INCLUSIVE INNOVATIONS

Non-Bank Finance Providers for Smallholders

Providing innovative financial solutions to address credit challenges facing smallholders

HIGHLIGHTS

- Enterprises have innovated in mitigating credit risk in agricultural finance through input financing, group lending, and using contractual agreements as collateral.
- They reduce market risks for farmers through flexible repayment structures and bundling non-financial services in the value chain with credit.
- Enterprises conduct farmer training to improve financial literacy among smallholder farmers. They design products, such as committed savings programs, to reduce farmers' debt burden.

Summary

The availability of credit is critical in the pre-harvest stage to enable farmers to purchase inputs, such as seeds, nutrients, fertilizers, pesticides, irrigation systems, equipment, and extension advice. Farmers also need funds to invest in yield enhancement technologies and improve market links. However, the needs of smallholder farmers are seldom met by mainstream financial institutions offering traditional financial products. Even where financial products are available, they are accessible only to a small subset of farmers, for instance, those belonging to farmer producer organizations (FPOs), growing horticultural or other cash crops, or those having strong relationships with value chain actors (e.g., contract farming schemes with agro-processors).

Enterprises have adopted innovative models to unlock credit to smallholder farmers. Many enterprises have automated paperwork and data capture to a large extent, resulting in faster turnaround and disbursement of loans. Some enterprises bundle a micro-insurance product with credit and earn revenue from the premium. Enterprises also provide asset financing for farming equipment to farmers who pay in monthly installments. Many enterprises have also adopted the model of solidarity groups, also referred to as joint liability groups, to address challenges related to the absence of collateral.

Development Challenge

Globally, 500 million households (approximately 2.5 billion people) rely on small-scale agriculture for their livelihoods[1]. These smallholder farmer households live on less than USD 2 per day, and typically cultivate less than five acres of land. Limited access to financial services, especially credit, is a major challenge to such smallholder farmers in low-income geographies such as Latin America, Sub-Saharan Africa, and South and South-east Asia. The aggregate demand for credit from these regions is estimated to be more than USD 200 billion, of which only around USD 50 billion is presently met by formal and informal financial institutions and value chain actors[2].

WORLD BANK GROUP

This series on Inclusive Innovations explores business models that improve the lives of those living in extreme poverty. Editors are Elaine Tinsley and Natalia Agapitova. Researched and developed by Intellecap.

Smallholder farmers face a number of challenges in accessing appropriate and adequate financial services. Supply side challenges such as lack of flexible credit products and lack of last-mile access, and demand side challenges such as low capacity to service debt hinder credit supply and uptake.

The other barriers that constrain capital availability are:

- Lack of organized farming and structured value chains
- Low financial literacy and financial management skills of smallholder farmers
- Absence of land titles and tangible assets for collateralization
- High degree of seasonality resulting in cash flow fluctuations
- Variability in harvest performance due to external risks such as rainfall, weather, pests, price fluctuations, and storage facilities

Inadequate access to finance causes smallholder farmers to confine themselves to sub-optimal inputs, which results in lower yield. This makes their produce less competitive in the market and also increases the risk for other upstream value chain players due to low quality and uncertain supply. Lower incomes force cash-strapped farmers into a debt cycle, where they seek credit to repay previous loans. Incomes of smallholder farmers are synced with the harvest cycle, and lack of steady or uniform flow of funds causes volatility in their consumption pattern, which can only be smoothed by savings. They borrow from unregulated moneylenders at exorbitant interest rates or selling the harvest early at a heavy discount to market rate.

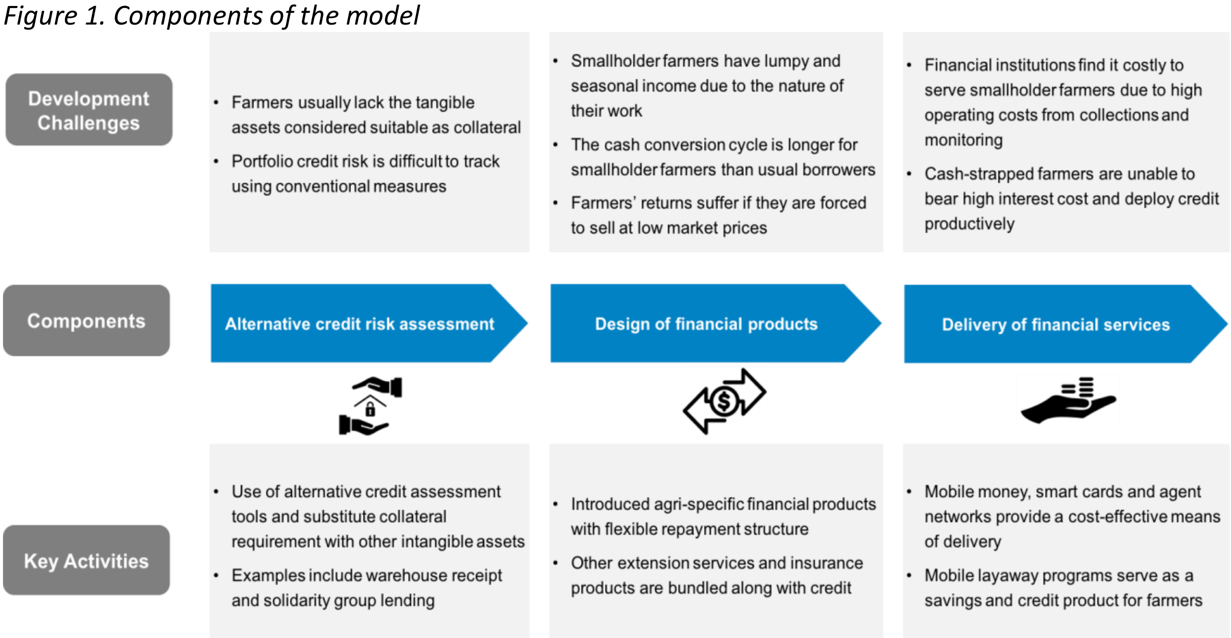
Business Model

Several enterprises have adopted simple yet powerful innovations to make the delivery of financial services efficient, cost-effective and customized to the needs of smallholder farmers. They have developed novel tools and funding structures to minimize risks, costs and information gaps in agricultural finance, and offer scalable, sustainable and market-driven financing solutions to farmers. These enterprises aim to help smallholder farmers reduce their financial vulnerability, manage agricultural risks optimally and increase their bargaining power in the market.

Components of the Model

Access-to-finance solutions include alternative techniques to assess credit worthiness, new products to address variable cash flows and ICT-based products to ensure last-mile reach. Most finance providers are structured as banks and MFIs. Some finance providers are also structured as non-profit organizations (such as One Acre Fund) or social investment funds (such as Root Capital)

Figure 1. Components of the model



Finance providers have adopted the following innovative strategies:

Innovative credit risk mitigation and collateralization

The absence of property, land and other tangible assets renders smallholder farmers ineligible to receive traditional commercial loans. Enterprises also find it difficult to underwrite loans to farmers in the absence of credit scores from national credit bureaus. This makes agricultural financing risky for lenders and costly for farmer borrowers. Hence, many enterprises have developed financing instruments which use agri-based assets and inventory to substitute for property collateral and mitigate credit risk. Examples include input financing in which inputs provided on credit are considered as collateral, and joint-liability group lending, in which group members are responsible for collecting payments on time and co-guaranteeing each other. Loans are also given against contracts from big buyers.

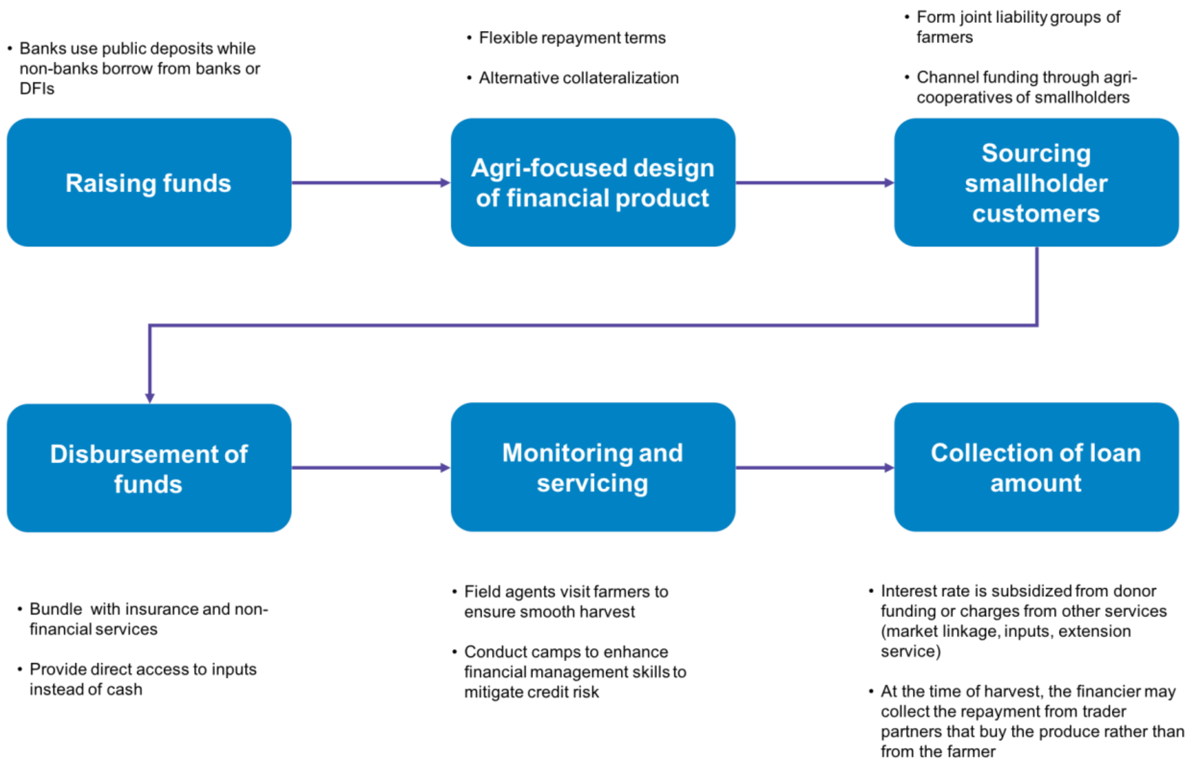
Tailored financial product design to address mismatch in cash flows

The 'one size fits all' approach does not work in lending to smallholder farmers. Given the diverse income streams, crops, harvest cycles, and value chain interactions, a flexible repayment structure is essential for successful farm financing. Enterprises have developed solutions that analyze and match payment terms to the irregular cash flows of different activities. Many enterprises use cash-flow based evaluation methods that allow them to effectively assess the harvest cycle and determine the best product fit for the farmers.

Non-financial services bundled with financial assistance

Smallholder farmers generally lack the financial literacy required to understand different financial products and face the risk of over-indebtedness or under-investment. Due to their financial circumstances, they often deploy capital into unproductive uses. Therefore, many enterprises offer bundled services such as financial education, agri-inputs, capacity building and market linkages, along with financial services such as credit, savings and micro-insurance. Direct-to-farmer finance providers often provide agronomic support services to smallholder farmers to mitigate production and price risks. These services most often include training to promote agricultural best practices and improve yields. In some cases, these services also encompass market access support to connect smallholders to buyers and improve price realization.

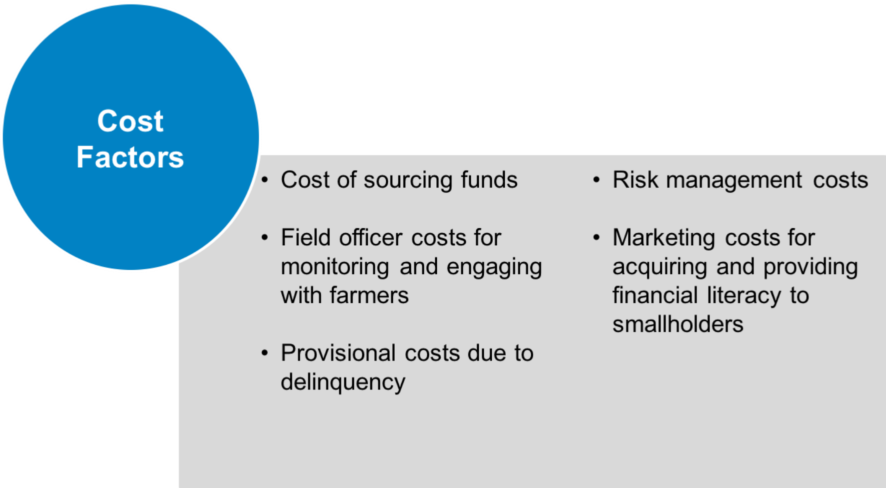
Figure 2. Process of the model



Cost Factors

The major components of costs incurred by finance providers are for customer acquisition and risk management.

Figure 3. Cost factors for the model



Providing micro loans is more expensive than lending large amounts, as the costs of loan appraisal, monitoring and follow-up are fixed regardless of the ticket size of loans. The cost of funds for finance providers ranges from 6 percent to 12 percent depending on the geography and source of finance[3]. Finance providers typically raise funds as grants or from DFIs and other social lenders who can lend with low return expectations. Farmers are often widely dispersed across rural areas that are not well-connected, and credit officers have to travel long distances to reach them. This implies high costs from transport, sales outlets and branches. Significant administrative costs are incurred on training new agents and developing management information systems. Many providers hire credit officers with a background in agriculture to ensure that they have the technical understanding to collect and analyze agricultural information. This often entails a higher human resource cost, but the credit risk is observed to be lower.

Revenue Streams

The main revenue streams for finance providers to smallholder farmers are the interest payments and fees from registration, processing or subscription. The revenue is derived from the differential margin between the interest rate and cost of funds. Enterprises such as One Acre Fund customize the principal repayment to the preferences and capacity of the individual farmer. They manage cash flows by leveraging grants, and set disbursal dates according to harvest period for each value chain. Enterprises such as Vasham also allow for a single balloon repayment of principal and interest when the loan is due. Some enterprises like Babban Gona have also helped the farmers sell their produce to traders and processors and earn a margin on the total profit.

Some enterprises bundle micro-insurance with the credit product and earn revenue from the premium. These enterprises upsell insurance products along with credit or require smallholder farmers to contribute savings before drawing credit. These mandatory savings accounts typically range from 10 percent to 25 percent of the loan value and serve as a form of partial collateral for providers in case of smallholder default.

In the absence of collateral, many enterprises have also adopted the model of 'solidarity groups,' also referred to as joint liability groups. These groups consist of 10-15 farmers each, usually engaged in similar activities, who organize themselves to receive credit and technical assistance. Solidarity group lending reduces the cost from operations and default risk for lenders. For example, Juhudi Kilimo, a Kenyan agri-financing social enterprise, runs a program wherein farmer clients co-sign each other's loans and receive unsecured microcredit and micro-insurance. Many finance providers offer credit for the purchase of farming equipment and receive monthly repayment installments from the farmers. This also offsets the collateral requirement as the agri-equipment is considered as the security.

Some enterprises, like Vasham in Indonesia, not only offer credit, but also help farmers gain optimum prices for their output in the market. Vasham runs the KONCO contract farming program through which it provides working capital loans to farmers and then connects them with aggregator companies that buy the produce at competitive prices. These prices are locked-in so that farmers receive downside protection if prices drop at the time of harvest. Vasham receives 10 percent of the profits from farmers as revenue[4].

Root Capital, a social lender, funds microenterprises, associations or cooperatives that aggregate produce from hundreds of farmers, rather than directly funding smallholders. Root Capital provides loans ranging from USD 50,000 to USD 2 million. The loans are tailored to the needs of the businesses, and include trade credit loans (to purchase products from producers and meet operating expenses), capital expenditure loans (to purchase or maintain fixed assets such as equipment or land), long-term working capital loans (to meet general business capital needs); pre-harvest credit loans (to support individual producers' production capacity through the purchase of inputs such as seeds and fertilizer); and buyer finance loans (to finance purchases from community-based suppliers and provide working capital to borrowers).

Finance providers have different approaches in delivering value-added support services along with credit. Some providers offer services directly through dedicated field staff or loan officers, and typically charge farmers a fixed fee or attach an additional service fee on interest payments. Other enterprises refer the farmers to partners that provide capacity building and support, and charge them a fixed commission. The partner is responsible for covering the costs associated with these support services, through fees charged to smallholders, philanthropic capital, and/or other revenue sources.

Financial Viability

Most smallholder financiers rely on grants or concessionary loans from governments or philanthropic organizations to reduce their cost of on-lending. They also leverage technology to minimize operational expenditure. The operational efficiency has allowed these enterprises to enhance their margin and pass on the benefit by reducing the interest rate by as much as 2 percent to 3 percent[5]. Opportunity International provides its field staff with mobile tablets to register new farmer borrowers, open new savings accounts, measure the size of the farm using GPS and geo-tag the farm. A negligible rate of default (1 percent) and a healthy ratio of donor-to-farmer contribution[6] of 1:4 enable One Acre Fund to achieve financial sustainability[7].

> Value chain financing in agriculture is important because it spreads the risk of financing to other players, such as agribusinesses and processors.

Smallholder farmers also benefit from agricultural value chain finance i.e., financing that takes place within the value chain as well as outside it. An example of internal value chain financing is input supplier credit where agro-input retailers offer deferred payment sales to smallholder farmers. External value chain financing is that which is made possible by value chain relationships and mechanisms: for example, a bank issues loans to farmers based on contracts with trusted buyers or warehouse receipts from recognized storage facilities. A typical case of external value chain finance is where small fruit and vegetable growers are able to access bank finance for agro-chemicals based on their export contracts. The exporter pays the farmers through the bank, which deducts the scheduled loan payments before releasing the net proceeds to the farmer group. Agrofinanzas in Mexico has an innovative business model in value chain financing. It specializes in lending to small farmers that do not have prior formal borrowing experience. It builds relationships with large firms and provides credit services to their suppliers who are smaller firms. Agrofinanzas leverages borrower information obtained from large firms (about their small suppliers), thus reducing the probability of default.

Some enterprises such as Root Capital use factoring agreements, or signed purchase contracts between micro agribusinesses and their buyers, for both short-term and long-term loans. The purchase agreement serves as a substitute for traditional collateral as it represents a discrete, future revenue stream that can be pledged to repay the loan. When the product is shipped, the buyer directly pays Root Capital for interest and principal payments due on the loan, thus decreasing the risk of default. This lending methodology, using fixed-price forward contracts as loan collateral spreads the risk among the value chain players, a paradigm shift from traditional lending, in which risk is borne solely by the most vulnerable producers.

Partnerships

Finance providers forge strategic partnerships in areas such as business development, product design, credit disbursal and collections. Some enterprises employ a unique partnership model to improve the supply chain efficiency along with providing finance. DrumNet, a Kenyan NGO, partners with banks, input suppliers and agri-buyers and facilitates direct financial transactions among them instead of burdening the farmer. Input suppliers sell their products to farmers on credit and receive payments directly from the bank through DrumNet, which collects the principal and interest from the forward-linkage traders instead of farmers. Similarly, the Indonesian bank BTPN provides credit to farmers in the pre-harvest stage in cash or in kind and simultaneously partners with agri-buyers who commit to buying the produce from these farmers. The loan is repaid when the farmers sell their crops post-harvest to these agri-buyers. These buyers deduct repayment from the farmer's sales and remit it back to the bank.

Many lenders also partner with agricultural universities to provide training to their credit officers. MFIs such as Financiera Confianza partner with inputs providers to source farmers as clients and advertise in each other's branches. Another interesting partnership model is the one between CARD Bank in the Philippines and Ideas42, a group of experts in behavioral economics. Ideas42 helped CARD Bank to redesign its savings product and incorporate behavioral levers such as goal-setting and text message reminders. Similarly, Musoni Kenya partnered with Grameen Foundation to design a product that allows for staggered loan disbursement, reducing the default risk. Enterprises also prefer to collaborate with trusted intermediaries to perform its non-core activities such as financing and training.

Implementation: Delivering Value to the Poor

Awareness

Most capital suppliers cite farmers' lack of understanding of financial products as the major hindrance in smallholder lending. On the other hand, smallholder farmers usually undermine the need for financial products such as savings and insurance even as they continue to struggle with heavy debt burdens. This information asymmetry limits customer acquisition and the scattered reach of the financiers make delivery of services costly. Therefore, most finance providers generally run financial literacy programs in parallel with their credit delivery, either by themselves or by tying up with external trainer partners. Enterprises usually do not charge the farmers separately for the financial education and the cost is factored in the interest calculation or subsidized by the government or by donors. For example, ADOPEM, a bank in the Dominican Republic focused on financing smallholder farmers, conducts weekly training sessions on the importance of savings, the material for which is designed by CODESPA Foundation.

Finance providers have adopted many different ways to create awareness. Opportunity International has developed material such as DVDs, TV and radio segments, comic books, games and role-playing activities as self-learning guides for farmers to improve their financial acumen. Juhudi Kilimo also maximizes the benefit of its asset finance offering by imparting knowledge about potential risks of storing cash and the importance of maintaining financial documents.

Acceptance

Enterprises that provide a wide range of financial products tailor-made according to the crop type, harvest cycle, tenure, and cash flows find better acceptance among the farming community. For example, AMK, an MFI in Cambodia, offers bullet and amortization loan structures, individual and group lending, in-field and branch repayment options, and USD and local currency options. Development organizations such as BRAC in Bangladesh have an agri-specific loan called Borga Chasi, which is cross-sold to farmers along with their dairy and inputs.

Loan disbursements need to be in sync with the crop cycle. Proximity Finance, an enterprise in Myanmar, provides farmers with ongoing access to credit (working capital) in ticket sizes ranging from USD 150 to USD 230. Since 2007, it has financed 90,976 inputs, which, in turn, increases annual farmer incomes by an average of USD 250. The repayment period generally extends through the harvest season with installments structured to Myanmar's Dry Zone and Delta crop cycles. Proximity Finance also provides a plain-vanilla five-month credit product for farmers to purchase seeds, fertilizers, irrigation equipment and other inputs.

Accessibility

To make financial products accessible to smallholder farmers, some enterprises have made smart design modifications to plain-vanilla credit instruments. For example, the Rural Resilience Initiative (R4) in Ethiopia links labor-based safety nets that provide cash or food in exchange for work on community projects. R4 is an innovative approach to helping communities better manage risk, one that involves a set of integrated tools: insurance, credit, savings, and disaster risk reduction. R4 provides credit to farmers and farmers work on natural resource conservation to reduce the risk of disasters in order to protect assets and improve productivity. This innovative model has made insurance highly accessible and desirable to poor farmers in Ethiopia. Compensation for weather-related losses enables farmers to avoid selling productive assets and facilitates faster recovery.

> FINO, a payments technology enterprise in India, has an extended agent network who act as human ATMs and are equipped with handheld biometric devices. Farmers who have smartcards can access banking services using this network even in the absence of the Internet.

Enterprises have also developed agent networks to expand their outreach in rural areas. For example, Financiera Confianza has established customer service points in small shops in rural areas where farmers can withdraw and repay. Juhudi Kilimo uses referrals, conducts road shows and advertises on radio for market activation. It also has on-the-ground credit officers who follow up on current farmers' projects as well as identify new opportunities.

Enterprises adopt innovative means to reach clients and provide last-mile access. Bancamía offers services through 'Lineamía,' which is a form of telephone banking available to all clients. This service enables the enterprise to accept loan applications over the phone, hear requests and complaints, and sell certain types of financial services. Financiera Confianza uses mobile announcement vehicles, daily newspapers, referral incentives, and radio as its marketing channels. Bancamía also uses radio and TV spots to target farmers. It advertises through booths at local fairs and provides referral bonus.

Affordability

Small farmers are sensitive to transaction costs incurred to access credit, for instance, cost of travelling to bank branches, especially during peak harvest season when they are very busy. Many finance providers, therefore, leverage mobile banking platforms to reduce farmers' time and cost for availing finance. ICT-enabled service delivery reduces the outreach cost for the farmers too, making the financial services affordable.

Opportunity International uses a hub-and-spoke delivery model whereby hub branches are opened in market centres, and mobiles and POS machines are used as access points in the surrounding rural communities. This enables affordable banking services to farmers living in sparsely populated regions as well. Many enterprises adopt a cross-subsidization model wherein they offset the low cost of finance to smallholder farmers with higher priced value-chain finance for traders and processors. For example, Grafco Sacco has variable pricing for agriculture loans.

Juhudi Kilimo has collaborated with Ford Foundation to develop a mobile platform for providing extension services free of cost to the farmers (this includes training on market research, disseminating weather and market information through mobile tech platform etc.) so that the risk is mitigated to a certain extent and the risk premium is reduced, making the loans affordable.

Results and Cost Effectiveness

Scale and Reach

Most non-bank smallholder financiers are deeply engaged with their farmer borrowers, and offer bundled extension services or inputs along with the credit. This limits their ability to scale. However, primary research suggests that group lending models have proved to be very scalable due to lower operating cost per individual borrower.

Doreo Partners, an impact investing firm in Nigeria, has implemented an innovative franchise model called Babban Gona, whereby subsistence farmers are grouped into a franchisee and provided with end-to-end services including credit, training, inputs, and transportation. The harvest is then sold to large processor corporates at negotiated prices and farmers receive quarterly dividends. This model provides Doreo Partners with economies of scale and commission from other value chain players.

One Acre Fund is able to scale rapidly by using a standardized operating model. It has a 'district operating unit' that can be replicated easily and cost-effectively. Each unit includes a field director, 6–10 field managers, 30–50 field officers, and a bookkeeper. At scale, a district can serve about 10,000 farmers. Each district within a country operation uses standard procedures for monitoring and repayment collections. As a country operation grows larger, it realizes economies of scale, and lowers the cost of serving an individual client.

Table 1. Examples of companies and their scale and reach

Company	No. of years of operations	Countries of operation	Scale and reach
Juhudi Kilimo	7 years	Kenya	31,000 farmers
One Acre Fund	10 years	Kenya	420,000
Doreo Partners (Babban Gona)	3 years	Nigeria	2000+

Improving Outcomes

Farmers' decisions to invest and produce crops are closely influenced by access to financial instruments. Improving access to finance can increase farmers' investment choices and provide them with more effective tools to manage risks. In turn, appropriate technologies to measure credit-worthiness can direct more private sector lenders and capital into the farming community. For example, in Malawi, the use of fingerprints to identify farmers allowed lenders to pinpoint sub-prime borrowers. Therefore, farmers were hesitant to default, and lenders were incentivized to engage in more transactions.

Adapta Sertão is a network of organizations that aims to assist small scale farmers in adapting to climate change in the semi-arid community of Pintadas, Bahia, Brazil. In addition to supporting farmer households in accessing water infrastructure, farming technologies, technical assistance, processing plants and markets for agricultural products, Adapta Sertão established a local micro-credit bank with loan services tailored for small-scale family farmers. Through Adapta Sertão, small farmers could buy productive irrigation equipment, making them more resilient in the face of a fast-changing climate. The incomes of local farmers increased from less than USD 250 per month to over USD 500 per month, and crop losses decreased from 70 percent to 20 percent.

Cost Effectiveness

Well-structured financing can help farmers find a pathway out of the cycle where low investment leads to low returns. Some smallholder lenders, such as Green Bank of Caraga in Philippines, have implemented commitment savings – these are savings accounts which farmers can only access after they reach a certain committed savings goal. Opportunity International Bank in Malawi also offers tobacco farmers a product where they can set aside their profits from harvest to fund the inputs for the next season. This creates a win-win situation for both, the smallholders and the lender; the savings can form a substantial capital base for the lending activities of the financial institution, while encouraging farmers to minimize expenditures and thus reduce the risk from cash-flow volatility.

> Prodem in Bolivia lends only to agricultural households that have at least two crops and that engage in other non-farm activities such as animal husbandry.

Root Capital has enabled several agricultural businesses to grow in an environmentally sustainable way, facilitating increased and stable incomes for 35,000 farmers and improved livelihoods for the 200,000 family members they feed and clothe. It has provided nearly USD 980 million in loans to 623 businesses that collectively source from 1.2 million smallholder farmers[8]. In 2015 alone, Root Capital's loans helped its clients generate USD 1.2 billion in combined revenue, 81 percent of which was paid directly to the smallholder farmers from whom they source. Additionally, its Women in Agriculture Initiative reached 200,000 women in 2015 by investing in businesses that promote gender-inclusive practices.

Taking it to Scale

Challenges

The regulatory environment is uncertain in some countries such as Kenya, posing additional risks for banks to provide funds for agricultural financing. Banks are often unwilling to lend to enterprises that on-lend to smallholder farmers due to small ticket size of loans, high credit risk, and high costs of due diligence and collections. Additionally, finance providers incur high transaction costs due to the lack of last-mile reach and the poor rural networks. The vast majority of smallholder farmers do not participate in producer organizations, and providing finance to them individually is not very profitable. Finance providers are also unable to assess credit-worthiness due to insufficient documentation and lack of readily available financial data with smallholder farmers.

Long-term lending is exposed to volatility, and agriculture commodity markets are extremely volatile. A smallholder who is financed today may find it difficult to repay if commodity prices collapse. Moreover, hedging and insurance products to mitigate risks tend to be very expensive. As a result, few long-term finance models for smallholders and producer organizations exist, though some social lenders such as Root Capital are beginning to experiment with them. The table below gives an indication of the scale at which finance providers operate:

Role of Government and Policy

In order to support agri-finance providers, governments should introduce appropriate risk-based regulatory framework and smart subsidies that spur innovation and avoid market distortion. A good credit guarantee program also helps reduce the risk of loans to farmers, and can incentivize finance providers to fund more farmers and release more funds. For example, Bancamía, an MFI in Colombia engaged in smallholder financing, uses Colombian governmental guarantee funds to protect itself from the risks of lending to the agricultural sector. In Ghana, the e-switch money transfer system serves small scale financial institutions allowing farmers in rural areas to use biometric cards for payment operations. However, other government policies can inhibit the growth of non bank finance providers – in India only a registered Bank or non-bank financial company can disburse loans, limiting the range of entities able to provide this service.

Some government interventions involve direct credit or refinancing. In India, the Small Farmers' Agribusiness Consortium (SFAC), promoted by the Government of India, provides interest-free soft loans of up to USD 12,000 to projects in agriculture or allied sectors. It also operates an Equity Grant Fund that enables Farmer Producer Companies (FPCs) to receive a grant equivalent to equity contribution of the members. In Nigeria, the government established the Agricultural Credit Support Scheme (ACSS) in 2006 to finance large agricultural projects such as establishment or management of plantations, cultivation or production of crops, livestock, and fisheries and farm machinery and hire services. The purpose of ACSS is to facilitate the development of the agricultural sector by advancing credit to farmers at low interest rates[9].

In Kenya, the government has innovated with a wide range of financial products adapted for the agricultural sector. The Kenyan government has partnered with the Alliance for a Green Revolution in Africa (AGRA) to initiate the Program for Rural Outreach of Financial Innovations and Technologies (PROFIT) in order to scale access to agricultural financing in Kenya[10]. The PROFIT program is expected to scale up an existing risk sharing facility of USD 5 million provided by AGRA, IFAD and the Government of Kenya to Equity Bank. The existing scheme has helped disburse a total of USD 50 million and has so far benefitted over 49,000 smallholder farmers in the form of direct lending for farm inputs. A credit facility of USD 7 million will also be provided under the PROFIT Program, targeting deposit-taking MFIs that seek access to funds for expansion for their rural and agricultural portfolios.

> The PROFIT Program has allocated USD 5 million in the form of technical support and capacity building for banks as well as for beneficiaries with limited business experience. It will also strengthen the management and governance of selected rural Savings and Credit Cooperatives Organizations (SACCO) to enhance their efficiency.

Conclusion

Access to financial services is critical for smallholder farmers to make investments in productivity, improve post-harvest practices, smooth household cash flow, establish market linkages and promote better risk management. Technology and innovations in last mile reach enable finance providers to reach rural markets and serve not only large farmers, but also smallholder farmers.

Many of these enterprises use technology to cost-effectively identify potential client farmers, assess their credit worthiness and provide them with information and financial services. However, there is little evidence of enterprises having achieved financial sustainability without lower cost funding or donor support. Social enterprises (SEs) attempt to improve the financial viability of their lending operations by adopting mobile applications and unique risk mitigation techniques. The provision of non-financial services along with finance also helps these SEs gain the trust of the farmers and mitigate other factors that may increase repayment risks. With government support, these finance providers are able to scale much faster and reduce interest rates, thus benefitting the farmers.

Table 2. Examples of Non-Bank Finance Providers for Smallholders

Company	Country	Solution description
Agrofinanzas	Mexico	Agrofinanzas is a non-bank financial institution specialized in lending to Agri-SMEs.
AMK	Cambodia	AMK is a rural-focused MFI in Cambodia.
Banco Adopem	Dominican Republic	Banco Adopem is one of the largest MFIs in the Dominican Republic. It has one highly flexible agricultural loan product, agrocrédito, which allows for customized payment schedules based on each smallholder's preferences and payment capacity.
Bancamia	Colombia	Bancamía's agricultural lending is done primarily through two credit products: "Agromía" and "Credimía." Both are designed according to the cash flow from the farmers' activities.
Doreo Partners (Babban Gona)	Nigeria	Babban Gona franchises Farmer Groups and provides tailored and cost effective end-to-end professional training, input, credit and marketing services to these groups. Members get access to Babban Gona market services that assure good warehousing practices, access to good markets and increased profits.
DrumNet	Kenya	DrumNet, a Kenyan NGO, partners with banks, input suppliers and agri-buyers and facilitates direct financial transactions among them instead of burdening the farmer.
Financiera Confianza	Peru	Financiera Confianza is a leading institution in the Peruvian microfinance sector, whose mission is to build opportunities for low income families
Grafco Sacco	Kenya	Grafco Sacco is a savings and credit co-operative society. It has an agriculture loan program to provide long-term and short-term loans to dairy farmers, poultry farmers and greenhouse farmers
Juhudi Kilimo	Kenya	Juhudi Kilimo provides microloans that allow Kenyan smallholder farmers to access high-quality agricultural assets that enhance the productivity of their farms.
One Acre Fund	Kenya, Rwanda, Burundi and Tanzania	One Acre Fund offers smallholder farmers an asset-based loan that includes: 1) distribution of seeds and fertilizer; 2) financing for farm inputs; 3) training on agriculture techniques; and 4) market facilitation to maximize profits.
PRODEM	Bolivia	PRODEM is a large non-profit micro-lending entity
Proximity Design	Myanmar	Proximity has two lending operations for smallholder farmers in Myanmar - Yetagon Credit for asset financing and Proximity Finance for working capital needs of farmers during the harvest season
Rural Resilience Initiative (R4)	Ethiopia	R4 provides credit to farmers and farmers work on natural resource conservation to reduce the risk of disasters in order to protect assets and improve productivity
Vasham	Indonesia	Vasham leverages a closed loop business model to provide Indonesian smallholder farmers with financing, expertise, and income security they need to achieve significantly better standards of living. Vasham provides two kinds of loans; farming input loans and operational capital loans.

Additional Reading

- Opportunity International; Financing Smallholder Farmers to Increase Incomes and Transform Lives in Rural Communities https://opportunity.org/content/News/Publications/Knowledge percent20Exchange/Financing-Smallholder-Farmers-Opportunity-International.pdf
- International Finance Corporation; Access to Finance for Smallholder Farmers http://www.ifc.org/wps/wcm/connect/071dd78045eadb5cb067b99916182e35/A2F+for+Smallholder+Farmers-Final+English+Publication.pdf?MOD=AJPERES
- Financing Agricultural Value Chains in Latin America: Barriers and Opportunities in Mexico, Peru and Honduras http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39157570
- Dalberg Global Development Advisors; INFLECTION POINT: Unlocking growth in the era of farmer finance http://www.mastercardfdn.org/wp-content/uploads/2016/04/Inflection-Point_April-2016.pdf
- CGAP, Segmentation of Smallholder Households; Meeting the Range of Financial Needs in Agricultural Families http://www.cgap.org/sites/default/files/Focus-Note-Segmentation-of-Smallholder-Households-April-2013.pdf
- Dalberg, Citi Foundation, Skoll Foundation; Catalyzing Smallholder Agricultural Finance http://dalberg.com/documents/Catalyzing_Smallholder_Ag_Finance.pdf

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ENDNOTES

[1] Segmentation of Smallholder Households: Meeting the Range of Financial Needs in Agricultural Families; CGAP
[2] Inflection Point: Unlocking growth in the era of farmer finance
[3] Primary interviews
[4] www.vasham.co.id
[5] Primary interviews with One Acre Fund, Root Capital and Juhudi Kilimo
[6] This implies that One Acre Fund covers 75 percent of its costs through service fees from farmers and 25 percent of its costs from donor funding
[7] Primary interview with One Acre Fund
[8] http://www.mastercardfdn.org/root-capital-and-the-mastercard-foundation-to-increase-incomes-for-300000-farmers-in-west-africa/
[9] http://ageconsearch.umn.edu/bitstream/91677/2/7eze_lemich_ugochukwuetal.pdf
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CASE STUDY: JUHUDI KILIMO

JUHUDI KILIMO

Founding year: 2009
HQ: Nairobi, Kenya
Countries of operation : Kenya
Orientation: For-profit
Employees: 172
Turnover: USD 3.2 million (in 2015)

The per capita food productivity in Kenya is 30% lower than that in the rest of Sub-Saharan Africa resulting in 21% of total food consumption being imported or received as food aid. Many of these rural poor smallholder farmers are unable to access to financial services required to acquire more productive farming assets to increase yields on the farms because of lack of collateral or business assets required for financing by MFIs.

Juhudi Kilimo addresses this problem by providing innovative micro-asset financing to the rural smallholder farmers. The assets produce a cash flow (such as selling milk or eggs) and there is a reduced risk since the asset financed can also act as collateral in the event of default. It also undertakes capacity building for farmers in collaboration with the Ministry of Agriculture in Kenya. Installments are typically covered by the extra revenue from the asset purchased. Multiple layers protect the farmer from bad indebtedness – the group guarantees the loans, the asset bought acts as collateral, and the animals purchased are insured.

Pre-sales advisory	Disbursal of loan	Asset purchase	Extension services
▪ Advice to farmers on the choice of asset they should purchase ▪ Assessment of the farmer's existing assets and financial capacity	▪ Formation of SHG, due diligence and provision of loan ▪ Monitoring repayment and mitigating risks of potential foreseeable adversities for farmers	▪ Provision of asset through partnerships with manufacturers ▪ Distribution of auxiliary products such as solar lamps	▪ Training on farming practices, market information, weather-based information ▪ Other support services required by the farmer to mitigate repayment risk

Operating Model

Juhudi Kilimo is a for-profit spin-off of K-Rep Development Agency, a Kenyan microfinance incubator. It offers loans for assets that can generate income and act as collateral. The key products offered by Juhudi Kilimo include: animal financing for high-yielding dairy cows and poultry; farm equipment financing for irrigation equipment, water tanks, milking sheds, pumps, and grain mills; and green energy financing for products such as clean cook stoves and solar lighting systems. It lends to groups of 15-20 farmers where members co-guarantee their loans, reducing default rates to only 3 percent. Juhudi requires a prior commitment (Loan Guarantee Fund) of 15 percent of the intended loan amount. Each new group receives 2 months of training from Juhudi before members are eligible to take loans. Group members who are new to formal lending receive training on basic book keeping, loan management and the risks and benefits of finance.

Juhudi's clientele consists of 99 percent group lending and 1 percent individual lending.

Farmers can get a first loan of up to Ksh 100,000 shillings (USD 1,040 for a dairy cow). Juhudi Kilimo qualifies clients to receive progressively higher loans as farmers repay their loans, reassessing a farmer's debt capacity at each level. Starting with loans of ~USD 1,000, farmers can apply for up to double the earlier amount at each successful full repayment, with a cap at ~USD 10,000. Every loan goes through a new credit appraisal, and approval is not automatic. It also offers top-up loans for energy devices (such as solar lanterns and improved cook stoves), education and emergency to its most loyal clients. This allows them to keep the churn rate at just 5 percent.

WORLD BANK GROUP

This series on Inclusive Innovations explores business models that improve the lives of those living in extreme poverty. Editors are Elaine Tinsley and Natalia Agapitova. Researched and developed by Intellecap.

Loan officers cater to rural clients through a network of 21 field offices across Kenya. Each loan officer serves up to 350 clients within a 45km radius. To establish credit-worthiness, loan officers conduct loan appraisals on farms, and recommend the most appropriate and affordable financing product. These loans finance income generating assets that are sourced from local suppliers. The loan officers capture and store real-time client data on their tablet through a cloud-based loan tracking system. This allows them to process loan applications more efficiently, which has greatly improved client satisfaction. This technology also helps to track loan officers' performance and client repayment rates.

Juhudi Kilimo partners with NGOs and extension service providers (both, Government and private) to offer training and information on best farming practices to its clients in rural Kenya. To help farmers in accessing market information, Juhudi Kilimo works with other players in the value chain such as rural milk cooling plants and poultry marketers. It has collaborated with iCow through support from GALVmed and Ford Foundation to develop a mobile communication platform and video training kit to provide agricultural advice to its borrowers.

Juhudi Kilimo has started conducting yearly SMS surveys and has tested sending payment reminders to its clients, increasing zero-delay repayment.

Financial Sustainability

Juhudi has raised over USD14 million in debt financing from organizations such as Kiva.org, Ford Foundation, Rockefeller Foundation, Grameen Credit Agricole, Fefisol, Alterfin, Deutsche Bank, Triple Jump, responsAbility, Global Partnerships and Regmifa. Juhudi's current shareholders include social investors, namely, Acumen Fund, Soros Economic Development Fund, and Grameen Foundation. Field support and training are delivered through partnerships with Kenya's Ministry of Agriculture Livestock & Fisheries, SwissContact and TechnoServe.

Over 80 percent of the revenues come from interest on loans, while the rest is split between loan application fees, membership fees and passbook fees. Juhudi Kilimo tries to balance self-sufficiency and impact to farmers. It limits costs of serving dispersed rural populations and outreach by leveraging SHGs to do initial screening, collect repayments and recruit new members. Since it does not take deposits, its cost of funds is as high as 16 percent-18 percent unlike those of banks or deposit-taking microfinance institutions. Currently, Juhudi lends to farmers at a flat rate of 20 percent per annum, making a margin of about 6 percent -- compared to interest rates of 20 percent-25 percent charged by the rest of their peers. Juhudi also receives grants, typically in the range of USD 20,000, for technical assistance projects (such as outreach and marketing, hiring experts to train staff and farmers clients and acquiring technology solutions to improve on business efficiencies and service delivery to customers).

Juhudi has more than 31,000 active borrowers and a 1 billion Kenyan shillings (USD10 mn) loan book with PAR >30 days at <3 percent. It broke even in August 2015, having brought in new management in April 2015. The company has since invested in internal controls and reorganized the business to improve operational efficiencies, staff productivity and capacity development. This resulted in an operational self-sufficiency (OSS) of 123 percent. Juhudi has adopted innovative cost saving technologies such as Safaricom's MPESA mobile money transfer system and Electronic Funds Transfer (EFT) in disbursing loans to client. To manage risk, it designed a loan product for livestock farmers (dairy animals) that includes insurance and vaccination against major diseases. The financed livestock (approximately 15 percent of the outstanding portfolio) are insured against death and disease at a cost of 3 percent of the value of the cow.

Impact

Most of the assets provided by Juhudi's financing not only produce income, but also provide supplemental protein-rich food for families, fertilizers and employment. The additional income earned is also used by farmers to pay their children's school fees. Half of Juhudi's customers are women who are empowered to make key household decisions and are less likely to suffer from gender related conflict and violence. Juhudi Kilimo has partnered with F3 Life which combines credit scoring with training on environmental best practices such as soil conservation and water management. Farmers are required to practice environmental friendly farming as a requisite to receive loans. Juhudi also provides credit to buy energy efficient products (e.g., solar lamps and improved cook stoves) through partnerships with SEs such as Ecozoom, Biolite, Orb Energy and Greenlight Planet.

Challenges and Lessons

Many agri-financiers shy away from the sector due to numerous risks or provide funding to Juhudi at a high cost. Most of the available financing instruments in the country are not designed to match with agricultural cycles which often result in seasonal income to farmers. Juhudi's financiers expect them to pay back quarterly or monthly and thus to ensure cash flow, the farmers have to pay back monthly. High operation costs in rural areas due to poor infrastructure and low levels of literacy also pose a challenge for Juhudi. Juhudi Kilimo requires capital that is synchronized to planting seasons.

Juhudi also faces several risks associated with market fluctuations and weather changes. In order to address this, they provide insurance covers to farmers so as to cushion them in case of disease outbreak, loss of livestock etc. It is also currently exploring additional insurance products such as weather index crop insurance, health insurance and political violence insurance. It uses peer pressure from guarantors to encourage defaulting farmers to pay, and in some cases, they also use auctioneers.

Road Ahead

Juhudi Kilimo is piloting loans to individuals with its best clients who ask for larger loans than what the rest of the group is willing or able to guarantee. It has also piloted loans for new types of products such as biogas digesters, water tanks and solar water pumps. In addition, it is planning to allow small top-up loans for good clients (as is already done for solar lanterns and improved cook stoves). It plans to introduce mobile loan disbursements and repayments. It is also experimenting with training videos and training presentations on the tablets and portable projectors on specific technical advice on agriculture practices. It has established Juhudi Labs with the mandate to research, innovate and incubate, pilot and test new products before they can be rolled out to the farmers to ensure that they meet the specific needs.

CASE STUDY: ONE ACRE FUND

ONE ACRE FUND

Founding year: 2006
HQ: Bungoma, Kenya
Countries of operation : Kenya, Tanzania, Rwanda, Burundi, Uganda and Malawi
Orientation: Non-profit
Employees: 4,300
Turnover: USD 29 million

One Acre Fund is a nonprofit organization that supplies smallholder farmers in East Africa with asset-based financing and agriculture training services to reduce hunger and poverty. It offers a comprehensive service bundle which includes inputs on credit, training to maximize productivity, crop and life insurance, as well as market access, all delivered at the farmers' village. Moreover, inputs are delivered at the time of planting and farmers are offered flexible repayment terms.

One Acre Fund has laid the foundation for a virtuous cycle whereby farmers increase their productivity and incomes and thus remain loyal to the organization. In 2015, it served 305,000 farm families throughout East Africa. In 2016, that number is projected to grow to 420,000 families. The multi-faceted approach of One Acre Fund towards helping local farmers maximize agricultural profit and sustainability is the differentiating factor in its business model.

Financing
- Provision of credit for seeds and fertilizers, with flexible repayment
- Bundling of insurance with financial offerings

Distribution
- Consolidation of farm inputs in central warehouses
- Distribution of inputs directly to farmers

Training
- Design and implementation of improved training materials on best farming techniques

Market facilitation
- Safe storage for farmers' crops with warehousing facilities

Operating Model

One Acre Fund sells inputs packages on credit to farmers to cultivate maize, millet and sorghum. The inputs are purchased from One Acre Fund's partner manufacturers and consolidated in a central warehouse. The enterprise hires 10-ton trucks to deliver the inputs to the fields. The base package, which includes maize seeds and fertilizers corresponding to the size of the land, is delivered before the planting season. In addition to these basic packages, farmers can purchase "top up" packages for additional inputs, storage bags and energy products. These inputs are also available to them on credit.

One Acre's teams include units of field managers and officers. One field director oversees each field team unit of 10 field managers and 50 field officers, who are individually responsible for delivering the program to around 200 farmers. A central head office in each country supports the field teams in finance, accounting, human resources, logistics, marketing and administration.

> The farmers are trained on improved methods for compost production, fertilizer application, seed selection, and erosion control to increase yield without additional cost.

Every two weeks, One Acre Fund delivers specific in-field training in targeted areas throughout the season, and also provides an educational handout on fertilizer impact and proper use. One Acre Fund has purchased a weather-index insurance from Syngenta Foundation, and passes on the benefit to farmers by forgiving some part of loans in case of crop failure, thus helping them mitigate risk. It also sells other products such as tree seeds, solar lights, reusable sanitary pads, hermetically sealed crop storage bags, and energy-efficient cook stoves on credit to farmers to improve their quality of life.

To control the average indebtedness of its clients, One Acre Fund caps its loans at USD 200, while the average ticket size is as low as USD 70. Also, to mitigate credit risk, it applies the concept of social collateral, whereby lending is made available to a cohesive joint-liability group of 4-10 farmers. A security deposit of USD 11 is taken upfront from farmers before extending the loan to ensure willingness and ability to repay. Field officers meet regularly with the farmer groups to coordinate delivery of farm inputs, administer training and collect repayments.

The annual service fee is around 17 percent for 3-10 month tenure loans. The loan repayment schedule is flexible. Full loan repayment is only required after the harvest is done, but farmers are encouraged to pay small amounts, whenever they can over the course of the season. The groups have a 2-week grace period to ensure repayment by all members. Around 80 percent of the farmers choose to re-enroll in the program season after season because they value the package that One Acre Fund offers, even though the package is at a premium of around 25 percent.

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In 2013, the Rwandan government invited One Acre Fund into an official partnership to operate an agricultural training program through its nationwide extension network. It has successfully operated this training program since 2013 in partnership with MINAGRI (the Rwanda Ministry of Agriculture) by training government agronomists at multiple levels, and aims to train a nationwide network of 'farmer promoters', who can ultimately train farmers in villages across Rwanda.

Financial Sustainability

In Kenya, One Acre Fund has an average gross margin of 32 percent on the inputs it sells. This margin includes an average 13 percent mark up on bulk products, a 17 percent flat service fee on input costs, crop insurance of ~5 percent of input costs, a fixed program fee of USD 7.6, and a delivery fee (which also helps pay for storage and warehousing costs).

One Acre Fund incurs maximum cost on field staff, input storage, transport and distribution, and insurance. Besides field operating costs, there are costs arising from R&D, pilot projects, government relations, monitoring, and fund raising. One Acre Fund also has access to a grant pool that enables it to leverage working capital from both farm input suppliers and banks. Costs related to new country scouting and government partnerships, innovations and M&E, and global support programs are paid for by donors.

Around 99 percent of the farmers repay their loans, which covers 79 percent of One Acre's field expenses. Grants are needed to fill the remaining gap of roughly USD 33 per farmer (including overhead). To improve sustainability, One Acre Fund focuses on levers such as transaction size per farmer and farmer loan repayment rate, as well as staffing ratios like clients per field officer. Currently, it is piloting new marketing and sales methods to improve enrollment for field officers and farmer mobile repayment (via MPESA) to reduce the need for collecting and recording repayments manually.

Impact

In 2015, the core program of One Acre Fund resulted in the increase of annual farmer incomes from USD 250 to USD 387 (55 percent). The farmer ROI (extra profit a One Acre Fund farmer makes for every extra dollar of investment) was 300 percent. In 2015, there was a 40 percent improvement in the harvest maize farms supported by One Acre Fund compared to that from non-One Acre Fund land. Farmers see their agro-productivity increase by 60 percent-300 percent (depending on crops, soil and climate) in comparison to neighboring farmers. The adoption of One Acre Fund's practices has had positive spillover effect on non-clients as well, increasing maize production by 200 pounds per field.

Challenges and Lessons

One Acre Fund faces competition from some banks or informal money lenders for loans. These loans, however, offer only cash credit, and not seeds and fertilizers on credit. They also do not deliver inputs or provide training. The other challenge is that the present model of One Acre Fund requires considerable manpower, which limits scalability. One Acre Fund is working on strengthening the infrastructure required to coordinate among the field team and the support staff.

Road Ahead

In 2015, One Acre Fund launched "Tubura University," a set of in-house development courses to provide its staff with training in English, computing, leadership and management skills. It has also put together a scale innovations team to explore ways to increase client density in areas of operations. These teams run research projects to build organizational knowledge by analyzing quantitative data, survey senior field staff, and incorporate human-centered design tenets into field operations. They propose changes to the repayment model, new approaches to marketing, or even advocate for the adoption of new technology. One Acre Fund is looking to grow at 37 percent to reach 420,000 farmers by the end of 2016 and 1 million farmers by 2020. To achieve these targets, it is focused on "growing in" (increasing the density of farmers served in regions of current operations), as well as "growing out" (expanding to serve farmers in regions outside of current operations).