

Financing Smallholder Farmers in the Digital Age: Lessons Across Africa

Justus Njeru, Agriculture Economist and Agriculture Value Chains Finance Specialist



[David Hong](#) points out in his brief “Scaling up Agricultural Credit in Africa” that access to credit remains a massive barrier to sustaining smallholder farming in Africa. Dalberg states in “Catalyzing Smallholder Agricultural Finance” that the global demand for financing 570 million smallholder farmers is about USD 450 billion. Of these smallholder farmers, 270 million remain financially excluded and require about USD 200 billion to grow their farm businesses and improve their livelihoods.

Formal financial institutions and value chain actors provide only USD 14 billion and USD 16 billion, respectively, of the needs. Smallholder farmers’ unique financial needs follow cyclical cash flows, occasioned by the seasonality of farming activities. Many of them require cash for inputs and other farming needs during the planting season. However, they often do not earn the income that is required to repay these loans until after the harvest, which is several months later. They also might need to pay other relatively large household expenses, such as school fees, especially at a time when household liquidity is particularly low. This cyclical nature of financial needs and repayment abilities conflicts with traditional microfinance, group savings, and loan models that are structured around regular repayment schedules.

In my previous blog, [Agriculture Finance Isn’t Risky](#), I had outlined suggestive steps for developing agriculture financing products and services for smallholder farmers. These were broadly categorised into understanding, designing and testing, and rolling out financial products. I had also stated that innovative agricultural finance involved (i) adjusting delivery channels, (ii) developing risk management frameworks, and (iii) providing farmers with support services. Desired results may not be achieved by simply making mere changes to the existing product features to fit the new segment.

This briefing note highlights some of the following key lessons that *MicroSave* has learnt during the process of agriculture lending support to financial service providers in Africa.

1. Invest in understanding clients’ needs

Financial service providers generally perceive that farmers mainly require financing at the onset of the farming season. However, this perception is oblivious of the dynamics of farming and of the agriculture sector, and how this dovetails

into the household welfare. The following examples support the above statements: i) tomatoes are weather-sensitive and disease-prone at the flowering stage and not at the planting stage; ii) a lactating cow or poultry requires more care than a free range; and iii) sesame requires heavy investment at pollination since it is a rigorous manual activity.

User-centred design approaches are important tools to understand farmers’ needs, motives, and preferences. *MicroSave*’s [Market Insight for Innovation and Design Approach and Toolkit](#) is user-centric, and its behavioural economics has been a focal point in developing solutions that clients prefer, choose, and use.

2. Barriers to financing are at times due to the low capacity of the credit team

Most MFIs¹ in East Africa lack the capacity to develop innovative financial services that target agriculture clients. *MicroSave* underscores the importance of having a dedicated team, with a requisite knowledge of the agriculture sector within the credit team. This has proved to be critical in creating a buy-in and participating in the research, ideation, and concept development process. These key resources also need backing from a product development committee that comprises operations, branch managers, and business development officers.

It is important that MFIs create a comprehensive training programme that combines classroom training with practical field activities. This combination has proved to be most effective in training loan officers on new products. They can then quickly and effectively assess if farmers are good candidates for the loan.

3. Delivery of agriculture finance schemes depend on the strengths of partnership with the larger ecosystem players

Forming a partnership is critical in innovative agriculture financing. MFIs should avoid draining finance into the business of providing extension services or input distribution and/or marketing farmers’ products. However, even as MFIs seek partnerships, it is ideal that a partnership protocol is developed at the onset. The protocol defines the roles, expected timelines, and rules of engagement. We have learnt

¹ The word MFI in this brief will be used to represent financial institutions operating in the rural areas and targeting smallholder farmers. Eg. Microfinance, community banks, cooperatives, etc.

from the market that some partnerships fail because of high ambitions, unsatisfied targets, and miscommunications to farmers by partners involved in an unorganised arrangement.

4. Evaluation of repayment capability of the farmer is not solely based on the land size

Traditionally, agriculture loans are fixed depending on the size of the land, estimated yield, and prevailing prices. However, in East Africa, land sizes vary due to a lack of a standard measurement or improper land mapping. This leads to varying levels of productivity and input usage by farmers. Many smallholder farmers also use innovative irrigation techniques or greenhouses to produce high yields on very small plots than those farming on large tracks of land and using little or no technology. It is important, therefore, for any MFI to understand the farming activities and financial behaviour of farmers to help them appreciate the unique operational challenges of agricultural lending. The cash flow analysis model plays a critical role by making lending decisions easy and efficient.

5. A flexible loan should be designed to accommodate different crops and weather conditions

MicroSave has worked with many MFIs who have a one-size-fits-all loan for their agriculture clientele base. This loan has proven to be inappropriate as various sub-sectors in agriculture have varying needs. There is a need for flexible loans. Most successful loans are those that have been created after analysing each farmer's individual needs. This has helped MFIs to tailor their products. For example, by including a grace period of up to six months in the product, farmers can harvest without any worry of panic selling to repay their loans.

6. Partial or tranche disbursement of loan, as opposed to a single disbursement, reduces risk and loan diversion

Though farming costs are spread throughout the season, a farmer gets the entire loan at once. Storing the extra cash at home is a risk, and most farmers do not have a bank account. Many farmers invest it in other ventures as letting the loan-money sit idle while being charged interest for it is a bad business. When such ventures fail, the farmer does not have enough money to harvest his crops and the full loan is at a risk of default. This results in some farmers taking loans from loan sharks or moneylenders to repay their existing loans. Farmers would rather borrow only the money they need at the time but are unwilling to take out multiple smaller loans because of the paperwork involved and the risk of not getting approved for the second and third loans. The repayment of the loan is linked to one of the farmer's established, income-generating enterprises. This limits the need for getting an experience in the new venture they are undertaking without introducing additional risks.

7. Adapting digital channels for disbursement should be more responsive to smallholder farmers' needs

Most farmers rely on rain-fed agriculture, which is seasonal and weather determined. A farmer has just a few days to resolve if a disease, pests, or frost hits. Getting a loan often takes a long time. The fear of running out of funds forces farmers to take out larger loans to be on the safe side. This, in

turn, promotes loan diversion and costs them extra interest. In many parts of East Africa, the climate is changing. Seasons are shifting and rainfall is becoming much less predictable. Since traditional crops are highly susceptible to drought, flooding, or even frostbite, many farmers are trying to shift their focus to livestock rearing, which is a more stable enterprise. However, all available loans require them to have a few seasons of experience in the enterprise they are taking the loan out for. To minimise damage to crops and livestock due to weather changes, the loan can be disbursed very quickly into the farmer's mobile money account.

8. Facilitation of partial disbursement of loans and direct disbursement to the wallet require investment in either adjustments or installation of a core banking system

A significant number of MFIs have banking systems with restricted modules. We noted that most system vendors or developers intentionally restrict the usage to solicit further business. Other MFIs lack a basic banking system. Once these modules are activated or new systems are installed, it is important to integrate agriculture products' features early into the Core Banking System (CBS) as these features can be complicated for CBS to incorporate. Understanding the constraints in the CBS can help shape the design of the products' features during the product development process. Though simple banking, cloud-based, open-source solutions exist, they have been received with a lot of opposition.

9. Alignment of loan repayments to the income cycle would reduce the risk of default and panic selling of produce

Smallholder farmers are stuck at the bottom of the agricultural value chain, where a significant amount of money and efforts are invested up front and the return on the investment takes months to materialise. A typical crop might take six months to mature and will make no profits until its harvest. Meanwhile, a business loan requires farmers to start repaying almost immediately. Some farmers take out large loans from usurious moneylenders and use a portion of the loan to finance the loans taken from former providers. In case of default, either moneylenders or aggregators or both insist that farmers repay in kind – with a portion of their produce.

In markets where the warehouse receipt system is developed, financial institutions working with an approved warehouse operator increase the ability for farmers to repay their loans with a little hustle.

In one particular market, a loan of \$200 was repaid in bags of maize and paddy rice at a market price of USD 600–1,000. This is well between 300–500% interest rate, and usually the loan terms are between two to four months.

Conclusion

While great strides have been made to extend credit to the agriculture sector, financing smallholder farmers still remains lower than all other economic sectors. Financial institutions must make more efforts to design comprehensive and sustainable credit schemes for farmers, leveraging on data, design alternative credit scoring models, and collaborate with multiple market players.