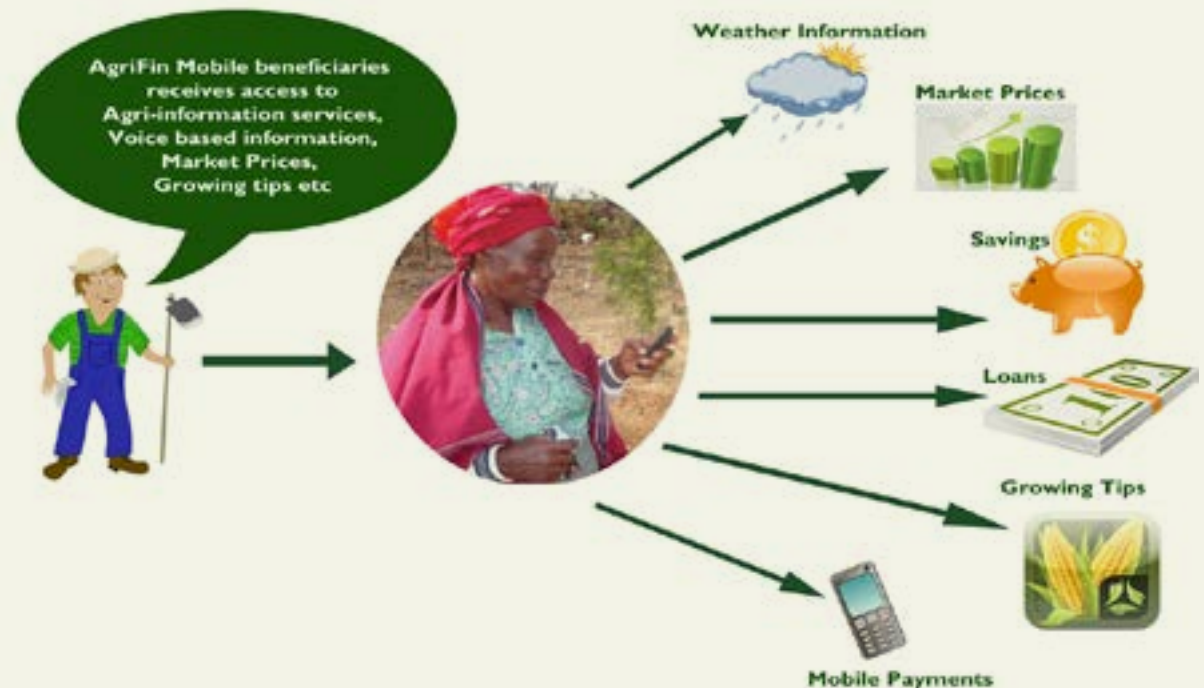
Introduction to Agri-Fin Mobile

Smallholder farmers in developing countries face a number of challenges that impact their productivity and contribution to food security. These include lack of access to financial services (Credit, Savings and Micro-Insurance), and limited access to rural advisory services. Over the years, there have been efforts to address these challenges to improve smallholder farmer productivity and contribution to food security. However, the lives of smallholder farmers have not significantly improved because only individual constraints have been addressed while others have been neglected. Mercy Corps realised that it was necessary to find an affordable, accessible way of providing services that addresses multiple challenges in sustainable business models.

Our program's implementation methodology has been a mobile-based bundled service approach.

The Mercy Corps Agri-Fin Mobile program provides a 'bundle' of agricultural and financial services plus market information to the smallholder farmer via the mobile phone. Through this approach the program brings together players including banks, mobile network operators, smallholder farmer aggregators, rural advisory service providers, and platform hosting and content managers to build a comprehensive suite of services that addresses all the farmers' constraints together. By using a new strategy called bundled services, the program joins products and services together to provide a single combined unit on the mobile phone.

The bundle:



The Agri-Fin Mobile program was born out of the recognition that agricultural development goals globally cannot be achieved without innovations in agriculture. Our potential interventions to enable farmers to increase yields and sell at better prices include provision of advisory information, promotion of better distribution of quality inputs and promotion of climate-smart farming practices among others.

Overall Project goal

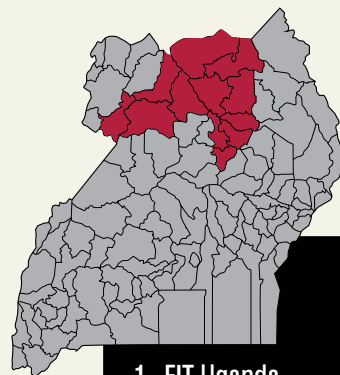
The overall goal is that smallholder farmers increase and stabilise their incomes and manage their production cycle in a more effective way. This shall contribute to improved livelihoods and an increased food security at household and system levels.

Project Objectives/Outcomes

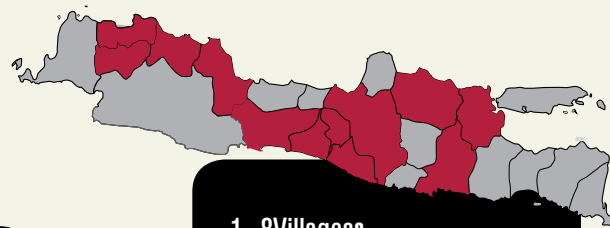
1. Demand-driven bundled financial and rural advisory services via mobile phones are elaborated and made available;
2. Sustainable and scalable business models are established and work;
3. Smallholders have sustainable access and make accurate use of financial and rural advisory services;
4. Knowledge of models, services and products are captured and shared internationally for dissemination and replication.

Our Target Audience

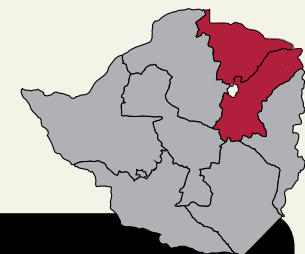
Male, Female and Youth Smallholder farmers



1. FIT Uganda
2. Bank of Uganda/GIZ
3. Beyonic Tech
4. MTN
5. Airtel
6. Mobipay



1. 8Villageas
2. Bank Andara
3. PISagro
4. Syngenta Indonesia
5. BPR Pesisir Akbar (Rural Bank)
6. District Agriculture Extension Offices
7. Faculty of Agriculture, Gadjah Mada University



1. Zimbabwe Farmers Union
2. The Ministry of Agriculture
3. Econet Wireless

The Agri-Fin Mobile program intends to continue working with partners and explore facilitation with other partners with a strong value proposition in order to explore opportunities to scale-up its activities.

Strategic Alliances

FIT Uganda

FIT Uganda Limited is a private business development consulting company with over 15yrs of experience in market information services. Over the years, they have learned from experience the challenges mainly affecting smallholders and developed a unique product, FARMIS; Farmer Record and Management information System that operates on both web and mobile supports the dissemination of advisory and market information to systems, this product was essentially well pronounced and gaining adoption in the market as perceived. The Agri-Fin program partnered with FIT Uganda to fully revamp the product through feedback provided by the farmers and made it a valuable service in the market. Over time through constant modifications of system and extensive marketing, the product has reached over 20,000 smallholder farmers with a plan to target an additional 30,000.

Orange Uganda (Now Africell)

The Agri-Fin program initially partnered with Orange Telecom, a French franchise company after the launch of its Orange money product in January, 2013. Despite being a small-shareholder in the market, Orange has been fundamental in taking the opportunity offered through the Agri-Fin Mobile program to the target audience, market its products and develop its mobile money network for cash in and cash out services in areas where output dealers were churning out payments. Orange Telecom worked with Farmer Center, a farmer centric association to layer its Orange money services for the input and output transactions.

Beyonic Limited

Beyonic is a mobile payment systems solution provider for mobile network operators and other service providers through the offering

innovative solutions and consultancy services for businesses in public and private sectors. Their new product funds to phones is a payment solution that can be tailored and offered to fit the needs of various actors in the agricultural value chain payments with user friendly features that enables its users to track and generate transactional records over time. The challenges around payments for most output dealers has been on safely delivering the payment with the huge cash payments that they make with long times on effecting transactions from B2P, most of the buyers have at least a structure of agents that connect them with the smallholders. The general challenges around cash payments, cash loss and long transaction times, and further, low savings levels by the farmers.

The Agri-Fin Mobile program partnered with Beyonic to develop an appropriate technology solution for the delivery and management of payments by the different actors to enable an effective ecosystem. Beyonic will be involved in setting up agents and registering farmers for mobile money payments with each transactional history of a buyer developed to allow for future credit rating. The current target is to reach up to 10,000 smallholder farmers and 200 agents across the operational area.

Bank of Uganda/GIZ

Bank of Uganda is the central financial governing body for the Government of Uganda. They have previously developed 8 core messages in financial literacy with technical support from GIZ and are trying to disseminate it in various forums to understand the impact that each channel is contributing. The Agri-Fin Mobile took the initiative to support the transcribing of the financial literacy to sms bit-size messages for mobile mass uptake. The messages will then be rallied to 10,000 smallholder farmers through the FARMIS and Beyonic systems that are receiving advisory and mobile payments; reinforcement of these messages will be through the radio business forum discussions through trigger messages sent out

Agri-Fin develops marketing strategies that are inherent from launch of the product with iteration of the business models to create a strong value proposition focused on a win-win for all actors in the ecosystem.

to farmers to discuss their experiences and questions on radio. Five (5) radio presenters for the five radio stations and 40 other agents will be trained on the full depth of the financial literacy and provide human interface discussions with the farmers on radio and physically respectively.

Mobipay

Mobipay is a third party provider for the AgriLife platform that allows for generating transaction records for farmers through the different service provisions on inputs, outputs, financial services etc. The program introduced the partner to different service providers in the country.

AgriNet

AgriNet is an output dealer for agricultural products and works with over 20,000 smallholder farmers through a network of 200 agents. The agents are mainly a channel through which aggregation for products and transactions takes place with each agent representing a cluster of 100 farmers. Most times when AgriNet is making purchases, it passes cash to its agent to make the payments ranging from 2-4million UGX, most times this cash is susceptible to fraud and takes longer times to reach the agents. Farmers on the other hand once they receive the cash, they don't have enough time to plan for it and hence end up spending it.

Mercy Corps through its Agri-Fin Mobile program has partnered with buyers of this nature to support in developing tailor-made mobile payment solutions through facilitating partners linkages like Beyonic to AgriNet, to setting up a total business solution on mobile payment to its agents and farmers. Financial literacy messages will also be layered to farmers receiving payments from AgriNet to improve on saving behaviour and knowledge on financial services. Each of the farmers' transactions will be used as a benefit for credit scoring and

link to financial institutions, these records only become beneficial after two transactional farming sessions.

MTN/Airtel

MNO's play a critical role in promoting mass uptake of products and services that is highly beneficial to rural populations and smallholder farmers. Over the years, Airtel has already branched in testing out mAgri products and launching of other low end customer products for smallholder farmers. MTN remains the largest shareholder of the telecom space with wide reach across the country. Despite the growth in the sector at 7% per year, huge constraints are still realised in rural Uganda that engulfs 80% of Uganda's farming population on the network coverage for phone signal and sparsely located mobile money agents to fully support the ecosystem for cash in and cash out, liquidity management issues around some of the agents and literacy levels among the farmers are major impediments to developing an e-ecosystem.

8Villages

8Villages has developed LISA, an SMS and internet platform that allows farmers to join their local crop community and receive regular community updates: seeds offers, harvest offers, questions by peers, answers by peers or local agri-experts. "Knowledge seekers" receive information by SMS, "Knowledge givers" have access to a fun and engaging web-platform where they can earn credits and improve their reputation status within the farming community. The platform has been tested with a 1,000 users in West Java, Indonesia. The development of engaged communities will allow for easier introduction of more complex offers related to finance and insurance in the mid-term.

Signed an MoU with Agri-Fin Mobile program in October 2012, 8Villages provides agricultural information services to agricultural extension personnel and farmers through development of the LISA

The program will continue efforts to develop the ecosystem of partners based on a shared value approach to build solid business cases for all partners and elaborate on cross-selling opportunities for the partners.

(Layanan Informasi Desa/Village Information System) platform, which was launched in December 2012. In November 2014, in cooperation with Mercy Corps Indonesia and the Faculty of Agriculture of Gadjah Mada University, 8Villages launched Aplikasi Petani (an Android-based Farmers Application). In addition to providing agricultural information services, the 8Villages platform is also used by the Agri-Fin Mobile program to provide digital financial literacy training and conduct surveys on the impact of the financial literacy training for female farmers.

Bank Andara

Bank Andara is a wholesale banking institution with social and financial bottom lines. Bank Andara obtained Bank Indonesia's approval to run the business in January 2009, and currently serves as a strategic banking partner to the Indonesian microfinance sector (MFI) in providing loans and services. Established by a trusted international investment consortium, Bank Andara's shareholders are Mercy Corps, IFC, KfW, Hivos-Triados Funds, and Developing World Markets Fund S.C.A – SICAV SIF, global investors in microfinance. The Bank currently works with almost 800 MFIs throughout Indonesia, provides loans to 563MFIs and has installed Andaralink payment services to 446 MFIs. The bank intends to reach 1,200 MFIs in the next 3 (three) years.

Signed MoU with Agri-Fin Mobile program in October 2012 and partnership agreement in May 2013, Bank Andara has provided loans to 198 corn farmers and mobile payment services through cooperation with Micro Financial Institutions (MFIs). Bank Andara provides training to the MFIs' field personnel on how to operate AndaraLink Mobile, whereby farmers can make bill payments, domestic remittance, and savings deposit and loan payment solutions through smartphones/tablets and Bluetooth printers carried by the MFIs' field personnel.

PISAgro

PISAgro was announced during the World Economic Forum (WEF) in East Asia. To bring a new vision of agriculture of the WEF into real action and to accelerate the changes that are needed to tackle the food security issue. The initiative by the Indonesian Government was quickly supported by seven private companies: Bayer Crop Science, Indofood, McKinsey, Nestle Indonesia, Sinar Mas, Syngenta and Unilever to form a Public Private Partnership platform. The seven companies are known as the founders of PISAgro.

PISAgro was aspired to provide a platform for collaboration among the different stakeholders in the Indonesian agriculture sector. It was set up to facilitate dialogue, mobilise commitments and new partnerships that connect the strengths of each stakeholder. Its objective is to achieve a target of 20% increase in agricultural productivity, 20% increase in farmers' income and 20% decrease in greenhouse gas emissions in each decade. Mercy Corps Indonesia partners with PISAgro as a member of the Rice WG, the Corn WG, and the AgriFinance WG.

PT. Syngenta Indonesia

Syngenta is a world-leading agri-business company, headquartered in Basel, Switzerland. It is one of the world's leading companies in over 90 countries dedicated to bringing plant potential to life. Our Crop Protection and Seeds products help growers increase crop yields and productivity. It contributes to meeting the growing global demand for food, feed and fuel and is committed to protecting the environment, promoting health and improving the quality of life.

Signed an MoU with Agri-Fin Mobile program and 18 other stakeholders in August 2014 to provide a bundle of loan and "Start It Right" (Awali Dengan Benar, ADB) technology and information services to corn farmers in Dompu and Bima Districts. The direct

assistance to the farmers is conducted through visits by three agronomists to the 198 farmers (in 10 farmer groups) and by conveying implementation of the ADB technology through SMS blast.

BPR Pesisir Akbar (Rural Bank)

BPR Pesisir Akbar was established in 2005 and operated in 2007. BPR Pesisir Akbar has more than 10,000 clients (more than 6,500 savers and more than 7,000 borrowers) who are serviced by one head office, one branch office, and nine service offices located in Bima District. Around 55% of the borrowers are in the agriculture and fishery sectors, 25% in service sector, 10% in industry sector and 10% in other sectors.

Signed an MoU with Agri-Fin Mobile program and 18 other stakeholders in August 2014 to provide a bundle of loan and mobile payment services using AndaraLink to corn farmers in Dompu and Bima Districts. The 198 corn farmers, who signed credit agreements with BPR Pesisir Akbar, will receive packages of production inputs (seed, pesticide, fertiliser, herbicide, booster) to implement the ADB technology and cash to pay labour costs (for land preparation and harvest).

District Agriculture Extension Offices

For the purposes of promoting and conducting training on LISA and financial literacy training for farmers (including female farmers), the Agri-Fin Mobile program has worked together with four agricultural extension offices, located in Karawang District, Bogor District, Indramayu District and Subang District in the province of West Java. Each agricultural extension office appoints an agricultural extension personnel coordinator to serve as the focal point and coordinate the promotion and training activities for the sub-district extension offices. These include the agricultural extension personnel as trainers, and farmer organisations (farmer groups and female farmer groups) as trainees.

Faculty of Agriculture, Gadjah Mada University

The Faculty of Agriculture of Gadjah Mada University (UGM) is one of the oldest agriculture schools in Indonesia. It signed an MoU with the Agri-Fin Mobile program in November 2014 to launch Farmer Application for agricultural extension workers

in the provinces of Central Java and Yogyakarta. The Faculty of Agriculture provides experts to answer questions from farmers and agricultural extension personnel and uploads articles/journals that are relevant to farmers on Farmer Application.

Zimbabwe Farmers' Union

The Zimbabwe Farmers' Union is a registered farmers' organisation that represents smallholder farmers across Zimbabwe. The Union seeks to advance the interests of smallholder farmers in Zimbabwe. The farmers union signed a Memorandum of Understanding with the Agri-Fin Mobile program to support the development and promotion of the bundled of services.

Ministry of Agriculture

The Ministry of Agriculture, Mechanisation and Irrigation Development is the ministry that is responsible for food security and the coordination of agricultural activities in Zimbabwe. It comprises of 15 departments and divisions. The Agri-Fin Mobile program also works closely with extension officers in the local districts.

EcoNet Wireless

Econet Wireless International is a diversified global telecommunications group. Its operations in Africa span into Zimbabwe, Lesotho, Botswana, Burundi, Nigeria and South Africa. Econet Wireless Zimbabwe is the country's leading mobile network operator (MNO). It operates as one of Econet Wireless International's key strategic business units. Products and services include mobile and fixed telephony, broadband, satellite, and fibre optic network, banking, transaction processing services and mobile financial services. EcoFarmer is Zimbabwe's largest mAgri service dedicated to delivering mobile based services to the agricultural sector. It was launched in 2013 as a subsidiary of Econet Wireless, a telecommunications company offering voice, data and other overlay services including mobile money services, solar products and mobile health services.



Focus on Agricultural Advisory Services

Agricultural advisory services is a product conceived to help improve smallholder farmer incomes through improved yields. When farmers register for the service, their interests are taken into account and they will receive topical agricultural SMS messages on specific crops. Key agricultural information that has been provided through the program has been farming tips, post-harvest information, weather information, market information. The aim was to better equip farmers with necessary information to better manage the production and increase on their productivity and inversely increase on farmers income, a key goal of the program.

The Agri-Fin Mobile program is focused on bundling essential services to smallholder farmers in order to increase on their productivity and incomes. The program is working on the hypothesis that increasing farmer's productivity and incomes requires access to agricultural advisory services, a key pillar with other factors constant. The program focuses on understanding the dynamics and system constraints around smallholder farmers in countries while collating with a market assessment of current and potential would be providers through a partner mapping process. This therefore enables the program to develop a demand poll for the information required from the farmers and the value proposition that a possible partnership would bring.



A Case for Uganda

To date, the platform has been able to provide information services to **15,465** smallholder farmers with **950,703** transactions enabled for push and pull messages, the farmers comprise of **56.8% male** and **43.2% female** and active farmers at **9,049**. Farmers have been able to make better decisions in terms of how they plant their products and where they can sell their products.

Through a partnership engagement process, a value proposition was developed with FIT Uganda to tailor its Farmer Management Information System (FARMIS) to the market. This partnership also enabled other stakeholder engagements in the product developed especially the National Agricultural Research Organisation (NARO) and Ministry of Agriculture. The platform's strategy has been to work through partner farmer cooperatives and associations with business and revenue models around subscription of payments from each farmer and the on boarding farmer organisation. Agents known as Production Information Agents did the marketing and profiling of the farmers to the system; the profiling takes into account the farmers bio data and the crop production information including up to three (3) crops that they would wish to receive information. Once profiled on the systems, they either pay immediately through mobile money an annual fee of \$8 or go through a trial period of one month and once not subscribed gets taken off the system. All information is provided through mobile, bringing the power of decision making to the palm of the farmer.

Lessons learnt

- A single information stream may not be of great value and needs to be complimented or embedded with other services. The agricultural information provided under FARMIS has been complimented with financial literacy. This is in bid to increase the value proposition of the product and to enhance all aspects of the farmer decision making.
- A marketing strategy is critical for any product to succeed. Initial anticipation of the program was to rollout the service through the network of farmer organisations but this required more boost in terms of reaching farmers. A radio campaign with incentives was developed to interest farmers in the product.

- Capacity building of the agents/interaction point for the farmers is critical in some instances; miscommunication on what the service or product was realised. It's critical to continuously refresh the agents on what exactly the product is and any new additions to it.
- Mobile penetration in rural environments has still remained low in some instances with limited network and low literacy levels sometimes. The program took into consideration the critical aspect of translating the messages to the local language while continuously remodeling the product with the feedback from the users. It's critical to engage other actors where the product doesn't have expertise or niche; for instance, network coverage and mobile phone sales.



01

Service Delivery Models

The mode of service delivery is through mobile phones, a key aspiration for the program in promoting mass uptake and increased ownership.

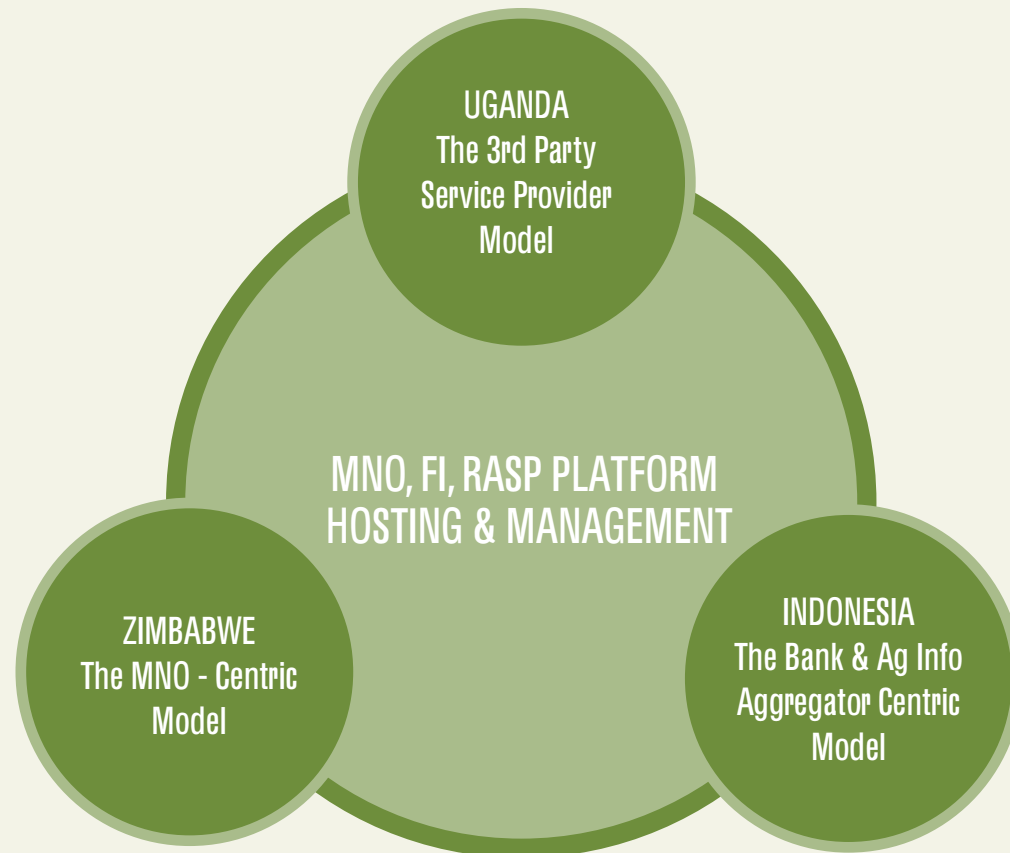
The Agri-Fin Mobile Delivery Model

The Agri-Fin Mobile program model plays a facilitator role to build a suite of services and partners with relevant stakeholders to effectively rollout the services. The program seeks to create a cluster of private and public sector players that share the same objective of creating and distributing mobile based solutions for smallholder farmers to improve their livelihoods.

Demand-driven bundled financial and rural advisory services via mobile phones are elaborated and made available.

In each country we have developed at least one content specific and appropriate mobile service targeted at smallholder farmers.

- Uganda - the FARMIS platform
- Zimbabwe - EcoFarmer platform
- Indonesia - LISA platform

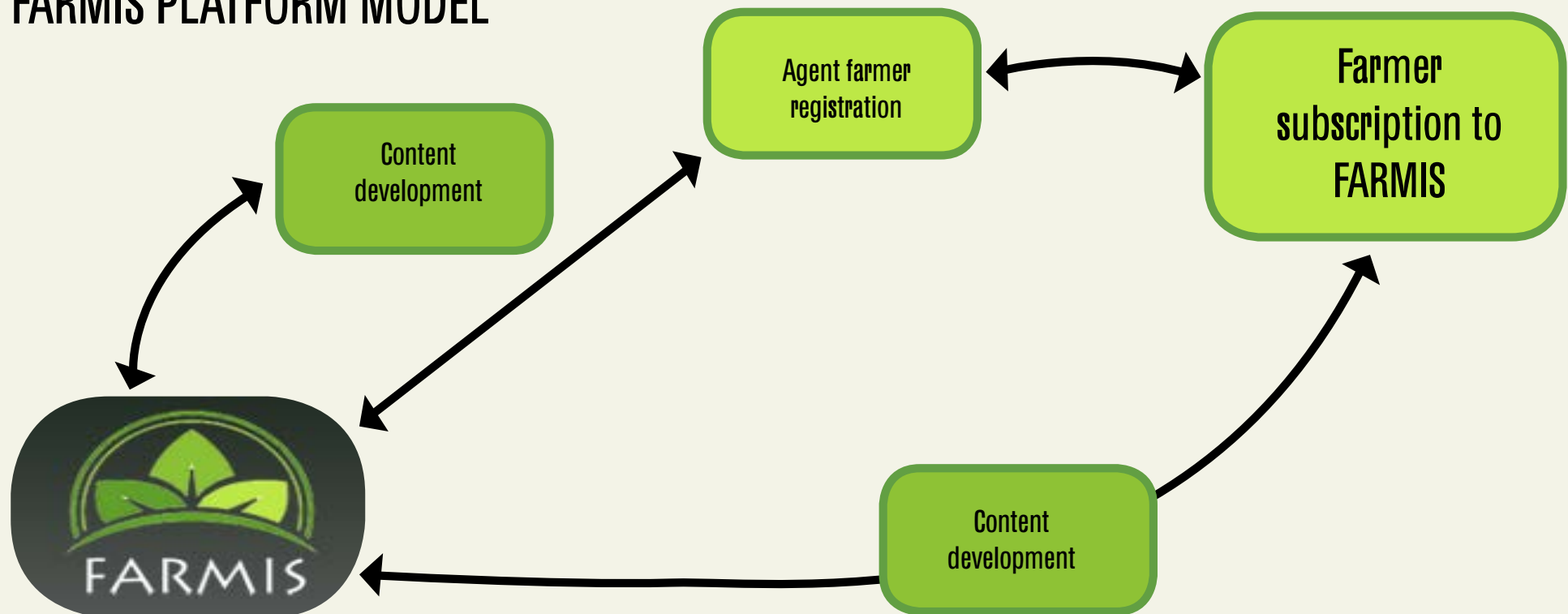


UGANDA - FARMIS

In Uganda our module has been through a third party provider FIT Uganda. We partnered with FIT Uganda to develop and take to market its Farmer Record Management information system (FARMIS). The FARMIS platform in perspective was already in the development process, however the program supported in the refinement of the product through the market research it had conducted. Pilots and user assessments were also conducted to enrich the product and increase its value proposition over time especially on the approach for the messages and dissemination channels.

The FARMIS platform is built off through content management and development with key research organisations in the country such as NARO, Ministry of Agriculture, and other content collaboration has been through Grameen foundation and Weather Feeds Company. Other forms of extensive research have previously been developed for 25 crops in Uganda. This information has then been packaged to meet to the needs of each of the farmers, depending on what they are producing. Once a farmer gets profiled onto the platform and pays for services, they receive information related to their request. Other options have been to put farmers that haven't paid instantly for a one month trial period.

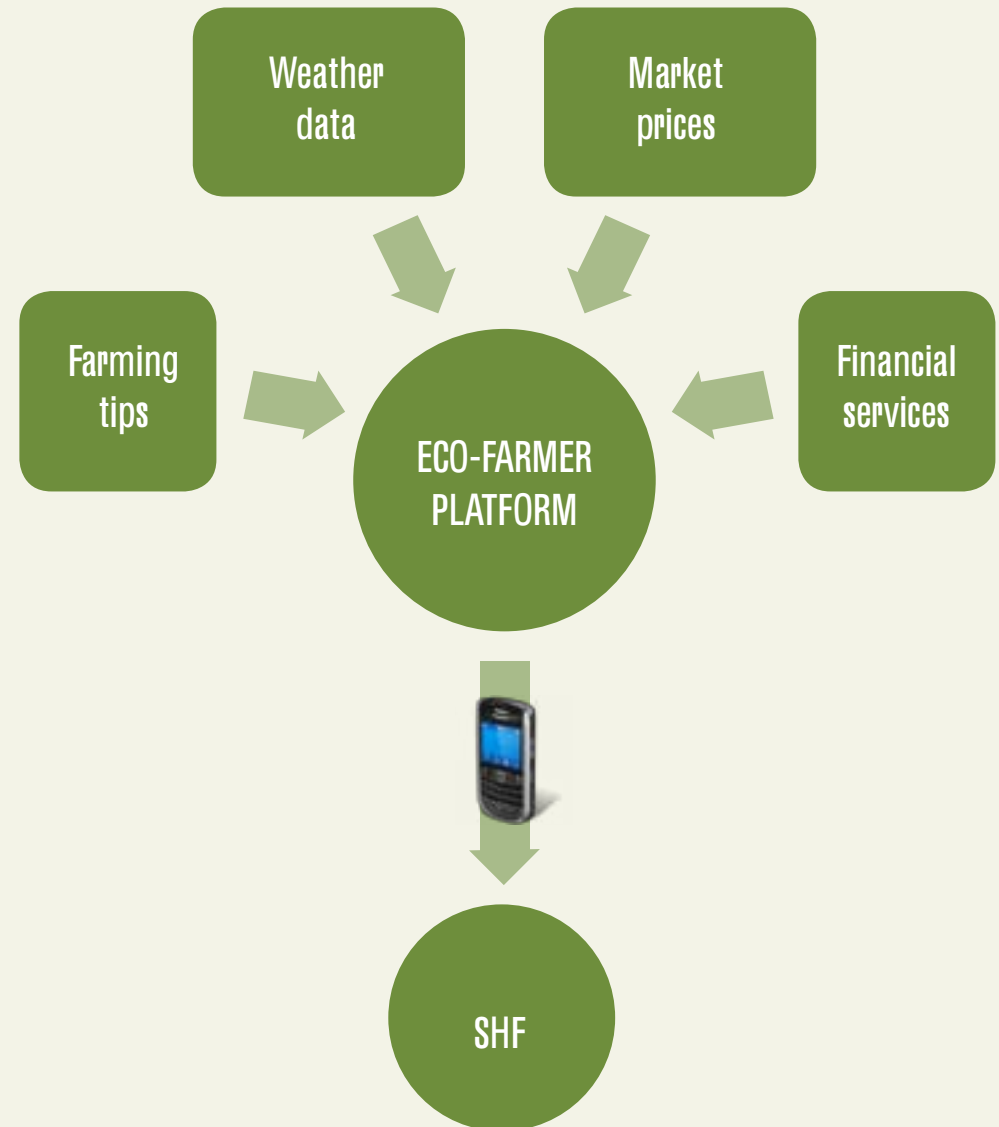
FARMIS PLATFORM MODEL



ZIMBABWE - ECOFARMER

In Zimbabwe, MoUs have been signed with EcoNet Wireless and Zimbabwe Farmers Union (ZFU), the leading smallholder farmer representative body in Zimbabwe representing over 400,000 smallholder farmers countrywide, as a way to bring together various private and public sector players that include banks, MNOs, Rural Advisory Service Providers and Content Managers to build a comprehensive suite of services and operational business model.

The MNO is the product champion and leads in product development and uses its mobile footprint to extend agriculture information to smallholder farmers through the mobile phone. This service will in turn contribute to improved customer loyalty and reduced churn. The farmers union is immensely involved in the registration and distribution of the Ecofarmer services through a network of brand ambassadors. They are also involved in product development and evaluation as the voice of the fragmented smallholder farmers. The Ministry of Agriculture supports product development and agriculture content development as the source of credible agriculture information.

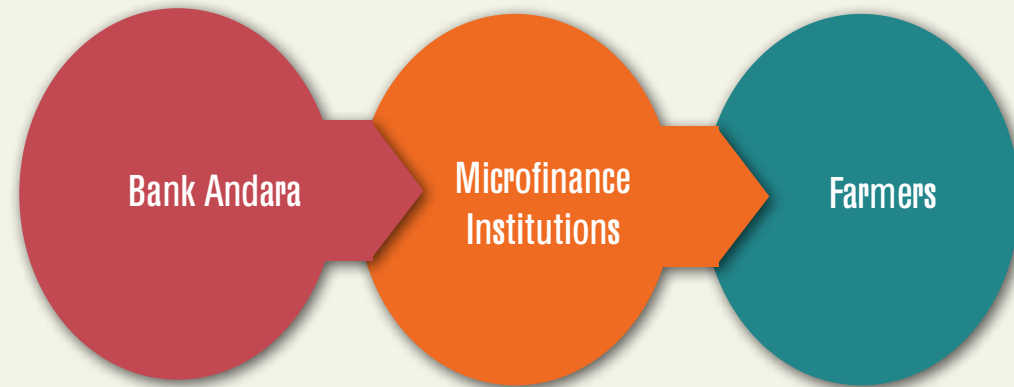


INDONESIA - LISA

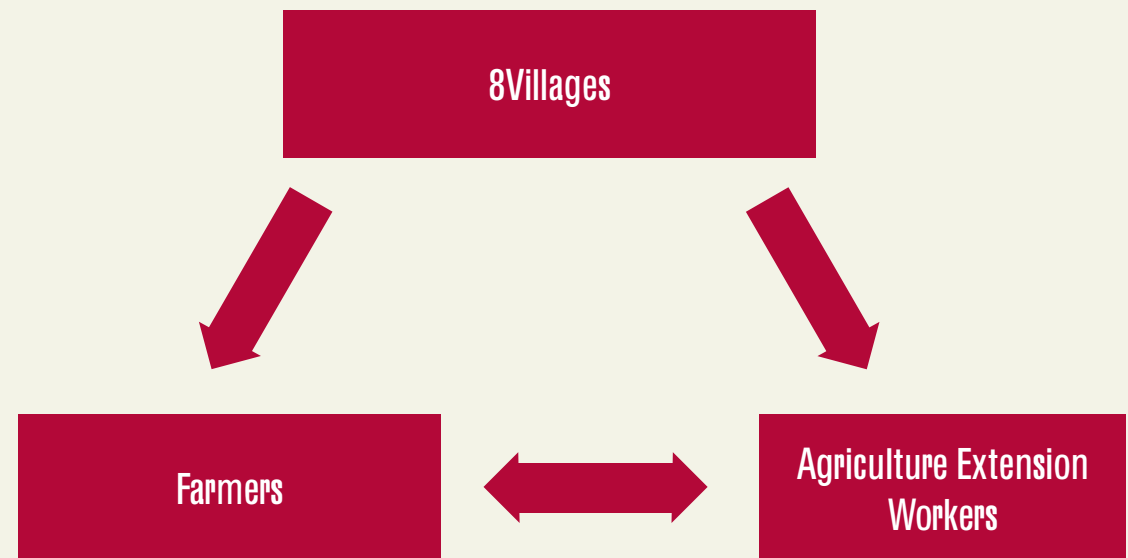
The result of product development research with 400 food and horticulture crop farmers (2012) indicated that what farmers need is agricultural information and financial services, especially loans and payment systems. Based on these needs, the Agri-Fin Mobile program in Indonesia conducted mapping of potential partners who could be invited to work together in providing the services needed by farmers, specifically rice, corn, chili and potato farmers (the value chains that are the focus in Indonesia). At the time, an MoU was signed between Bank Andara, 8Villages and the International Rice Research Institute (IRRI). As things developed several projects were conducted with Bank Andara for payment systems and credit for farmers, 8Villages for provision of text messages (SMS)-based agricultural information and implementation of digital mobile literacy through SMS. Bank Andara and 8Villages have partnered with Mobile Network Operators while the Agri-Fin Mobile program role is to act as a facilitator in order for the services provided by these partners can be used by large numbers of farmers. Based on discussions with the management of Bank Andara and 8Villages, there are different needs that require facilitation from the Agri-Fin Mobile program. The following scheme is the flow in the provision of the services provided by Bank Andara and 8Villages for farmers.

From the scheme above, it can be clearly seen that the facilitation carried out by the Agri-Fin Mobile program focuses on three aspects; training and promotion/marketing for agricultural information and mobile payment services and liaison with stakeholders for project financing. There are several options for delivery channels; using the delivery channels of the existing business models of the partner (microfinance institutions as the partners of Bank Andara) or cooperating with the district/sub-district extension offices as partners of 8Villages to convey agricultural information and carry out digital financial literacy training for farmers.

Bank Andara Delivery Model



8Villages Delivery Model



A close-up photograph of a man with short dark hair, smiling broadly while holding a mobile phone to his ear. He is wearing a grey short-sleeved button-down shirt. The background is a blurred outdoor setting with green foliage and a tree trunk.

"The bulk of smallholder farmers (85.5% - 89.1%) rated the mobile technology and sms services as being either easy-to-use, accessible, useful or convenient."

Mid-line survey 2014

02

Ensuring Supply of Bundled Services

Smallholders have sustainable access and make accurate use of financial and rural advisory services.

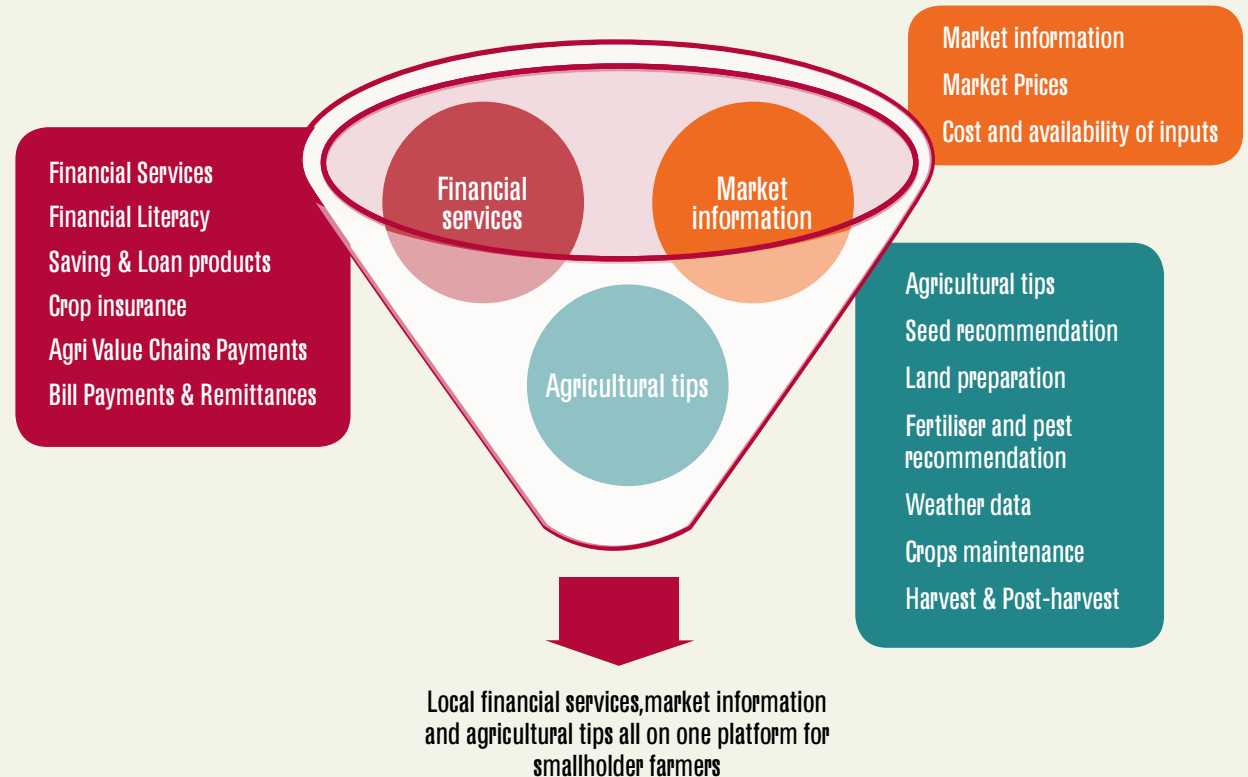
Introduction

The Agri-Fin Mobile program has been engaging with different partners to facilitate the delivery of services and products that will increase productivity and income among smallholder farmers through building an ecosystem and leveraging on the experience and expertise of each of the partners while mindful of a sustainable business model. To date, the program is growing an enormous amount of interest around its implementation strategy that has allowed the success in the 3 countries.

Maintaining availability of products and a reliable supply chain is essential to ensuring that target groups have access to the bundled services when and where it is convenient for them. Agri-Fin Mobile's first critical objective addressed this need; to ensure smallholder farmers have sustainable access and make accurate use of financial and rural advisory services. The Agri-Fin Mobile program's technical approach for supply focused on strengthening public and private product supply networks in order to increase quality of bundled service products. The program also ensured that these services were available to the target population (Male, Female and Youth Smallholder farmers).

The bundled services under the program include;

1. Agricultural Advisory services – Preferably paid for service
2. Financial integration – Literacy and advisory services
3. Agricultural Payments – Mobile payments, E-payments
4. Credit – Financial linkages



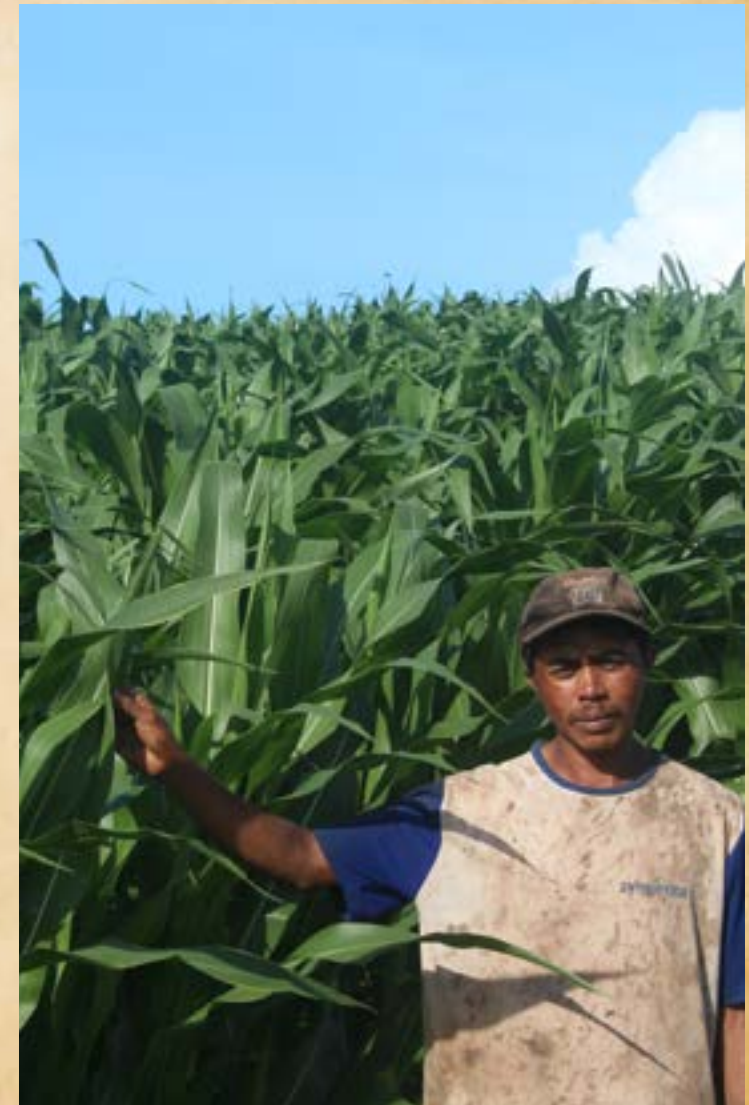
Generating additional incomes through bundled services

Pak Sabarudin (aged 32) is a farmer and head of the Tani Subur Farmers Group in Nusa Jaya village, Manggalewa sub-district, Dompu district. Pak Sabarudin has 1 hectare of land and in 2013, his corn yields were only 5 tons/ha. To meet his need for purchase of agricultural inputs and labour costs, Pak Sabarudin usually borrows from a money lender or agri kiosk or local trader.

Pak Sabarudin is one of the 198 corn farmers in Dompu and Bima districts who took part in the financing project integrated with ADB technology and agricultural information and saving/loan payment collections facilitated by the Agri-Fin Mobile program in cooperation with Bank Andara, PT. Syngenta Indonesia, BPR Pesisir Akbar (a rural bank), ten corn farmer groups, and four grain traders. The sources of funds for the farmers' loans were provided by Bank Andara and channeled to BPR Pesisir Akbar through an executing scheme. When Pak Sabarudin signed the credit agreement with BPR Pesisir Akbar for Rp 8 million (USD 640) for 1 HA, he automatically received the entire bundle of services, including a package of production inputs provided by PT. Syngenta Indonesia, assistance in the use of ADB technology provided by PT. Syngenta Indonesia in the form of agronomist personnel and agricultural information through SMS Blast.

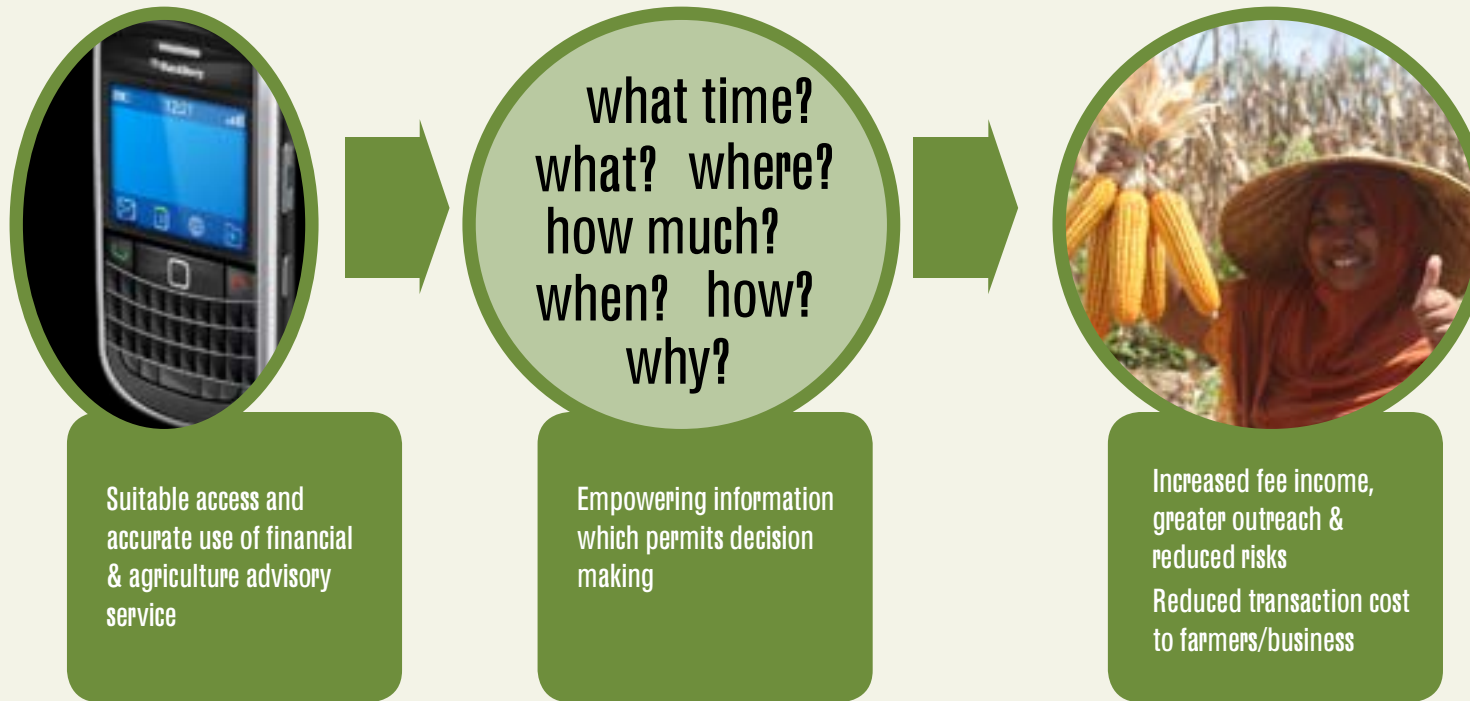
After the harvest, when Pak Sabarudin's corn kernel crop was ready to be sold to the grain traders, a field officer from BPR Pesisir Akbar came to the grain trader's location and received the payment installment for Pak Sabarudin's loan using AndaraLink mobile. To ensure that the anticipated increase in income as a result of increased yields in 2015 would be used wisely, the Agri-Fin Mobile program conducted financial literacy training for farmers' wives, including Pak Sabarudin's wife. Although in the previous planting season Pak Sabarudin had received a loan from money lender, the availability of the bundled services accorded Pak Sabarudin great benefits and added value compared with the situation the previous year.

As a result of availability of funds and the package of production inputs before the planting season, including assistance in the use of ADB technology, both face to face and through SMS, Pak Sabarudin is optimistic that his corn output will increase by at least 20%. In addition, the availability of the AndaraLink savings/loan deposit solution used by the field officer from BPR Pesisir Akbar will save Pak Sabarudin both time and travel expenses.



Key strategies used to ensure supply of bundled services

Value proposition



"Using mobile money has dramatically increased the efficiency of our supply chain. Simply by paying our agents, we have realised much less loss than in previous seasons! All of our agents were paid by mobile money in February and when we pay farmers directly; it will get even more transparent. All 23 of the agents TruTrade bought product from received payments directly via mobile money in February! This has significantly reduced cash transportation costs and risks and 10 of these agents are also farmers that received 34.5m UGX (USD 11,000) realised in mobile money payments. This is the beginning of the tipping point for opening up financial access for smallholder farmers."

Paul, Managing Director of TruTrade Uganda



Focus On Financial Advisory Services

Financial advisory services are the second stage of the bundled services offered to smallholder farmers. It is developed with a view that as farmers' incomes improve, they will require financial literacy on how to handle their income. The Agri-Fin Mobile program has targeted financial literacy trainings to smallholder farmers' family members who are responsible for handling income especially women. The gender assessment was conducted through 20 FGDs with female farmer groups and youth farmer groups in six districts in Karawang District. Each FGD was attended by eight participants and facilitated by one facilitator/extension worker and one rapporteur. Ten of the FGDs were attended only by female farmers, and the other ten only by young male farmers.

Findings of the gender assessment include the following:

- Female farmers say their biggest needs related to agriculture are financing, tools and training.
- Male and female farmers want the same types of agricultural information from Agri-Fin Mobile, despite their different roles in agriculture production.
- Female farmers prefer face-to-face communication for training and learning.
- Male youth can access agricultural information through male youth farmer groups, but very few of these groups have been members below the age



of 25. Female youth are invisible in formal agricultural information channels because there are no female youth farmer groups in West Java Province.

Recommendations from the gender assessment included the following:

- Train female land-owners to teach female land-less laborers about LISA.
- Integrate savings and loans mechanism into LISA and train women in these services face-to-face.
- Encourage agricultural extension workers to create formal systems of networking and communication between female farmer groups to share information and skills.
- Make LISA promotional events accessible to women and explicitly state female farmers in communications about LISA.

The Agri-Fin Mobile program plans conducted training for 10,000 female farmers (70% were female farmers who own land and also work on it) in Bogor District, Subang District, Indramyu District and Karawang District, all in West Java Province. During the training, the Agri-Fin Mobile program worked together with the Government Agricultural Extension Offices at the District and Sub-district levels and with Female Farmer Groups (FFGs). The Agri-Fin Mobile program was provided with master trainers and training modules for the trainers and the female farmers. The Government Agricultural Extension Offices provided the candidate trainers to be trained by the master trainers through ToT. The material conveyed in the training included agricultural information services (LISA), family financial management, and products and services of financial institutions, including a payment system service using AndaraLink.

It is hoped that after taking the training, female farmers will join the agricultural information service community (LISA), which includes daily tips on good agricultural practices and enables them to submit questions directly to experts, to provide comments on the experts' responses, to form interactive groups, and to receive incentives if they invite other female farmers to join LISA. This service can be accessed free of charge by mobile phone and does not require internet access. It is also hoped that female farmers who understand about family financial

management will apply this knowledge in their daily lives. The female farmers will prepare family financial plans and create a priority scale for expenditures, so that they can save in a regular, disciplined and planned way in order to meet their future needs. For the implementation of the training, the Agri-Fin Mobile program has developed two modules, for trainers and female farmers.





A Case for Indonesia

Ibu Hayanih is a 43 year old mother of three who lives in Kalijati village, Jatisari sub-district, Karawang District. When they were first married, from 1990 to 1995, Ibu Hayanih's husband worked as a factory employee and she was a housewife. In 1995, her husband decided to switch to farming, on the grounds that farming would give him more free time to develop other activities that would increase the family income.

Born in an urban area, Ibu knew absolutely nothing about agriculture till her husband started farming. To date, they have not joined any farmers group but access agricultural information through friends and neighbours. When some of the plants are not looking normal, she will describe the obvious symptoms to the owner of the agricultural chemical shop; he will then give her the appropriate chemical and explain how to use it, but without mentioning the type of pest or disease that is causing the problem.

Ibu Hayanih and her husband farm on three bahu of land (1 bahu = 0.7 hectare), which they rent on a share cropping basis. Each year, they plant two crops of rice and one of mung beans. From the first rice planting season, they harvest 12 tons of dried rice grains, and 11 tons in the second season. The total expenses for their farming business on the three bahu of rice fields comes to Rp. 7 million (\$532). The expenses include land preparation (tractor rental), labor for plant preparation and planting the seedlings, fertiliser and pesticides. The fertiliser is usually provided by the land owner, while Ibu Hayanih's family gets the seedlings and pesticide from the agricultural input shop, paying after the harvest.

Taking part in the Agri-Fin Mobile training was a new experience, particularly the material on LISA and on family financial management. The LISA tips have given Ibu a lot of information that she has wanted for a long time. In addition to receiving tips, Ibu Hayanih also sent questions in to LISA; about alternating irrigation, bokashi fertiliser, and what is leaf blight and how do we deal with it. Previously, when she posed her questions at the agricultural input shop, the answer was not an explanation but just a chemical. On the contrary, when she asks LISA, she gets a complete explanation. Another advantage of LISA is that questions can be sent in any time and from anywhere, and there's no need to be embarrassed; she can send a question from the privacy of her room without anyone else knowing. LISA has opened up new knowledge about farming that she had never known before.

Over the course of two months, Ibu Hayanih has sent six questions to LISA. One of the questions she asked was "What is bokashi fertiliser?" The answer from LISA: "Bokashi fertiliser is the same as compost: the result of decomposition of organic materials through a fermentation process. Examples are animal manure bokashi, straw bokashi, etc.

Thanks to the tips and answers from LISA, Ibu Hayanih's crop in August 2014 was larger by one ton than her previous harvest, causing the greater revenue by Rp. 3,900,000 (\$296). Ibu Hayanih has started to save diligently at her child's school, at the rate of Rp. 10,000 (\$0.76) per day, set aside from her daily spending money.

The selling price of dry rice from the first growing season was Rp. 3,900/kg, and Rp. 4,400/kg in the second growing season. In the first harvest season, the price was relatively low because there was a fair amount of rain, so the harvested rice grains did not get dry. The money earned from selling the dry rice grains in a good harvest comes to Rp. 46.8 million. (\$3,557) This is then split 50-50 with the land owner, so the amount Ibu Hayanih receives is Rp. 23.4 million (\$1,779). The profit from one planting season, Rp. 23.4 million (\$1,779), less the 7 million (\$532) of expenses, leaves Rp 16.4 million (\$1,247). This profit is then used for day-to-day needs, school fees, home and child care expenses..

Achievements

In late 2013, the Agri-Fin Mobile program conducted a pre-test of a financial literacy module for female farmers together with 34 female agricultural extension workers and 650 female farmers in Subang District, Indonesia.

- Training of Trainers (ToT) was conducted for 71 agricultural extension workers in the three districts.
- Financial literacy training was conducted by the female agricultural extension workers, reaching 10,004 female farmers through in-person training and practice. Of the 10,004 female farmers who took part in the training, around 6,000 own mobile phones. 2,400 female farmers (40%) were registered with the LISA platform.

Lessons Learnt

- Female farmers are more interested in receiving information about financial literacy than agricultural information. It is suspected that this is because the farming business activities are mainly the responsibility of their husbands, while the female farmers' primary responsibilities are managing the family financing and supporting the farming activities.
- One constraint faced in conveying agricultural and financial literacy information was frequent changes of SIM cards. At the same time, after changing their SIM cards, the female farmers forgot how to register with the LISA platform.
- After conveying the financial literacy material via SMS, the Agri-Fin Mobile program sent quizzes each week to learn the female farmers' response to the material they had been given. The questions were of an open-answer type, and the female farmers had to answer within a 160-character limit. For each right answer given, they would receive an incentive of Rp 5,000 (USD 0.4) worth of pulsa (mobile phone usage units). The existence of this incentive strongly motivated female farmers to send in answers.

- When conveying financial literacy material by mobile phone, it is important to confirm whether the mobile phones that the farmers use are their own or are shared with other family members. Information may be missed under circumstances of shared mobile phones.



03

Marketing Bundled Services

The ecosystem of partners established in the three countries has been the foundation of success for the project. Use of brand ambassadors and community leaders has contributed to the uptake of services.

Introduction

Successful marketing requires not only a reliable supply of products and services, but also promotion of behaviour change in agricultural practices and creation of a demand for the products and services supplied. Agri-Fin planned and targeted activities to increase consumer awareness and improve use of agricultural and financial products and services. This involved a comprehensive integrated communication strategy informed by evidence-based needs, to promote, reinforce, and sustain product use and positive farmer behaviour. These activities created a supportive environment and empowered communities to recognise and appreciate their rights and responsibilities in adopting good agricultural practice behaviours. Agri-Fin Mobile program has employed different marketing strategies tailored to the specific country context as explained below.

Uganda

In Uganda, marketing of the FARMIS platform has been through various explored means. The farmer cooperatives and associations as congregating centers are the first reach of services to smallholder farmers, however Production Information Agents (PIA) have been recruited and trained from within the cooperatives to act as marketing and profiling agents, beyond profiling they also act as the human interface in the farmer community to connect with the FARMIS system in case they require additional information. The incentive for them to undertake the role is through commission percentages for every farmer they bring to the FARMIS platform and also from those who have paid.

Other media and incentive strategies have been deployed and worked effectively. Radio has been a good boost in promoting services as it spans over some of the geographic areas. Promotional items have helped in generating interest and gaining more insight of the product. With the radio initiatives, the product has been able to gain momentum in other areas of country not initially targeted and increasing access of the services. Other marketing materials such as flyers, t-shirts

and stickers have been used with information on how farmers can get access to services. We believe all these strategies are critical in driving the products and services into the market and should be inherent into the marketing strategy of the product.

Indonesia

Since it was first launched in December 2012, Agri-Fin Mobile has worked together with district and sub-district agricultural extension offices and 8 Villages in providing training and promotion of LISA (Village Information Service) for farmers, heads of farmer groups, and agricultural extension workers in four districts (Karawang, Subang, Bogor, and Indramayu) in the province of West Java. The partners use a multi-channel marketing strategy through cooperation with Agricultural Extension Offices/Agriculture Services, the University, agribusiness companies, the agriculture programs of donor institutions, and Mobile Network Operators.

As at end of March 2015, there were 72,000 farmers registered on the LISA platform a dramatic increase from 15,000 as at August 2014. This marketing strategy was also aimed at increasing the number of female farmers using the LISA services. Whereas at the end of 2013, female farmers accounted for only 5% of the farmers registered on the LISA platform, by July 2014 40% of the users of LISA were female farmers. This change occurred because the Agri-Fin Mobile program conducted financial literacy training which targeted 71 female agricultural extension personnel and 10,004 female farmers, and the training was conducted at locations close to the residences of the female farmers.

Zimbabwe

In Zimbabwe the distribution of services is anchored on a network of selected agents that represent Ecofarmer within rural communities. These are paid agents of various ages that are trusted, capable farmers. The use of mobile technology and the nature of the target market warrant a marketing strategy that addresses basic trust concerns. Therefore, the brand ambassador network is the foundation

Agri-Fin planned and targeted activities to increase consumer awareness and improve use of agricultural and financial products and services. This involved a comprehensive integrated communication strategy informed by evidence-based needs, to promote, reinforce, and sustain product use and positive farmer behaviour.

of the marketing strategy for the services. The agents provide the critical face to face selling of the products and are the ambassadors for the services. They therefore go door to door and approach farmers to register for the services. Additionally, they also ride on community gatherings and events like field days to promote the Ecofarmer suite of services.

These brand ambassadors are frequently trained on any new product features and are also consulted to provide feedback on the use of the services and any other questions and issues raised by registered farmers. These agents are paid by the Zimbabwe Farmers Union that has been given a sub-grant by

the program to facilitate the selection and coordination of this network of agents.

Econet leads on the mass promotion of the suite of services throughout the use of billboards, flyers and vehicle advertising. Econet also supports the marketing of the services by also attending public events at district level (e.g. Food and security committees) and community events to promote the Ecofarmer suite of services. Additionally, the program provides the financial and mobile literacy training that support the uptake and marketing of services.



Accelerated behaviour change and adoption of good farming practices among smallholder farmers in Zimbabwe.



In Zimbabwe the Agri-Fin Mobile program in partnership with private and public players developed a mAgri platform known as the Ecofarmer service. This advisory service disseminates farming tips and market prices to smallholder farmers through the mobile phone. Ecofarmer additionally provides the smallholder farmer access to weather index insurance cover for the agriculture season.

Initial assessments of the Ecofarmer service have revealed two interesting ways that farmers have been impacted by the mAgri advisory service. The service has positively impacted farming practices of smallholder farmers and has contributed to their accelerated behaviour change. The advisory service has shared what farmers have considered new information and also old information that reminded smallholder farmers of techniques they had been taught thereby reinforcing their value. Additionally,

She now acknowledges that the farming tips have changed her mindset on the concept of farming and that her crop requires close monitoring in order to realise an improvement in her crop productivity. The service has triggered a behaviour change among smallholder farmers and shows evidence that there is potential to improve productivity.

the advisory services have been noted to trigger immediate responsive action particularly by women. The opportunity to access timely and relevant information has provided a foundation for the smallholder farmers to improve their livelihoods.

Mrs Marimo is a smallholder farmer in the Murehwa district in Mashonaland East province. She registered for Ecofarmer on the launch in October 2013 and has been receiving valuable information from Ecofarmer since then. Last season Mrs Marimo received a number of farming tips on the maize crop. Although some messages required additional information for her to be able to act on there were specific tips that she clearly has found useful and have impacted on the way she farms.

While her crop grew as she waited patiently for harvest time, she received a message that changed her view on her farming practices. The message advised her to continuously check on her crop and keep weeding as weeds can actually affect the quality of her crop. This triggered her to immediately weed her field and continuously keep an eye on her crop at every stage of the crop cycle. She now acknowledges that the farming tips have changed her mind set on the concept of farming and that her crop requires close monitoring in order to realise an improvement in her crop productivity. The service has triggered a behaviour change among smallholder farmers and shows evidence that there is potential to improve productivity.

Access to the farming tips has also shown that it can impact on the quality of yield and output. In Mashonaland East some farmers in Hwedza noted that they received a message that changed the quality of their yield. The farming tip recommended that farmers soak their maize seeds before planting them as this would improve the germination process. For some of the farmers this was not necessarily new but it reminded them of good farming practices they had been taught. The farmers reported that when they actually soaked the seeds they indeed germinated faster than the usual as per the received message. This improved their yield for the season and they hope to continue using this practice for the coming seasons.

The farming tips have triggered new thinking about farming, a change in farming behaviour of smallholder farmers now that there is evidence that yields will improve and there is potential to increase incomes. The advisory service is adding value

to farmers by sharing with them good farming practices. This use of technology to disseminate agriculture information can result in accelerated behaviour change and adoption of good farming practices for long term impact on smallholder farmer productivity and incomes.



04

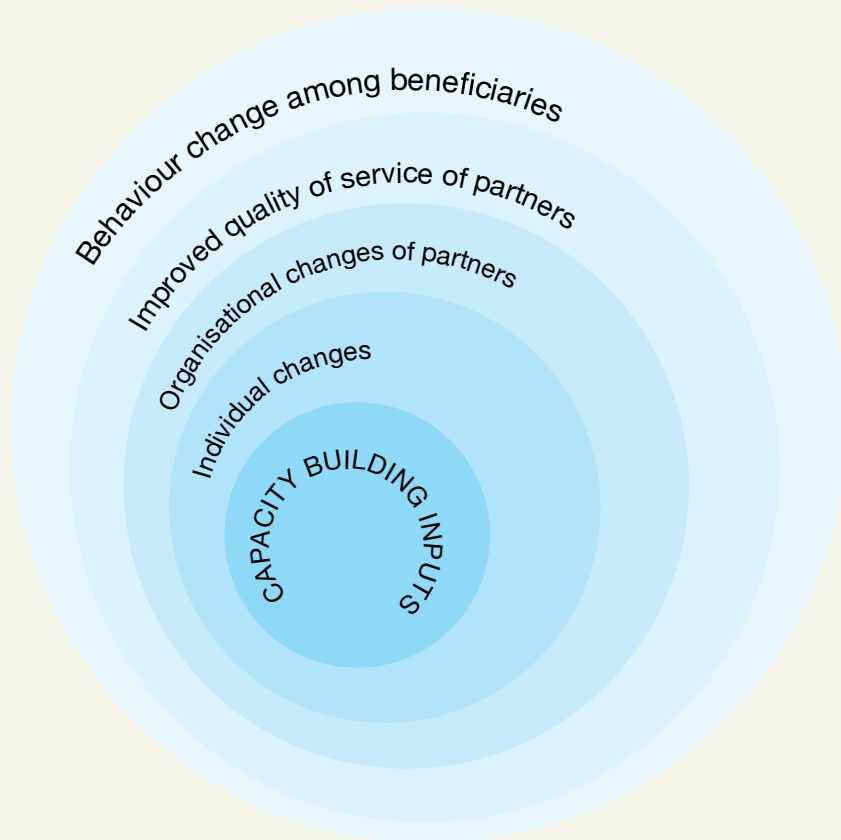
Partner Capacity Building

The program targets partners with existing financial, MNO and agricultural technical mobile platforms or applications, or demonstrated interest in developing and investing in them; and facilitates development of a development model whereby the bundling process provides and increased value proposition for each partner such as increased fee income, greater outreach, or reduced risk.

Introduction

In order to fulfill its goal, Agri-Fin has ensured that partner capacity building is a continuous process for its stakeholders. Agri-Fin mobile has worked to empower and strengthen local institutions to take control of their own growth for lasting change. Institutional capacity building strengthened the knowledge, skills and behaviour of individuals and improved systems, enabling institutions to efficiently meet their mission and goals in a sustainable way.

The Ripple Effects of Capacity Building



TRAINING SESSIONS CARRIED OUT SINCE PROGRAM INCEPTION

UGANDA

1. Mobile Money - Mobile Literacy training
2. Financial literacy training
3. SACCO Management Information Systems training
4. Cooperative Agricultural Information Systems training





It is possible to cost effectively and sustainably empower smallholder farmers to improve their food security and economic situations through the delivery of suites of financial and farm management products and services offered as commercially-viable, embedded services of financial service providers via mobile channels.



Focus On Agricultural Digital Payments Services

The third stage of bundled services is the Agricultural Digital Payments. This program was developed to reduce transactional charges through encouraging farmers to use mobile payments or digital money transfers (e-transfers). This in turn forms a transactional history for the farmers which has been the biggest problem for access to credit in the banking environment. Below, we share each country specific approach.

Uganda

The Agri-Fin Mobile program in Uganda partnered with Beyonic to support off-takers “buyers” to effectively utilise digital financial services and reduce on transaction cost. The approach was curved through working with Beyonic’s Fund to phone platform, an aggregated payment solution across the mobile networks in Uganda. A customisation of the platform was adapted to the structure of Trustrade (an off-taker), which works through input/output agents in reaching smallholder farmers, offering inputs during the start of the planting season and buying the outputs from the farmers during the harvest time. However, AgriNet has been challenged with effectively managing payments to the farmers and has lost lots of millions through the process of having to move physical cash from one location

to another to enable the purchase; in fact sometimes it would take them over a week to move cash to a required location. The farmers alone once they receive cash are quick to spend and as a result the program area has seen an up rise of social challenges such as alcoholism and gender based violence.

Indonesia

During the three years of implementation of the Agri-Fin Mobile program in Indonesia, our partner in the provision of financial services has been Bank Andara. Considering the business model of Bank Andara as a wholesale bank (which does not provide services directly to end users but instead through microfinance institutions), the Agri-Fin Mobile program always partners with microfinance institutions (MFIs), including BPR (rural banks), credit unions, savings and loan cooperatives, village unit cooperatives, and farmer group union cooperatives. Through its cooperation with microfinance institutions, the Agri-Fin Mobile program has been able to increase the access of farmers who are either customers or non-customers of MFIs to use the

The platform has been able to register up to 558 farmers with 270 transactions worth \$ 28,678 for the purchase of products.

“We have created a financial literacy program “magnify your life, simplify the use of money” and it’s gaining momentum. We are having discussions with interested sponsors already as we feel this will make a lot of impact to the farmers.”

Richard Barton, a radio presenter at POL FM in Kitgum, developed a financial literacy program for its estimated 7,000 listeners.

As of the end of April 2015, 10 MFIs that are partners of Bank Andara in West Java, Central Java, East Java and West Nusa Tenggara Provinces have also partnered with the Agri-Fin Mobile program to provide services of bill payments, domestic remittances, and saving/loan repayment collections to 17,705 farmers, who have conducted 89,972 transactions.

various features of AndaraLink Mobile (bill payments, domestic remittances and saving/loan payment collections) and loans. Together with Bank Andara, the Agri-Fin Mobile program has built the capacity of MFIs in the form of support for access to the AndaraLink platform, training AndaraLink for MFIs' field personnel, promotion and marketing strategies so that farmers will want to use the features of AndaraLink Mobile, and provision of loans for MFIs, specifically for farmer financing projects.

In July 2013, the Agri-Fin Mobile program started a pilot of AndaraLink Mobile in cooperation with a Rice Farmer Group Union Cooperative located in a rural area of Karawang District. Before partnering with the Agri-Fin Mobile program, the AndaraLink payment system was already used by around 300 Microfinance institutions (MFIs), but nearly all of these MFIs were located in urban or semi-urban areas. During the implementation of the pilot, it was learned that there were a number of constraints in the use of AndaraLink in rural areas, including the following: Unstable GPRS signal, operating hours of AndaraLink that were not suited to the circumstances of farmers at home to conduct transactions, and receipts from the Bluetooth printers that sometimes did not come out. These constraints were then discussed with the AndaraLink team so that various adjustments could be made.

Using the Agri-Pay business model, by the end of December 2014, the Agri-Fin Mobile program entered into cooperation with four MFIs (Rural Banks, Credit Union, Village Unit Cooperative) in three districts (Banyuwangi, Tulungagung and Jombang) in the province of East Java to provide bill payment services, domestic remittances and saving and loan payment collections to target at least 3,000 farmers and achieve 14,000 transactions by the end of April 2015. Because the AndaraLink Mobile services can provide added value for farmers who are customers and at the same time help to prevent fraud and increase the productivity of MFIs' field personnel, BPR ADY and KUD Dwi Karya in Banyuwangi district

have decided to make additional investment in 32 smartphones/tablets and Bluetooth printers to reach even more farmers. At the time the cooperation began, the Agri-Fin Mobile program only required a minimum of 2 units of smartphone/tablet and Bluetooth printers. Then by end of March, the Agri-Fin Mobile program signed a partnership agreement with 5 MFIs in Central Java and West Nusa Tenggara provinces to rollout the AndaraLink mobile for farmers.

Zimbabwe

Increased productivity and income can only truly impact household income and welfare if sound financial decisions are made. The program also seeks to build financial resilience of smallholder farmers to ensure they cope with unexpected changes and financial literacy is a valuable tool to achieve this. Financial literacy assists farmers to understand new concepts that will ensure uptake of financial services products. Financial literacy is therefore an essential component of the program. In Zimbabwe, financial literacy efforts are replicating efforts in Uganda.



56 agents have so far been trained and are expected to train smallholder farmers in their respective communities.

In Uganda the program partnered with the central bank of Uganda and GIZ to offer financial literacy training based on 8 core messages developed by GIZ. The GIZ consultant was tasked to provide the training in Zimbabwe as well focusing on key areas that identify with the smallholder farmer in Zimbabwe. These include savings, loans, financial management, insurance and mobile payments. Rolling out financial literacy training embedded in product promotion will enhance SHFs' capacity to make key household spending, savings and lending decisions, taking full advantage of existing financial products, in order to improve SHF well-being. The material from Uganda is the core of the financial literacy campaign and the sms will also be disseminated as the training continues. Econet has embraced the concept of embedding education in marketing services to the bottom of the pyramid.

Lessons Learnt

There are both behavioural and ecosystem challenges related to digital payment ranging from lack of trust on mobile payments and in some areas there is still low literacy levels coupled with low cell network penetration. Some of the learnings from the partnership have been:

- Education component on digital payments is still critical to drive this initiative. Some farmers still need re-assurance on the safety of mobile money services and any related risk. There are also basic challenges in initiating digital payments and how they can become more comfortable with receiving the service.
- Agent network for the mobile money service is not widespread: Most farmers in rural areas still have a challenge on accessing cash in and cash out points. Mapping out existing agents and identifying gaps is crucial in developing an inclusive ecosystem. Supporting existing input/output agents as mobile money agents has been one of the most appreciated approaches.

Financial literacy has been another aspect in both digital financial services and agricultural advisory services, as farmers move through the spectrum of both increasing productivity and incomes, it is critical to embody financial literacy

information to equip farmers with the right financial discipline and decision making skills. With collaboration with the Central bank of Uganda/GIZ which had already developed eight (8) core messages on financial literacy, the program facilitated the transcribing of these messages to sms or bit size to fit into the mobile channel, a core platform of the program. Partners have been introduced to this content and appreciate the content as adding value to already what they are providing, both the agricultural advisory provider and the mobile banking solutions have taken this as a value add of an embedded service. Other radio stations have also absorbed this content and developed financial literacy sessions.



05

Research

Access to agricultural and market information disseminated through these platforms has improved smallholder farmers' income. Weather information has guided farmers on timely ploughing, planting and weeding. Over 170,000 farmers have been profiled to receive these messages

Introduction

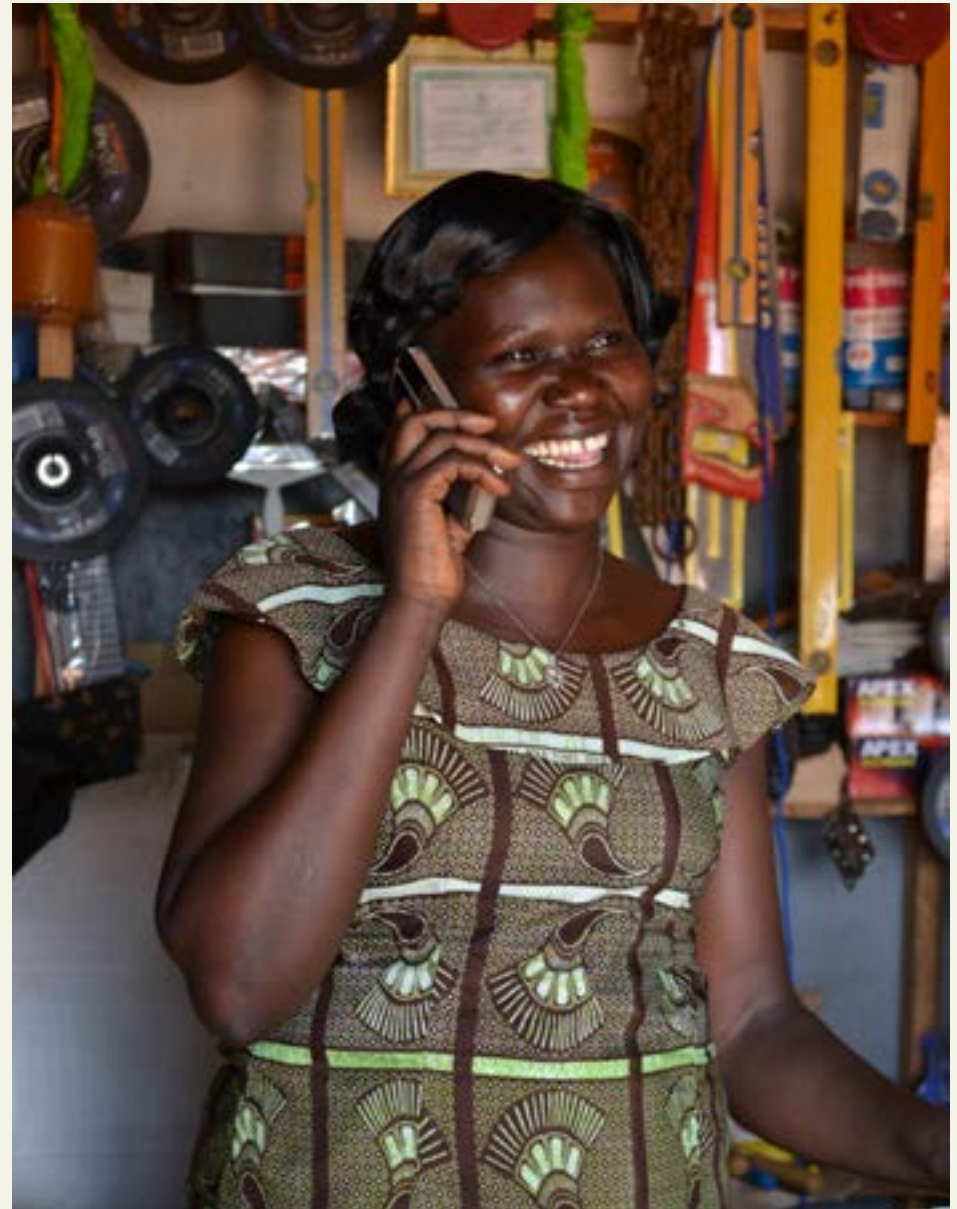
Conducting research and knowledge generation have been a key roles for the Agri-Fin Mobile program particularly feeding into decision making for partners. All successful agricultural advisory and finance interventions start with research. Research gives program staff the information they need for evidence-based-decision-making. Research is conducted at many different points during an agri-finance project: at the start of the project to establish baselines and get insights about the target populations, during the project to assess program reach and to update behavioural determinants and campaign focus, and at the end of the project to evaluate effectiveness and impact and draw conclusions that inform future interventions.

It was majorly of great value when partners were engaged were the baseline and value chain studies conducted by the Agr-Fin Mobile program in its first year. The studies presented to potential partners a comprehensive picture of the market, the profiles of target beneficiaries and the opportunities for their organisations. This was vital as it gave organisations rich data to base initial decisions on. Over the implementation years the program has provided periodic user assessment reports outlining the feedback from users of the Ecofarmer suite of services. Rapid assessments have also been conducted by the program to feed into specific decision making points for our partners particularly the product champion.

The MNO particularly does not have the capacity and the resources to conduct in-depth research at that level. Therefore they rely on our partnership to provide a credible consistent flow of data essential for effective decision-making.

Most recently the program has begun to provide product development support through the human centered design approach. The human centered design approach allows for more in-depth understanding of the farmer journey and the various productivity constraints. This process has been well embraced by the product champion as it presents a new dynamic approach to product development.

When planning to partner with a financial institution to facilitate mobile financial services for farmers, the question always asked of the financial institution is: What is the potential for mobile financial services (MFS) for the value chains that are



the focus of the Agri-Fin Mobile program in Indonesia? This information should be available to attract financial institutions as potential partners in providing MFS. In August 2014, the Agri-Fin Mobile program worked with PT. Spire Indonesia to conduct research on Indonesia “Market Assessment for Agricultural Value-Chain Payments via Mobile Technology”, with a focus on the value chains of rice, corn, chili, potatoes, and oil palm. As well as being uploaded to the Agri-Fin Mobile website, the results of this study are also displayed on the website of NetHope. In addition, the study results also serve as a reference for several donor institutions in Indonesia that focus on supporting the development of MFS for farmers, including by understanding the constraints faced in changing the behaviour of farmers, who typically always prefer cash, to switch to non-cash.

Another research study conducted by the Agri-Fin Mobile program in Indonesia was in partnership with PISAgro and PT. Syngenta Indonesia to conduct a quick assessment on the financing needs of corn farmers in Dompu and Bima districts and the existing gap. The results of this study were then presented in a regular meeting of the PISAgro Corn WG, chaired by the Director for Cereals of the Ministry of Agriculture, which served as the basis for developing a product of financing integrated with technology for corn farmers. Ultimately, the research activities initiated by the Agri-Fin Mobile program succeeded in creating a product of financing integrated with technology and agricultural information for corn farmers that was able to attract the private sector – Bank Andara, PT. Syngenta Indonesia and BPR Pesisir Akbar – to allocate funds much greater than the cost of the research conducted by the Agri-Fin Mobile program.

A number of studies were commissioned under Agri-Fin Mobile program. The following includes studies that were both funded and part-funded by Agri-Fin Mobile.

Research carried out:

1. Mercy Corps Agri-Fin Mobile Product Development and Baseline Research
2. Market Assessment for Agricultural Value-Chain Payments via Mobile Technology
3. Gender Analysis and Integration Assessment Agri-Fin Mobile program





Focus On Linkages To Financial Institutions



The fourth and final stage of the bundle is the link to financial institutions. Once a credit /transactional history is created it's quite easy for the farmer to be linked to any financial institution hence with mobile money transfer and e-transfers, farmers can now go to banks to receive a credit while using their transactional statement as guarantee to show they are credit worthy.

According to the results of the 2013 Indonesian Agricultural Census, of the 25 million farming households, around 5.1 million are corn farmer households (20%). After rice, corn is one of the strategic commodity crops targeted by the Indonesian government to achieve self-sufficiency within the next three years. The results of a baseline study by the Agri-Fin Mobile program (2012) and several studies conducted by other institutions show that corn farmers face three main constraints; limited access to technology, limited agricultural infrastructure, and obstacles to working capital. Given these constraints, the productivity of corn crops is only around 50% of what it should be (average 4 to 6 tons/hectare). Thus, Indonesia still has to import 3.6 million tons of the corn that is needed for the livestock feed industry in 2014.

Mercy Corps Indonesia joined PISAgro in February 2013. In line with the focus of the Agri-Fin Mobile program, Mercy Corps Indonesia joined the Rice, Corn and Agrifinance Working Groups (WG). In line with the strategy of the Ministry of Agriculture to achieve self-sufficiency in corn, several regions outside the island of Java have been designated as corn production centers, including Dompu and Bima Districts in the province of West Nusa Tenggara. Based on the results of preliminary discussions with PT. Syngenta Indonesia (Leader of PISAgro Corn WG) and Bank Andara, the Agri-Fin Mobile program conducted an assessment on corn farmers' demand for financial services and performed a gap analysis in July 2014 in four sub-districts in Dompu and Bima Districts. The assessment results show that corn farmers need working capital to purchase production inputs, and it needs to be available before the planting season begins. Although there are financing facilities derived from credit programs subsidised by the government, often the loans are only received two months after the planting season has begun. As a consequence, corn farmers have to seek loans from other sources (individuals, shops selling agricultural inputs, local traders), typically at very high interest rates; 20% to 100% for five months. In addition, farmers also need technology and intensive guidance so that their crop productivity can improve.

Fostering financial access to smallholder farmers

Beginning in the second week of September 2014, in the framework of the PISAgr Corn WG's activities, PT. Syngenta Indonesia conducted an introduction and training for 50 agricultural extension personnel and 50 corn farmer leaders concerning the Start It Right (Awali Dengan Benar, ADB) technology. During the two days of the training, as well as explaining about the ADB technology, there was also a visit to the Syngenta Learning Center (SLC) and a preliminary explanation by the Indonesia Program Coordinator of Agri-Fin Mobile about financing products and the model of the financing scheme that will be disbursed to corn farmers through cooperation with micro finance institutions (BPR/rural banks). After a series of discussions an MoU was signed between Bank Andara, PT. Syngenta Indonesia, Syngenta retailers, BPR Pesisir Akbar (Rural Bank), Mercy Corps Indonesia, 10 heads of corn farmer groups, and four grain traders to provide a financing facility integrated with technology and information for corn farmers in Dompu and Bima Districts.

Based on the result of analysis of the corn farmers' businesses, the production cost needed by the farmers is Rp 8 million (\$608)/hectare. Bank Andara will provide a credit facility, which will be disbursed to BPR Pesisir Akbar, and BPR Pesisir Akbar will disburse the credit to each farmer in accordance with the area of land proposed by the farmer. So that the loan disbursement can support an increase in crop productivity of at least 20 percent, the value of the credit per hectare will be given in the form of vouchers for production inputs (Rp 5 million (\$380)/ha) and cash funds for labour costs (Rp 3 million (\$228)/ha). Rp 1 million of the Rp 3 million for labour costs will be kept in the form of farmers' savings account at BPR Pesisir Akbar and will later be used to pay labour costs at harvest time. In November to mid-December 2014, 198 farmers with land covering 385 ha signed a credit agreement with BPR Pesisir Akbar. The term of the farmers' loan is six months, and the loan principal will be paid from the proceeds of the crops sold by the farmers to the grain traders who are participating in the MoU.



Loans disbursed to 198 corn farmers in Dompu and Bima districts with a total value of Rp 3.1 billion (USD 248,000) to date.

Lessons Learnt

- Financial literacy should be conducted simultaneously with introducing technology to farmers as there is not enough time to explain the project dynamics to farmers. Information about administrative requirements, costs incurred from the process of the credit agreements and their allocation among the members of the farmer groups, insurance requirements regarding loans etc should all be communicated prior project take off for smooth uptake of services.
- Creation of new partnerships for new financial products takes longer than anticipated as partners perceive agriculture as a high risk sector. The best way to address this issue is to build a business case.
- Risk management tools should be discussed in advance with other potential partners to avoid project snags and conflict amongst partners. All partners must agree to their responsibilities to ensure that all partners are on board.
- During the product development process, an incentive system mechanism should be planned for in advance. It is necessary to identify the additional costs that will be incurred by those monitoring and ensuring repayment by the farmers is done. Once these supervisors are motivated, financial institutions and agribusiness companies will achieve their objectives.



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Conclusions

“To make agriculture sustainable, the farmer has got to be able to make a profit.” Sam Farr

Lessons Learnt and recommendations

Like all projects, the Agri-Fin Mobile program has experienced successes and challenges as well. This program has provided Mercy Corps an opportunity to grow as an innovator in Agriculture using technology based solutions and hopes to scale up leveraging these lessons learnt.

01: Human interface still critical in promoting services through technology.

Overly there has been the notion that once you deploy technology, it should be able to quickly drive mass uptake by directly empowering farmers to their palm. However, it has been observed that farmers are still skeptical about some of the technologies, especially on services from the mobile phones. One of the key bottlenecks to the adoption of technology is trust issues that farmers develop. Education levels among the farmers is also still a challenge and this requires routinely interface to boost their knowledge on how to access and to gain confidence of the product. Defining a human interface while promoting a service will be critical for adoption, it will require the services of the more skilled early adopters within the communities that are willing to act as points of reference to the farmers. One farmer in Uganda was quoted saying

“We need someone within our community that we can rely on for support if we have any issue with the service”- clearly a social capital that rural populations have depended on over time.

02: Understanding the last mile distribution and influence to the farmers.

Often times, like any other product or service, understanding the last mile distribution is critical in developing channels for reach to smallholder farmers. Each context ofcourse provides its own structure and should be clearly used. These channels for last mile distribution can act as a strong and localised marketing and reference point; they can also be used to drive adoption and uptake of services. In Uganda the input/output agents are emerging as the power tool in reaching farmers while in Zimbabwe the “Brand Ambassadors” are strongly becoming the drivers for services under Eco Farmer and any other embedded service. Empowering and

branding this category with the right information is critical in delivering the right information. In Indonesia, the model is a little upstream with a lead farmer being consulted by the rest of the farmers and acts as the agent within the community.

03: Pricing models and structures should be tested in the actual pilots.

Sometimes businesses are very enthusiastic about prices that can create break-even for their products without necessarily testing it out with the final consumers. It's critical that during the piloting of the products and services, testing out different pricing models and structures are critical in gaining acceptance of the product for commercial purposes. Some of the factors for this are that farming, being a seasonal activity in most of the regions, has a seasonal trend that greatly affects any pricing and payment structure for a service or product.

04: Private sector alignment and financial commitment should be tagged to a payment by milestone basis.

Dealing with private actors is sometimes a challenging process and needs to be well managed. Balancing the priorities and the goals set are sometimes more complex as private sector actors try to survive as well in a very competitive world. To smooth this process, its critical to align the interest and value proposition/ shared value of the private actor to the service. Management of the private partners with financial commitment and payments by milestones has proven to be simple management on streamlining expectations and targets, this approach reinforces Mercy Corps own principle in playing a “facilitator” role in catalysing the private sector.

05: Feedback loops are critical in the product development.

These should be provided for throughout the product cycle. Environments that these products are launched in are very dynamic and as such require constant market intelligence in understanding the farmer interest and providing that specific adjustment to the product or service. This process as well increases on the demand for the product/service.

Mercy Corps will lead the engagement of the communities targeted for products and facilitate discussions on the financial, rural advisory and market needs of the smallholder farmers and identify points of intervention for a mAgri solution.

Carol Kakooza Program Director,
Agri-Fin Mobile
email: ckakooza@ug.mercycorps.org
Mercy Corps

