FINANCING FARM INPUTS THROUGH A RISK-SHARING CONSORTIUM

Lessons from AGRA's Input Finance Model in Ghana and Burkina Faso

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OVERVIEW OF THE CASE STUDY

Millions of smallholder farmers and their producer organizations face the challenge each season of covering the cost of farm inputs—the seeds, fertilizer, pesticides, labor and other ingredients needed to cultivate their crops and earn income. Affordable agricultural finance for small producers is in short supply across most of the global South, due to factors that include farmers' lack of physical collateral, the expense of reaching rural smallholders and high covariant risk. An emerging model to address this gap in agricultural financing unites four categories of actors in a given value chain to shoulder the risk together: financial service providers, off-taking companies, input suppliers and producer organizations. The rationale for this risk-sharing consortium is that each of these actors stands to gain from successful crop production and therefore has an incentive to shoulder a portion of the input finance risk.

Written for stakeholders in agricultural development at all levels, this case study examines the risk-sharing input finance model implemented by one of AMEA's members, AGRA, in Ghana and Burkina Faso over the past several years. The document begins with a tour through the rationale and structure of the model; the benefits that incentivise each value chain actor to participate; and the ups and downs of the model's implementation in the rice, cocoa and cashew value chains in Ghana, as well as a specialty maize value chain in Burkina Faso.

Next, the case study delves into an analysis and discussion of specific details related to these two implementations. We examine challenges encountered by AGRA and its partners, recognizing that such "unexpected" events are bound to occur in any similar context but can be mitigated through steps presented in the Recommendations section. Challenges discussed include:

- Stakeholder understanding and capacity issues
- Consortium member communication and relationships
- Contracts and pricing
- Timing of inputs and payments

The observed direct and indirect outcomes of the risk-sharing model are presented, along with experience-based hypotheses about the investment and time required to develop and launch such a consortium.

The final section of the case study offers a preliminary how-to guide for stakeholders considering testing such an approach. Based on learning from the implementations in Ghana and Burkina Faso, the case offers tools such as:

- A set of considerations and prerequisites related to local context and value chains when considering the risk-sharing input finance model
- Selection criteria for identifying promising consortium partners in each category (financial service providers, off-takers, input suppliers and producers)
- Important steps to take in laying a strong foundation for success—including partner capacity building topics, contracts, consortium partner communication and knowledge management and sharing to advance the state of the practice

By sharing this case study of an agricultural finance tool still in the process of being refined, AMEA and AGRA hope to highlight a promising approach to addressing a common gap in the farmer organization ecosystem and to share practical lessons learned that can guide ongoing testing and improvement of the risk-sharing input finance model. Through this knowledge product, AMEA seeks to support its members and the broader sector in continued advancement toward high-functioning, inclusive and sustainable farmer organizations and agri-SMEs around the world.

I. BACKGROUND ON AMEA'S CASE STUDY SERIES

This case study is part of a series produced by AMEA's Toolbox Working Group. AMEA's case studies are designed to provide value to stakeholders in Africa, Asia, and Latin America seeking to design and deliver high-impact business development services (BDS) in the agricultural ecosystem. Each case study offers insights and lessons learned on integrated programs that have the potential to transform the agricultural production and livelihoods of millions of farmers.

KEY QUESTIONS EXAMINED ACROSS THE CASE STUDIES INCLUDE:

- Which agri-SME segments are agri-BDS and agri-Finance initiatives serving and what does this mean for the weaker agri-SMEs?
- How have different agri-SME segments been offered BDS and how have they contributed to the cost?
- How is agri-BDS tailored to meet the specific needs of individuals and organizations?
- What is the full cost of supporting agri-SME growth and can these services be delivered more effectively?
- How can agri-SME data be shared and used for improving BDS effectiveness?
- How has agri-SME growth been accompanied by improvements in social or environmental outcomes e.g. women's empowerment, food safety/security?
- Which AgTech have proved to be the most effective in enabling agri-SMEs to access and use BDS?

AMEA collaborates with its members to identify case studies within and beyond the AMEA network that merit research and documentation to inform and inspire sector stakeholders. The current case study is intended to contribute to the knowledge base on these and related questions.

II. AGRA AND THE CONTEXT FOR THIS MODEL

AGRA is a "farmer-centered, African-led, and partnerships-driven institution that is transforming Africa's smallholder farming from a solitary struggle to survive to businesses that thrive." AGRA works with agricultural value chain actors of all levels to enhance farm production in 11 focus countries in Sub-Saharan Africa with an emphasis on staple crops.

An important element of AGRA's strategy is to strengthen the agricultural finance ecosystem in Africa. AGRA aims to increase the supply of agricultural finance through blended finance vehicles that inject government or donor support to catalyze private sector investment with an appropriate risk profile. AGRA also promotes and supports technological and other innovations that improve farm efficiency and crop production. Finally, AGRA helps initiate and broker market and risk-sharing partnerships among agricultural value chain actors to reduce and spread risk.

As part of the organization's agricultural finance efforts, in 2017 AGRA worked with Advans Ghana Savings and Loans, Ltd and other value chain partners in Ghana to pilot a risk-sharing model for facilitating farmers' access to agricultural inputs on credit. Input finance is one of the key constraints for farmers in sub-Saharan Africa, where smallholders are often required to assume the entire burden of risk even though other actors in the value chain stand to gain from smallholder production. AGRA observed that "the sustainable input finance system that profits all parties is a system where the loan risk is spread among a wide network of stakeholders" (AGRA). In response, this 'input finance model' unites farmer organizations, financial institutions, input suppliers and agribusinesses such as processors and marketing companies, under agreements to collectively bear the risk of farm input loans.

Following a successful proof of concept in Ghana, AGRA replicated the model with context-specific adaptations in Burkina Faso beginning in 2019 (with first financing taking place in 2020). The input finance model is currently active in Ghana, Burkina Faso and Mali. This case study examines the implementation of the model in Ghana and Burkina Faso to shed light on how the model functions, its potential for improving access to smallholder finance, and tips for replicating and scaling up similar approaches in other countries, contexts and value chains.

III. RESEARCH METHODOLOGY

This case study is based on research conducted by a neutral, external consulting firm (Inclusive Finance Accelerators, IFA) in March-May 2023, following the closure of AGRA's technical support grants for these implementations at the end of 2022. The consulting team comprised: a Project Director/Lead Writer and two Field Researchers–one based in Ghana and the other in Burkina Faso.

The consultants started with a desk review of existing reports and documentation obtained from AGRA as well as the consortia partners where possible. These documents included partnership agreements, grant progress reports, AGRA publications and presentations on the input financing model, quantitative data on credits and sales, and internal memoranda on progress and lessons learned. There was limited quantitative data available on the nature and breakdown of costs incurred by the various partners and the allocation of grant funds to specific activities.

The secondary research was complemented by a series of virtual and in-person, semi-structured key informant interviews and focus group discussions at all levels of the input finance risk-sharing model. Interlocutors included:

- AGRA headquarters, regional and country-level staff;
- Representatives of the participating financial service providers in Ghana and Burkina Faso;
- Leadership and field-level staff of participating offtaking companies in both countries;
- Representatives of select input suppliers in both countries;

- Participating agricultural producers in both countries, including leaders and staff of producer organizations and individual farmers;
- AGRA's technical service providers (consultants funded by AGRA's grant to facilitate the mechanism's implementation).

In total, the consulting team conducted about two dozen interviews (each lasting around 60-120 minutes) with more than 45 interlocutors across both countries.

IV. AGRA's INPUT FINANCE RISK-SHARING MODEL

A. OVERVIEW OF THE CONCEPT

1. RATIONALE FOR THE INPUT FINANCE RISK-SHARING MODEL

Agricultural production of course begins with inputs–the seeds, plant nutrients, crop protection, labor and cultivation practices that go into planting and raising any given crop. Since the cost of these inputs must be incurred well before the product can be harvested and sold, it is common for farmers of all levels to require credit to cover their input expenses. But investing in inputs also entails risk–the risk of crop failure due to weather events such as drought or flooding; the risk of low harvest due to low quality seeds, mis-application of inputs, or pest infestation; and the risk of market fluctuations that can cause sales revenue at harvest to be lower than production cost, to name a few. The smaller and more precarious the farmer, the less physical collateral available and the less structured and stable the given value chain, the higher the risk associated with financing farm inputs.

Hence obtaining reliable and timely credit to cover the cost of farm inputs can be an obstinate challenge for tens of millions of small agricultural producers in the global South. Producers sometimes cover their input costs with savings or by borrowing from friends or family. Sometimes, they obtain inputs on credit from input suppliers. If they are lucky, they may be able to access financing for their inputs through their producer organization or a financial institution. Although some off-takers are willing to extend inputs on credit to secure their supply at harvest time, and a few financial institutions will provide input finance under strict conditions, such credit providers find it expensive and time-consuming to identify and reach reliable producers and producer organizations dispersed across the countryside. Therefore, small and mid-sized farm production is frequently constrained by lack of access to sufficient capital to invest in the quantity and quality of inputs producers require to increase output, qualify for off-taker contracts and improve producers' profitability.

Meanwhile, actors throughout the value chain are impacted by the inadequate supply of input financing. Input suppliers are faced with the dilemma of assuming substantial risk by providing inputs to farmers on credit, or selling very little of their inputs because producers cannot afford the upfront input costs. Off-takers struggle to source sufficient quantity and quality of product because there is not enough production to meet their installed capacity/demand. Even financial institutions are impacted, because as urban markets have become saturated, reaching rural customers is a key to their growth and sustainability; yet the risks and challenges associated with serving small and medium farmers and agribusinesses constrain their response. All four of these categories of value chain actors–producers, input suppliers, off-takers and financial institutions–stand to gain from increased farm production and the investment in agricultural inputs that makes it possible.

2. ONGOING DEVELOPMENT OF THE MODEL

Through its work in agricultural value chains across Africa, AGRA observed an experiment launched on a small scale by one of its financial institution partners that appeared to hold strong potential for boosting the viability of input finance for smallholders. A mission-driven savings and loans institution, Advans Ghana, was leveraging the shared interests of these four categories of value chain actors to spread the risk of input finance more equitably. Rather than placing the risk burden on any one actor alone, this input finance risk-sharing model united producers, input suppliers (offering seed and fertilizer), off-takers and the bank to collectively assume the input finance risk and then reap the rewards of higher production. Following Advans Ghana's initial pilot-test of a risk-sharing input finance model in the rice value chain (in 2016), AGRA agreed to fund an expansion of the model in rice, as well as pilot tests in cocoa and cashew, led by Advans Ghana starting in 2017. In the following years, AGRA replicated the model with new partners and value chains in Burkina Faso (beginning in 2019-2020) and Mali (beginning in 2021).

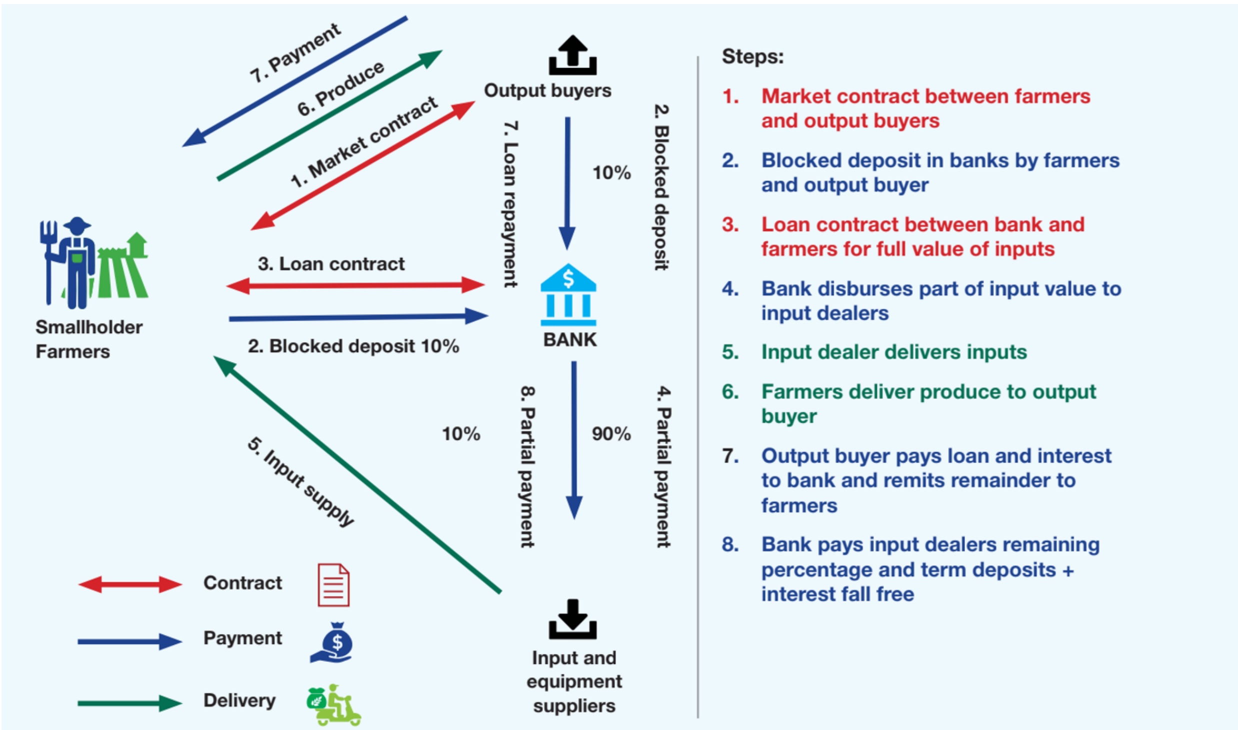
This input finance risk-sharing model remains a work in progress. The model is also not entirely unique–similar risk-sharing arrangements have been used informally by market actors and by multilaterals, NGOs and other investors and technical assistance providers in various forms. Moreover, the implementations supported by AGRA have not yet been taken to scale in any of the value chains or geographies beyond approximately 13,000 participating farmers per season in any given value chain.

The period of experimentation to date has been riddled with obstacles like the upheaval of COVID-19, major market and price fluctuations, extreme weather events, socio-political unrest in Mali and Burkina Faso, and substantial management changes within some key partner organizations. The evidence base on implementation costs, long-term sustainability and impact is still incomplete. And the research for the present case study revealed a diversity of experiences, perspectives and results even within individual value chains and partner collaborations.

Nevertheless, the model appears to be a promising strategy that is worth testing in other contexts, improving over the coming growing seasons, and investigating further to share learning and inform ongoing development– through AGRA's partners and beyond. The purpose of this case study is to document the experiences of AGRA and partners to date with the purpose of contributing to a shared knowledge base of practitioners who seek to address common, intractable challenges to increasing smallholder production and income in the global South.

3. HOW THE MODEL WORKS

FIGURE 1: DIAGRAM OF RISK-SHARING MECHANISM



Source: AGRA Finance Team and IFAD's Leveraging South-South and Triangular Cooperation (SSTC). *Risk-sharing as a Driver for Smallholders Farmer Finance: Value Chain Financing Model - Value chain financing model offers a risk-sharing solution for SMEs and farmers.*

While there are variations on these steps and terms, which will be further discussed in following chapters, the basic concept of this input finance risk-sharing model is as follows:

- The four categories of actors–producers, input suppliers, off-takers and financial service providers–come together as a 'consortium' (see inset box) to coordinate their roles and share input financing risk. (Note: the process of identifying and uniting these actors is discussed further below.)

- A contract is established between the off-taker and the producer organization for an agreed quantity and quality of product at an agreed price. This quantity and quality is based on sub-agreements between the producer organization and its members.
- The producer organization places an order to an input supplier for the inputs required to fulfill their agreement with the off-taker (as agreed by members).
- A contract for the full value of these inputs is drawn up–this can be between the producer organization and the FSP, or between the offtaker and the FSP (with the producer contracts containing a clause about inputs).
- The off-taker and the producer organization each deposit 10% of the value of the inputs at the bank as a blocked deposit, thereby offsetting the bank's risk by 20% (or a different percentage, as agreed).
- The input supplier delivers 100% of the inputs to the producer organization (or in some cases, to the off-taker, who in turn distributes them to the producers).
- The bank sends payment to the input supplier for 90% of the value of the inputs. Thus the input supplier maintains 10% of the risk (as-yet unpaid but delivered inputs), and the bank is carrying 70% of the risk with no physical collateral (in some cases, such as Burkina Faso, they do have a loan portfolio guarantee in place).
- At harvest, the producer organization delivers the agreed quantity and quality of product to the offtaker.
- The offtaker verifies the quantity and quality of the produce and calculates the total amount owed for the farm product received. The off-taker sends a payment to the bank covering the full cost of the input loan plus interest. The remaining amount owed is paid directly to the producer organization, (which distributes the proceeds to its members, usually retaining some agreed portion as a management fee).
- The bank remits the outstanding 10% of the value of the inputs directly to the input supplier. The blocked deposits worth 10% each are made available to the off-taker and producer organization.

This type of arrangement is also referred to as a 'tripartite agreement,' bringing together three or more actors. Figure 1 illustrates these steps and relationships with a diagram of the partners and flows of credit, inputs and outputs.

DEFINING THE INTEGRATED AGRIBUSINESS CONSORTIUM

"A carefully selected group of rural organizations and businesses that agree to work in a coordinated manner to deliver the benefits of the critical components for agricultural transformation (seed, fertilizer, agro-dealership, extension, markets and agri-finance) to a specific group of farmers in a defined geography"

How Integration Enhances the Competitiveness of Agribusiness and Smallholder Farming Systems: the Tanzania Case Study (AGRA, 2021)

4. BENEFITS OF THE MODEL FOR EACH CATEGORY OF ACTOR

In theory, this model results in improved business margins for each of the four partners, which reinforces their motivation to participate in the risk-sharing consortium. Here is how each category of partner stands to benefit from this arrangement.

PRODUCERS: The model positions farmers to more readily afford quality inputs in the quantities that correspond to their land and labor capacity, while also connecting them with a ready buyer. They are able to access an affordable input loan without physical collateral. Usually, through these linkages, farmers also receive some accompanying agricultural extension at no charge by the input supplier and/or off-taker (who stand to gain from correctly applied inputs and recommended agricultural practices). As a result, producers can expect to see increased yields and more assured sales at fair prices.

In Burkina Faso, the model has enabled farmers to reduce their production costs by 15% for two reasons: (a) bulk ordering of inputs at the cooperative level results in lower costs per farm, and (b) the bank loan carries a lower interest rate due to the risk mitigation (9% versus the standard 12%).

INPUT SUPPLIERS: Input suppliers who are often faced with either providing inputs to farmers on credit or not selling their inputs stand to gain substantially from this arrangement, as the consortium assumes a substantial portion of the risk. Moreover, input suppliers usually have to invest ahead of time to prepare their inputs for the season; by engaging in this arrangement which includes production contracts between farmers and off-takers, input suppliers can better plan for and invest in the right type and quantities of inputs with the assurance that they will be sold. This enables input suppliers to reduce their risk exposure, stabilize their business, invest in quality (such as improved seeds and other technology), and remain a growing concern (rapid turnover of input suppliers is a common problem in some markets). Input suppliers also appreciate enhanced access to a network of cooperatives with farmers who are well trained and linked to a buyer.

OFF-TAKERS: Agribusiness companies with strong demand for their product often struggle to secure adequate harvests, and they expend considerable time and resources on searching for reliable producers across large, rural areas with poor transportation infrastructure. Furthermore, like input suppliers, they are often faced with having to finance inputs on their own in order to fulfill their product orders, or turning to more expensive imports to shore up inadequate local supply. By uniting with input suppliers and a financial institution (each with their own incentives to reach and serve producers) off-takers are able not only to reduce their own input credit risk exposure, but also to leverage the network and technical assistance of their partners to find, organize and build win-win relationships with new producers.

In Burkina Faso, the off-taker improved its operations margin by 20% after engaging in the risk-sharing model. This was due to a combination of factors: (a) like the farmers, off-takers benefited from reduced inputs expense owing to the bulk purchasing and lower interest rate; (b) like the input suppliers, off-takers benefited from expanding their procurement network to more producers and their cooperatives; (c) the bulk purchasing that was enabled by grouping farmers and purchases increased off-taker efficiencies; (d) the quality of the product was higher and there were fewer post-harvest losses, thanks to good quality inputs and producer training and best practices. This means that off-takers had lower pre-financing costs, increased and more efficient procurement, and a higher quantity and quality of product from local sources.

FINANCIAL SERVICE PROVIDER: Rural finance–dominated by the agricultural sector–is the last frontier for expansion to new clients but involves a high level of risk. Because of the risk profile and difficulty of outreach, FSPs are especially challenged to offer affordable credit to small producers for farm inputs. By partnering with other actors who have their own incentives for increasing access to inputs and higher farmer production, FSPs benefit from existing trusting relationships and networks to reduce risk, improve efficiencies and–crucially–offload some of the risk burden.

Although the rationale for and potential win-win benefits of this model exist without an external organizer, identifying and uniting the actors can pose a formidable hurdle. The role of AGRA in the model's implementation in West Africa has been to serve as a catalyst and convener. AGRA provides some initial funding and low-profile technical assistance to get the model up and running and establish proof of concept. The following section describes this role in further detail.

5. SETTING THE MODEL IN MOTION

WHY THIS MODEL RARELY OCCURS NATURALLY

Since these producers, input suppliers, off-takers and FSPs are all striving to build value in the same geographic areas and value chains, it may seem natural that their shared goal of increasing production would bring them together without extrinsic support. Unfortunately, this is not typically the case for a variety of reasons. For instance:

- Smallholder producers, small and mid-sized agribusinesses and financial service providers in rural areas tend to co-exist in a landscape of disparate actors who do not know each other and have few pathways to connect.
- Farmers are not always organized in high-functioning, entrepreneurial cooperatives or other networks. These producers' small size, low profile and dispersed locations make them hard for other value chain actors (such as off-takers, input suppliers and banks) to identify, reach and serve.
- Small-scale producers are also more apt to lack the financial means, mobility, digital tools, trust of other ecosystem actors, and education needed to seek out partners (like new input suppliers, a financial service provider, off-takers and a cooperative structure) on their own.

For these and numerous other reasons, actors whose collaboration makes sense frequently remain disconnected.

AGRA zeroes in on the many components that make such a win-win risk-sharing arrangement feasible, and works to create connections and reinforce capacities so that partners can collaborate effectively. AGRA and its technical assistance partner have applied grant funding, technical expertise and time to enhance the ecosystem via the specific steps further described below. However, rather than institutionalize ongoing, subsidized outside support, AGRA's intention is to catalyze development and momentum of such consortia, and then exit as soon as possible so that consortia members can lead, guide and adjust the model sustainably in the long run. AGRA and AMEA encourage stakeholders to consider how the areas of activity presented here could be sparked and nourished naturally by existing actors in the local ecosystem.

BRINGING ACTORS TOGETHER

The first task, then, is to introduce these categories of actors to one another, identify shared motivations and synergies, and build trust among the actors so that they can determine a collaboration that results in a win-win relationship for all. AGRA's approach is to identify actors in each category, explore their respective offerings and pain points, and bring them together with other categories of actors to meet, learn about one another, and discuss potential collaboration and contracting. AGRA or its technical assistance grantees then work with the partners individually and as a consortium to build capacity, negotiate the terms of the risk-sharing model, troubleshoot when necessary, and monitor the progress of the collaboration. (Note that in the case presented here, the entire process in Ghana was led by the financial service partner with little to no outside technical assistance, while in Burkina Faso, both AGRA staff and a contracted technical assistance provider supported the process.)

It appears from AGRA's experiences to date in building input finance risk-sharing consortia in various African contexts and value chains that outside facilitation may be necessary to jumpstart the model. A neutral third party who has a high-level view of the overall market, understands the specific value chain in the local context, has the convening power to gather relevant stakeholders, and can objectively steer technical negotiations among all categories of actors, is invaluable to setting in motion a successful consortium. Although a moderate level of subsidy is needed to cover initial costs of organizing, accompanying and reinforcing technical and operational capacities of the partners, the approach should be time-bound and always aim to equip partners to take over the facilitation role themselves. Further guidance on this is provided in the Recommendations chapter.

BUILDING PRODUCER CAPACITY

Farmers and their producer organizations often require substantial capacity building in order to participate effectively in the model. In many cases, the producers have little to no experience with buyer contracts and formal financial institution loans. Sometimes the producer organizations lack cohesion and organizational management–which makes it difficult to ensure tasks like estimating production capacity, committing to and upholding production contracts, monitoring crop growth and quality, arranging for distribution of inputs and collection of harvests, agreeing to contract terms, and transferring payments.

While choosing to work with producer groups that are already well organized and high-functioning is one way to facilitate the model, in many contexts and value chains, such groups either already have off-taker contracts and financing, or they do not exist. It is important for stakeholders to resist the temptation to bypass weak producer organizations and work directly with individual farmers. In the implementations seen in this case study, there have been varying degrees of capacity building support provided to producer organizations. As examined in more detail further below, bypassing farmer groups undermines the model's scalability and sustainability, negatively impacts the bottom line of all categories of actors, and affects the long-term bargaining power and professionalization of small producers. (For more information on the characteristics of high-functioning producer organizations, see IWA 29 - Professional Farmer Organisation Guidelines.)

AGRA sees to it that producers get the agricultural training and coaching needed to improve production and quality in an environmentally friendly manner. This is done either through AGRA's self-employed village-based advisors, through AGRA-funded technical assistance providers, or via fellow partners such as off-takers and input suppliers who have a vested interest in ensuring their farmers know the recommended agricultural practices. In addition, AGRA provides technical capacity building support (via local NGOs, BDS providers and other technical assistance consultants) to producers and producer organizations to equip them to advocate for and govern themselves effectively.

APPROPRIATE FINANCIAL PRODUCTS

AGRA also works with the financial institution partner(s) in the consortium to design appropriate input loans to serve this market. The risks and constraints associated with extending agricultural finance to low-income farmers and small agribusinesses are often not well understood by formal financial institutions. Risks such as crop production variability, market fluctuations and timing of inputs need to be well understood for accurate risk assessment, management and pricing, while constraints such as collateral, distance from the FSP and seasonal revenue flows have important ramifications for loan terms and delivery mechanisms. AGRA (through its own staff or grant-funded technical advisors) collaborates with the financial service provider to educate their staff on this segment and ensure that their service offerings, requirements and processes match the needs of the other partners in the model. This technical support is typically provided by AGRA over the period of at least two seasons.

ENSURING THE RIGHT INPUTS ARE AVAILABLE

Calibrating input supply and demand can be a challenge. There is often a Catch-22 when it comes to quality inputs in smallholder value chains: input suppliers cannot produce and carry more expensive inputs (such as improved seeds or fertilizers) if there is not enough demand; but demand does not arise when farmers have no access to or experience with the inputs. New inputs must either be ‘pushed’ to farmers through extension or ‘pulled’ from farmers via off-taker demand for a certain quality of product. Moreover, in many cases, several inputs work together as a system, and farmers will not realize their production potential if inadequate knowledge or resources lead them to purchase only some of the inputs needed. Therefore, AGRA works with input suppliers to subsidize demonstration plots, extension activities and information campaigns among producers, and encourages communication among farmers, off-takers and input suppliers to raise awareness about the value and usage of specific inputs.

SUSTAINABILITY OF THE MODEL

Focusing on the foregoing components of a well-functioning system, AGRA seeks to build capacity and stimulate market forces to set in motion a virtuous cycle of ongoing, self-sustaining collaboration. In the discussions that follow on how this input finance risk-sharing mechanism has been implemented in Ghana and Burkina Faso, followed by a distillation of lessons emerging from these experiences, there are notable variations. However, the important concept is that hopefully some time-limited support for each category of actor and the consortium as a whole leads the partners to take responsibility and invest their time and effort in continuing to work together out of self-interest–including making adjustments along the way as necessary without ongoing external support.

Photo credit: AGRA

B. APPROACH AND IMPLEMENTATION IN GHANA

Advans Ghana is a leading financial institution in Ghana with more than 117,000 clients, a total loan portfolio worth USD 18.4 million, and savings deposits totalling USD 3.8 million (as of December 2022). Driven by its values of openness, commitment, entrepreneurship and innovation, Advans Ghana focuses on providing client-centric financial services to small businesses and low- and middle-income individuals in a sustainable and responsible manner (Advans Ghana, 2023).

In 2016, Advans Ghana had already used the bank's own funds to conduct a small pilot test of a risk-sharing strategy to finance inputs in the rice value chain. At the time, AGRA had other agricultural finance projects afoot both with Advans Ghana. Seeing the rationale and win-win potential of the risk-sharing model, AGRA agreed to provide a technical assistance grant to Advans Ghana the following year to refine the model, expand it to new partners within the rice value chain, and test it in other value chains.

Following a series of value chain studies, Advans Ghana selected the cocoa and cashew value chains for replication. Both AGRA and Advans Ghana knew that despite cocoa being a highly structured value chain in Ghana (with a governmental body overseeing prices and a well developed contract process between off-takers and farmer groups), the supply of input finance to the extensive network of small producers still lagged behind demand. Advans Ghana opted to test the risk-sharing model in *cocoa* (beginning in 2018), as well as the less structured *cashew* value chain (beginning in 2018), and to expand the model within the rice value chain. Advans Ghana also sought to incorporate its Mobibank mobile banking agent network into the risk-sharing model to facilitate transfers of payment among the risk-sharing partners.

After selecting the target value chains, Advans Ghana applied a set of selection criteria (detailed further below) to identify an appropriate off-taker for each value chain. The core relationship in Advans Ghana's implementation is between the financial service provider and the off-taker, and Advans Ghana builds the rest of the consortium around this partnership. In collaboration with the off-taker, Advans Ghana conducts a competitive bidding process prior to each season to select an input supplier, and then negotiates the input package and pricing. Meanwhile, Advans Ghana works with these consortium partners to identify producers, emphasizing an existing relationship between the off-taker and producers. Having attempted early on to work with individual producers, Advans Ghana quickly discovered the importance of grouping farmers. Hence when a functioning producer organization does not already exist, Advans Ghana and the off-taker work with “lead farmers” who represent 15-20 fellow farmers, to facilitate contracting, input distribution, the credit process and product delivery. (Chapter V delves into the specific selection criteria recommended on the basis of the experience in Ghana as well as Burkina Faso.)

Advans Ghana views financial literacy as a key starting point for onboarding clients, and in the case of the risk-sharing model, the bank’s first operational step within each value chain is to educate the end clients. Advans Ghana trains each group of farmers in short sessions over a period of two to three weeks on formal financial services with Advans Ghana, including account management, loan interest and payments and administrative processes. Following the financial literacy training, a loan officer visits each group to conduct a one-day session on how the input finance model works, the package of products and services the farmers will receive, and a detailed breakdown of the costs and expectations. Advans Ghana staff responds to producers’ questions and makes the adjustments necessary to reach an agreement with the farmers. Then, each group of farmers submits their requests for financing and signs a contract with Advans Ghana and the off-taker for the input loan. Each step in this process takes a considerable investment of time and attention. In the case of AGRA/Advans Ghana’s implementation, Advans Ghana was from the outset the main driver of the process.

In 2017, Advans Ghana began scaling up the model in the rice value chain with its existing off-taking partner, “rice off-taker A”–which also happens to be a processor and an input supplier. Ghana has two rice seasons per year–the main growing season from April/May to July/August, and the “minor” season from July/August to October/November. In 2016, Advans Ghana and rice off-taker A had already tested the model with a small number of individual farmers; in 2017, they expanded to reach 350 farmers for the main season. The collaboration went well, and Advans Ghana and rice off-taker A continued working together, financing the main and minor seasons in 2018.

> **“The partner off-taker’s procedures are more transparent than other schemes we’ve tried. We like being able to understand clearly the risk-sharing and also receive market rate for our crops”**
>
> Producer participating in the risk-sharing model

Unfortunately in 2019, off-taker A went through a company reorganization that put the risk-sharing partnership with Advans Ghana on hold for an indefinite period. Between ongoing hopes of continuing with that off-taker, the COVID-19 pandemic slowdown, and work in other value chains, it took Advans Ghana a few years to rekindle the model in the rice value chain. Advans Ghana formed a partnership with a new rice processor/off-taker (“rice off-taker B”) and together, they relaunched the model in 2022 with 61 farmers (including some farmer groups). Two seasons were financed in 2022, and the partnership is set to continue and grow in 2023. Figure 2 shows the evolution of AGRA/Advans Ghana’s input finance risk-sharing model in rice.

FIGURE 2: GHANA RICE VALUE CHAIN RISK-SHARING MECHANISM INDICATORS

RICE VC	2016	2017	2018	2019	2020	2021	2022
Region(s)	Volta	Volta	Volta	Volta	Volta	Volta	Eastern
# Farmers receiving financial literacy	350	159	-	100	N/A	N/A	61
Offtaker(s)	A	A	A	N/A	N/A	N/A	B
Input suppliers: % risk	N/A	A: 20%	A: 20%	N/A	N/A	N/A	New: 10%
# Farmer Organisations	N/A	None*	None*	N/A	N/A	N/A	None*
# Farmers		350	159	N/A	N/A	N/A	61
# Loans	N/A	350	159	N/A	N/A	N/A	12
Volume of loans (USD)	N/A	42 061	17 115	N/A	N/A	N/A	132 293
% Loan repaid	N/A	100%	100%	N/A	N/A	N/A	100%

With support from AGRA, Advans Ghana also pursued the model in cocoa beginning in 2018. Advans Ghana identified a leading worldwide chocolate manufacturer based in Switzerland as their cocoa off-taking partner under the risk-sharing model. In the first year of the collaboration, Advans Ghana financed 2,500 of the off-taker's cocoa farmers across the wide geographic expanse of all five cocoa-producing regions of Ghana. The model was well accepted and appreciated by the partners overall, although Advans Ghana found it time-consuming to manage relationships and contracting with farmers spread across the country. Even though cocoa farmers are typically grouped and represented by local purchasing clerks, Advans Ghana sometimes has to make two visits per community to negotiate and finalize input credit contracts.

The scale of the collaboration ebbed and flowed, reaching more than 13,000 individual farmers and loan volume of about $135,000 in 2021. Advans Ghana attributes the uneven evolution of this partnership to global cocoa price changes, as well as COVID-19 disruptions. In 2022, the international off-taking company also underwent a corporate reorganization, and the partnership was put on hiatus. Advans Ghana and that off-taking partner have not yet restarted their collaboration, and Advans Ghana currently has no active portfolio under this model in the cocoa value chain. Nevertheless, Advans Ghana considers cocoa to be a promising value chain for continued application of the risk-sharing input finance model, owing to the well structured value chain with strong relationships between off-taking companies and their producers. (Figure 3 shows the evolution of AGRA/Advans Ghana's input finance risk-sharing model in cocoa.)

Photo credit: AGRA

FIGURE 3: GHANA COCOA VALUE CHAIN RISK-SHARING MECHANISM INDICATORS

COCOA VC	2018	2019	2020	2021	2022
Region(s)	Western, Ashanti, Eastern, Central, Brong Ahafo and Ahafo				N/A
# Farmers receiving financial literacy	Training provided to cocoa farmers who opened savings accounts regardless of whether they went on to receive loans. Farmers whose loans were disbursed through purchasing clerks did not necessarily receive training, as there was no direct contact with these farmers. Farmers trained off-taker staff to provide training to farmers on utilizing Advanced' digital platform, Mobilbank. Of 2 400 farmers trained, 1726 opted to have their premiums paid into their mobile savings accounts.				0
Offtaker(s)	1	1	1	1	0
Input suppliers: % risk	1: managed by off-taker	1: managed by off-taker	1: 10%	1: 10%	0
# Farmer Organisations	None (farmers grouped by partner for loan distribution)				None*
# Farmers	2 500	8 454	5 700	13 025	0
# Loans	659	270	177	213	0
Volume of loans (USD)	114 020	200 514	88 874	138 191	0
% Loan repaid	100%	100%	100% (with delays due to COVID-19)	100%	0

Advans Ghana also attempted to apply a streamlined version of the model in the cashew value chain beginning in 2018. The risk-sharing approach was applied on a pilot basis to enable the purchase of cashew saplings as an add-on activity for farmers working in other value chains. Advans Ghana financed just 12 farmers for a total value of about $250 with farmers covering 25% of the input value and suppliers depositing 10% of the value with Advans Ghana. Since cashew trees take about five years to mature, 2023 will mark the first opportunity to observe results. In general, however, Advans Ghana determined that this model was not well suited to the cashew value chain due to lack of interest on the part of input suppliers and the fact that farmers tend to be scattered and ungrouped. If they opt to pursue tree crops in the future, Advans Ghana plans to target value chains that are more structured and have proximate farmers already organized in groups. Figure 4 shows the evolution of AGRA/Advans Ghana's input finance risk-sharing model in cashew.

Photo credit: AGRA

FIGURE 4: GHANA CASHEW VALUE CHAIN RISK-SHARING MECHANISM INDICATORS

CASHEW VC	2018	2019	2020	2021	2022
Region(s)	Volta	Cashew seedlings were financed by Advans with 25% risk-sharing by farmers via term deposits. As cashew seedlings take 5 years to mature, this was intended as an add-on activity for Advans' existing customers. Ultimately though, Advans discovered that few cashew seed companies were interested in the risk-sharing and that the lack of structured value chain meant that farmers were scattered and hard to reach and to group for credit and agricultural extension. As a result of these findings, work with the cashew value chain was discontinued by Advans.			
# Farmers receiving financial literacy	17				
Offtaker(s)	none				
Input suppliers: % risk	Volta Cashew: 10%				
# Farmer Organisations	None (farmers grouped by partner for loan disbursement)				
# Farmers	12 (10% blocked deposit)				
# Loans	1				
Volume of loans (USD)	259				
% Loan repaid	100%				

Based on its learning to date, Advans Ghana envisions continuing to expand the model in rice and cocoa, and is seriously considering testing it in the palm oil value chain, which appears to fit the bank's criteria for success (as further discussed below).

C. APPROACH AND IMPLEMENTATION IN BURKINA FASO

With the input finance risk-sharing model off to a strong start in Ghana, AGRA observed similar input finance and ecosystem constraints elsewhere in West Africa and sought to apply the model in other countries beginning in 2019. By testing this model in new contexts and value chains, AGRA hoped to expand on the learning of its team and partners, and hone a tool that could have tremendous value for rural development and the integration of smallholder farmers into formal markets.

In Burkina Faso, AGRA started with an open bidding process to select a project administrator (AGRA has minimal operations staff and operates largely through competitive contracts with highly qualified technical assistance providers). Cabinet d'Ingénierie et de Conseil en Développement d'Entreprises (Engineering and Business Development Consulting Firm, known as ICDE) landed the role and was brought on board to begin assembling partners and replicating the model in June 2019. Since the linchpin of the model in Ghana was the financial institution (Advans Ghana), AGRA and ICDE began building the risk-sharing consortium by first seeking a financial partner via a second competitive bid.

An agricultural bank was selected as the financial service partner for the risk-sharing input finance model replication in Burkina Faso. Brand new at the time, this was a government bank created to increase rural finance in the country and with a particular focus on boosting the agricultural economy. The bank was still in its start-up phase, and AGRA's input finance model aligned well with the bank's stated mission of reaching all levels of society, including smallholder farmers. As of late 2022, the bank had a total portfolio of about $95 million.

There was a lot going on at the financial institution, though, and iterative negotiations with diverse risk-sharing partners to hammer out a model that met everyone's needs was not necessarily a task for which bank leadership and staff had time and appetite. Eventually, AGRA carved out a budget to cover the cost of a dedicated project manager within the bank who brought a relevant background in agricultural finance–but not before the bank had financed the first (and to date *only*, for reasons that will be explained further below) round of input loans.

Moreover, to enable financial transactions under this model, it was necessary for the institution and other project partners to obtain a third-party guarantee. BCEAO regulations include stipulations on capital adequacy ratio and expected credit loss, and sales contracts cannot be considered as guarantees for input loans. Hence in this case (as would be required in all other BCEAO countries), an additional guarantee was secured from SOFIGIB to cover the financial partner's credit portfolio under this risk-sharing mechanism.

Following the financial partner selection, AGRA's contracted technical assistance provider, ICDE, was charged with conducting analyses to select the focal crop. AGRA had specific focal regions within Burkina Faso and a shortlist of value chains to consider: rice, maize, cowpeas, sorghum (and later: soy). ICDE recognised that a fairly structured market would be necessary to develop a functioning risk-sharing mechanism characterized by off-taker contracts, strong demand and a critical mass of producers with the potential to meet the off-taking demand. While cowpeas were appealing due to the strong engagement of female farmers in that value chain, there was not an agro-industrial off-taker for this crop, and the dominance of cotton and cereal crops in the area left little room to cultivate cowpea. The sorghum value chain was also deemed insufficiently structured (with a lack of formal off-taking contracts, as well as minimal inputs needed) to be a good early test case. And rice was potentially too subject to political influence and whims. When soy was later added to the list, ICDE found that it would have been a strong candidate for the model, but the pilot test with maize was already underway.

Maize (corn) rose to the fore, especially a sub-category of high quality maize produced for the thriving Burkinabè brewery industry. Corn "grits" comprises about 70% of the ingredients in the beer of one of the country's top breweries. However, since maize is plagued by a naturally occurring fungus called aflatoxin that is dangerous to human health, breweries require a superior quality of grain, low in aflatoxins, in order to meet stringent health standards. The inputs and farm practices necessary to produce this high-quality maize are in short supply and command a higher market price than regular maize. As a result, this maize sub-category is a more tightly structured value chain with a guaranteed market for producers with the right inputs and know-how. Maize is usually cultivated only once per year in Burkina Faso with planting occurring around June/July and harvest around September/October.

Next, ICDE sought off-takers dealing in low-aflatoxin maize “grits”. They wanted buyers who had a high demand in terms of both volume and quality, backed by high-profile contracts, and who were professional enough to have benefited from outside investment. Several off-takers were identified. All of them were highly motivated by their need to expand their network of producers so they could increase their supply of locally produced grits. Not only did these partners have a business need, they also saw this as an opportunity for improving the local economy. As the General Director of one off-taking partner also put it, “The beer industry is booming in Burkina. Maize is the main ingredient and the only one that can be produced in our own country. Whatever is not produced locally has to be imported, which is a shame because this is a major opportunity for Burkinabè farmers.” Although the selected off-takers already had existing and trusted relationships with financial institutions, they had to agree to work with the selected financial partner to participate in the model.

The off-takers already had networks of producers, too, but one of their motivations to participate in the model was to expand their producer network. So ICDE conducted a search for producer organizations. There is a pervasive culture of handouts and donor dependency in Burkina Faso, so ICDE aimed to identify producers with a genuine interest in trying something new. The cooperatives varied widely in their level of organization, operational capacity and professionalism. Although some had experience with formal financial services and contracts, the majority were loosely organized groups of farmers with little knowledge of production contracts or bank credit. As the project stakeholders eventually discovered, many of the farmers within the same cooperative did not even know one another and were not aware which of their neighbors were participating in the same scheme.

Contracts were established between the off-takers and the producer cooperatives, with production agreements signed by individual farmers–a process facilitated by ICDE. The contracts specified that the off-taking price would be an average of the market price for grits-quality maize over the past three seasons, plus a small mark-up; the contracts further specified that the price would be reviewed at three specific intervals during the season.

In addition to their lack of experience in contracts and banking, most of the participating producers were very poor farmers whose very survival depended on the successful production of high-quality maize that was new to them. The farmers also required agricultural extension services to bring them up to speed on the recommended farming practices. Although input suppliers often provide advice and have a demo plot to show, and the off-takers usually provide agricultural advisory services to their producers through a network of field staff, AGRA and ICDE decided to have ICDE train the producer organization's endogenous advisors and AGRA's village-based advisors (VBAs)[1] to provide extension services to the new farmers. As a result, farmers participating in the model had little or no contact with the off-takers and input suppliers (which was unfortunate for the off-taker-producer relationship, in retrospect).

Input suppliers were recruited in consultation with off-takers. AGRA's extensive experience in seeds and other inputs has shown what a challenge it can be to convince producers–especially smallholder farmers and their organizations–of the benefits of working with (more expensive) high-quality inputs. The off-takers had also discovered that even when farmers used some of the right inputs, they often failed to use *all* of the complementary inputs and practices necessary to obtain low-aflatoxin maize. Input suppliers had similar experiences–farmers picking and choosing the inputs and practices they could afford but ending up with sub-par production and quality because they had not applied the whole system of products and practices that work together. As a result, many of the input suppliers offering high-quality inputs (which require lead-time and investment to produce and have a short shelf-life) go out of business due to lack of knowledgeable customers or

[1] AGRA's village-based advisor networks

unpaid credits after poorly managed input and cultivation processes lead to unsuccessful yields. To combat this risk, both input suppliers and off-takers were motivated to work together to develop producer “kits” with all of the components necessary to produce the quality and quantity required by the off-takers.

After a ramp-up period of about six months, during which ICDE worked with all actors to build a shared understanding of the mechanism, the consortium embarked on its first season with the risk-sharing input finance model in 2020. Ultimately only one off-taker had the organizational capacity to follow through with implementation. A total of 10,137 farmers received high-quality maize inputs on credit for a total value of about $1.8 million ($178 on average per farmer).

Unfortunately, the implementation was flawed from the outset. Not only was the Burkinabè countryside grappling with growing socio-political violence that affected many rural communities, but the COVID-19 pandemic strike also struck just as the partnership was getting underway. There were also numerous delays all along the chain–starting with the bank. Being new to this activity and not fully comprehending the critical importance of timely application of inputs, the financial partner was slow in fulfilling its role. There were delays in input supplier negotiations, and the bank was late in signaling its agreement to unblock the delivery of inputs. Input suppliers, who were ready and waiting with packages of inputs into which they already had sunk costs, went ahead on faith and sent inputs to the participating producers. Nevertheless, farmers (who had deposited 10% of the input value at the partner bank) received their inputs late–which set the entire production process on a weak footing. Despite the agreement being that input suppliers would receive 90% of the input value from the bank following delivery, no payment was forthcoming–hence the suppliers essentially were essentially financing 100% of the inputs to farmers, while 20% of the value (10% from the off-taker and 10% from the producer cooperatives) sat on blocked deposit at the bank.

Meanwhile, the market price for local maize was seeing a precipitous rise. In the challenging socio-political context of 2020, the Burkinabè government began stockpiling maize to protect national food security–even offering high farm gate prices to small producers in order to secure the staple food. This served simultaneously to constrain supply and spark price increases. Whereas the high-quality grits crop normally commands a better price than "common" maize, suddenly the producers participating in the consortium were seeing "common" maize selling for three times the price they were set to receive from the off-taker. For its part, the off-taking company was slow to react to the rapidly changing prices. No sooner had the off-taker painstakingly negotiated, approved and communicated a price increase to producers, than the farmgate prices had risen substantially–sometimes literally overnight.

As very poor, first-time contract farmers with little to no bank credit experience, it was difficult for these producers to take the long view. There was considerable confusion as the market price became a moving target. Through communications with other farmers and communities, some producers also noticed that certain (perhaps veteran) farmers under contract with the same off-taker appeared to be receiving a different price than new producers. There was also resentment that the off-taker engaged directly with one set of farmers and relegated those participating in the new risk-sharing scheme to "endogenous" trainers. Thus, instead of building relationships through direct training of the farmers brought on through the risk-sharing scheme, the off-taking company provided a training of trainers so that other trainers (not employed by the off-taking company) could "cascade" the off-taker's training to new farmers in the network. In view of all of these factors, rather than prioritize their relationship with the off-taking company and the consortium for the sake of long-term profit growth and financial stability, many producers chose instead to side-sell. They agreed to divert the product financed by the consortium to buyers other than the off-taker with which they had established a contract.

When harvest time came, the off-taker received only a fraction of their contracted maize. They in turn remitted to the financial partner only the repayment corresponding to what the off-taker was able to pass on to their buyer (in the brewing industry). Most of the farmers who had skipped their contracts did not initially return to the bank either to make good on their input loan or to seek to withdraw their 10% deposit. The bank responded by maintaining a block on the deposits of all producers (even those who had delivered and repaid), as well as the 10% deposit from the off-taker. The bank also continued to hold out on payments to input suppliers–who had financed 100% of inputs for the entire season and now expected to finally receive reimbursement.

At the end of 2020 and into 2021, each partner found their own way of dealing with the fall out. The off-taker completed its own maize delivery contracts with imported products. The bank put a full halt on the risk-sharing input loan product, regardless of farmer product delivery/repayment status and deployed a coordinator (funded by AGRA in theory to build bank capacity in small-scale agricultural finance) to pursue in-default farmers in the field. Input suppliers pursued the bank for their reimbursements. Many farmers gradually repaid the bank, and some input suppliers received partial payments from the financial partner. As of 2023, these recovery activities were still ongoing.

Despite the mishaps, however, some aspects of the implementation were in fact successful.

- **PRODUCERS:** Farmers immediately saw a difference in the quantity and quality of their production, which convinced them of the value of the pricier inputs. Producer organizations cited a significant change from 2 to 2.5 tonnes per hectare with previous inputs and farming techniques, to 4 to 5 tonnes per hectare using the inputs provided through the consortium.
- **OFF-TAKER:** Even though many producers did not adhere to their contracts, the off-taking partner was happy with the expansion of their producer network to those who had remained loyal. The quality of their product purchased on the local market improved dramatically with a substantial increase in local maize meeting the stringent European norms for low aflatoxin levels required by the off-taker's buyer in the brewing industry. Moreover, the off-taker was able to reduce its risk exposure from sometimes 100% upfront financing to just 10% for farmers participating in the risk-sharing mechanism.
- **INPUT SUPPLIERS:** While some input suppliers were totally put off by the experience, others still see high potential in the model if implemented correctly. They are pleased with the prospect of reducing purchasing costs via bulk orders, being better equipped to plan ahead for the season, and freeing

up working capital to stock a wider array of inputs and increase delivery capacity.

As a result, the off-taker and some input suppliers continued to engage with producers with some limited support from ICDE until the AGRA project formally closed in October 2022. Since then, these partners continue to establish contracts and share the risk of input finance, even without the involvement of a financial service provider. AGRA, ICDE and the off-taker indicate that the original financial partner remains interested in continuing, and that a new financial provider–or perhaps a pool of financial providers–will be incorporated under the model in the coming year. Figure 5 shows the evolution of the model in Burkina Faso.

Photo credit: AGRA

FIGURE 5: BURKINA FASO MAIZE VALUE CHAIN RISK-SHARING MECHANISM INDICATORS

MAIZE VC	2020	2021	2022
Region(s)	Hauts Bassins, Cascades		Hauts Bassins, Cascades, Boucle du Mouhoun
# Farmers receiving financial literacy	1	none	none
Offtaker(s)	1-3	1-2	1-2
Input suppliers: % risk	At least 5 individual suppliers Input suppliers delivered inputs to farmers on credit, expecting to receive 90% of their value from the bank upon delivery, so they would carry 10% of the risk until harvest time payment. Ultimately the bank did not reimburse input suppliers until the bank received payment from the off-taker after harvest, and some suppliers had to pursue the bank to obtain payment. Given this, the model did not work as hoped for the input suppliers.	5 suppliers Credit applications were submitted to the bank for the 2021 rainy season but were delayed in being processed. In order not to miss the season, the project supported POs who were interested in sourcing from input suppliers. Some input suppliers have agreed to continue delivering inputs on credit, without the participation of the bank. To partially share the risk, the POs and the buyer made deposits of at least 30% in the accounts of the input suppliers, backed by the sales contracts between the buyer and the POs to strengthen supplier confidence.	At least 4 suppliers Credit applications were submitted to the bank, which wanted to renew its confidence in the POs, but institutional changes within the bank impacted the processing. In addition, the exponential rise in input prices linked to the crisis in Ukraine was not favorable because by adding bank charges to input prices many producers were going to realize a loss and become over-indebted. As an alternative, negotiations were made directly with some input suppliers with POs depositing 10% and the buyer depositing 40% in the input supplier's account.
# Farmer Organisations	8	12	21
# Farmers	10 137	28 960	5 662

# Loans	3 249	9 638	187
Volume of loans (USD)	1 804 182	1 674 149	292 204
% Loan repaid	Around 30% (approximately 70% were pursued during the following two years with many but not all eventually reimbursing the bank)	Unknown – these credits were negotiated between producers, input suppliers and off-taker in the absence of the bank.	Unknown – these credits were negotiated between producers, input suppliers and off-taker in the absence of the bank.
Tonnes of maize sold in structured market	6 767	23 056	19 103

NOTE: The line items 'producers' and 'number of loans' include not only individual farmers, but also some private enterprises, which accounts for the large per-borrower loan size.

Photo credit: AGRA

V. ANALYSIS AND DISCUSSION

The implementation of this risk-sharing input finance model with AGRA's support in both Ghana and Burkina Faso was imperfect, and neither example has yet reached the point of steady, substantial growth. Many unexpected circumstances arose in both countries—violent unrest in the Burkinabè countryside, COVID-19 with its far-ranging micro- and macro-level disruptions, severe price increases of maize in Burkina Faso, and major company re-organisations that intermittently put partnerships on hold in both countries. All of these factors had important impacts on the model's development, proof of concept, sustainability and growth.

Unfortunately, such events are the general rule when implementing such innovations anywhere—and especially in the unpredictable contexts where they may be most needed. Extreme weather events, pest infestations, government policy, organizational leadership changes, sociopolitical upheaval and other factors will continue to be present in these and future implementations. Therefore, examining past challenges can help stakeholders identify potential weaknesses in the model and take measures to fortify future implementations against unavoidable adverse circumstances.

This chapter begins by delving into several major challenges encountered by AGRA's partners in implementation of the risk-sharing input finance model. Specific obstacles are highlighted from the experiences in Ghana and Burkina Faso to offer the reader a glimpse into the rationale for the recommendations made in the following chapter. In addition, this analysis and discussion explores the potential social impacts of the model, based on preliminary evidence in the two countries. Finally, some indications are provided of the budget and timeframe for launching such a model.

A. CHALLENGES ENCOUNTERED

1. Stakeholder understanding and capacity issues

In both Ghana and Burkina Faso, it rapidly became apparent that each stakeholder not only needed to have a clear understanding of the risk-sharing model, but also had to possess certain internal processes and capacities to carry out their role successfully.

Well-functioning **PRODUCER GROUPS** are critical to the model's efficient and effective operation.

- Advans Ghana has struggled to work with farmers who are not organized into groups. The lack of cashew farmer groups led in part to the decision to discontinue the model in that value chain, while the widespread geography in cocoa (spread across more than 30 communities in five regions) has stretched the bank's outreach capacity and compounded operational costs. In the rice value chain, Advans Ghana initially worked with individual or loosely grouped farmers, only to decide that it was untenable; ultimately the bank revised its practices and collaborated with the off-taker to identify "lead farmers" who sign loan agreements on behalf of a small group to render the process more efficient. Nevertheless, many Ghanaian producers do have experience with contracts, and this helps to assure adherence to agreements once they are in place.
- In Burkina Faso, on the other hand, the farmer associations and cooperatives that frequently exist in theory were found to lack functioning leadership, real cooperation among members, and experience with professional contracts. When ICDE and other stakeholders interacted with cooperative "leaders" or individual members, there was often no cascading of information, and there were few mechanisms in place to unite group members for collective learning, analysis and decision-making. As a result, contracts drawn up between the off-taker and farmer cooperatives, and the individual farmer-level production agreements with ICDE/the bank that were intended to feed into the off-taking contract were not well understood or respected. It is prohibitively inefficient for the model's stakeholders to confer and contract with individual farmers, yet

without organizational capacity building and professionalization of farmer groups, it is infeasible to work with them in groups.

FINANCIAL INSTITUTION partners must also have a clear understanding of the model and the context in which the value chain actors are working, and be ready and able to institute clear processes to meet their obligations under the model.

- In Burkina Faso, after winning the competitive bid to participate, the bank failed to assign a "project champion" who could guide the bank's participation in the risk-sharing consortium. As a new financial institution that had not served such grassroots clients before, the bank leadership and staff lacked a solid understanding of the issues facing maize producers, the critical timing of input application, and the motivations of input suppliers which hinged on receiving 90% of the input value from the bank upfront. The bank's internal systems were not aligned with the needs of the mechanism and its stakeholders, and delays would immediately threaten the entire model. With no go-to person to build a clear understanding of the issues and work internally to develop solutions, the bank's role was impossible to uphold.
- Further, the bank's lack of familiarity with smallholder farmers and small cooperatives led to their disproportionate and unproductive reaction to defaults—blacklisting all clients and cooperatives involved in the model, even when they had repaid. This reaction led to even greater resistance to repay, since even if farmers did so, they still would not be able to access new credit.
- As a possible remedy, stakeholders in Burkina Faso are now considering creating a pool of financial institutions willing to participate in the model. They will seek to work with financial institutions with whom the off-taker and/or input suppliers already have a working relationship (providing a base of trust at the outset), and to invite institutions that are willing and able to devote staff and effort to troubleshooting the model. Stakeholders there hope that by opening the door to several financial service providers, they may be able to create positive competition and avoid the risk of losing the sole financial partner in the case of unforeseen circumstances.
- In Ghana, the financial service provider is the main driver and facilitator of the consortium, since this model fits within the bank's mission, business objectives, operational practices and capacity.

Working with **GOVERNMENT ACTORS** to shed light on inadvertent negative consequences of government policy also appears to be needed.

- In Burkina Faso, the government took measures to shore up national food supplies that appeared rational and beneficial from some perspectives. Offering high prices to poor farmers for staples that might be needed to avoid famine, or doling out free, high-quality inputs to farmers for improved crop yields may sound positive and can also yield political benefits. But these come with unintended outcomes, like farmers undermining a rare opportunity to improve their value chain participation and income stability for years to come, or input suppliers going out of business because farmers prefer to wait for seed handouts.

Therefore, to the extent there is a neutral, third-party technical assistance provider who can engage with government representatives to analyze the repercussions of macro-level policies on the markets and livelihoods of small producers, this would appear to be a valuable ingredient for setting the risk-sharing model on a path to success.

2. Consortium member communication and relationships

In both countries, the communication between and among the consortium partners has proven to be a critical component in the model's success or failure. Examples of where partner communication posed problems include:

- When maize prices skyrocketed in Burkina Faso, the lack of direct, timely and constructive communication led to slow decision-making, a lack of understanding of fellow partners' constraints and concerns, and ultimately producer side-selling that totally undermined the risk-sharing mechanism. Had there been a more cohesive and collaborative relationship already established directly between the partners (in this case, especially the off-taker and producer cooperatives), with an existing mechanism for rapid communication and negotiation, the partners would have been better positioned to address the obstacle in a timely and effective manner.

- In Ghana, one of the inputs provided under the risk-sharing mechanism was rejected by producers on the basis of non-performance. The input supplier stood by their product and had information about its use and the time needed to see results, but communication flowed mainly hub-and-spoke style, to and from the consortium leader (in this case the financial provider)--apart from more transactional communication between off-taker and seasonally selected input suppliers. Producers refused to utilize and to pay for the specific input, and the following season, the off-taker and financial service provider conducted a fresh competitive search for suppliers

> **"There were many problems including communication, the cost of inputs, personal contribution, bank account opening costs, lack of organization, lack of respect from the buyer towards the producers, delays in payment, outdated inputs, the main actors not having control of the system because the TA provider was doing everything…"**
>
> Producer in Burkina Faso

3. Contracts

Clarity and precision in the buyer contracts, as well as in any agreements between individual farmers and their group, are paramount. AGRA partners have experienced major challenges that could have been avoided by more specific and well understood contracts.

One critical point in the contracts is of course fixing the off-taking price. Detailing the price calculations, mid-season review and negotiation process, and adjustment criteria may not seem necessary until a market crisis arises. In Burkina Faso, producer contracts stated that the buying price would be the average market price at harvest the past three seasons plus a small markup. In Ghana, the contract price for last year's rice consortium was set as equivalent to "market price at harvest".

Luckily in Ghana, rice prices remained stable and none of the partners had reason to capitulate or negotiate.

In Burkina, on the other hand, maize prices skyrocketed continually over the course of several months, leading to confusion and uncertainty. The off-taker in Burkina was slow to respond, and producers had little commitment either to the off-taker (undeveloped relationship) or to their contracts (inexperience with contracts). As a result, considerable side-selling took place before the off-taker finally returned with a price that producers might have accepted.

> **“We provide training and other value-added services to our farmers, but we still pay market rate for their product”**
>
> CEO of rice off-taker in Ghana

Unfortunately, the situation in Burkina not only led to the off-taker receiving substantially less product than contracted, but also exposed another significant loophole in the agreements. The off-taker who received less product owed less in payment to producers than the input credit extended to farmers–so the payment they were to make to the bank did not cover the credit due. Meanwhile, some farmers who had sold their product elsewhere perceived no incentive to return to the off-taker or the bank to make good on their loan. Whether this was due to lack of specificity in the contracts and producer agreements, or to insufficient communication about roles and responsibilities, the result was a collapse of the consortium. Safeguards are needed to protect against the loan payment falling between the cracks.

In both countries, it has also proved important to specify in the contracts all details regarding delivery of inputs to producers, the aggregation of harvest, as well as its storage and transport.

HOW TO GUARD AGAINST PRODUCER SIDE-SELLING
(ADVANS' GHANA'S APPROACH)

- Off-taker must field officers who ensure that farmers apply inputs correctly and who make visits throughout growing season
- Use a stepwise approach to financing inputs so that the quantities are too small for farmers to relinquish any
- For the first loan, only a portion of the acreage is financed (e.g. inputs for only 5 out of 10 acres) providing a min-demo on their own land to compare results and ramp up farm capacity
- After the first loan, gradually increase input finance according to farmer's demand – thereby building experience and trust as partners
- All consortium partners should take every possible measure to ensure the farmer's success, since late late payment or inadequate harvest can lead to accumulated interest and lower profitability for the producers – which means everyone loses

4. Timing of inputs and payments

The timing of inputs is key to the rest of the system. As described in the section on implementation in Burkina, various lapses stemming primarily from the financial partner's slow responsiveness led to the late arrival of inputs, which set off a chain reaction during the rest of the growing season. Input suppliers must have the required inputs available on time, and financial service providers must understand the importance of disbursing on time so that the full complement of inputs arrive to producers on schedule. Input suppliers need to receive payment according to the agreement, since this is their incentive to participate in the consortium. Allowing plenty of ramp-up time to educate partners, document concrete agreements, build relationships and set the process in motion on time are critical to success.

> **"The mechanism is good in theory, but in practice the partners did not understand and refused to respect their commitments. The off-taker and the bank got us into trouble. We would like to continue working together, but we need to review the mechanism and adapt it to the realities on the ground."**
>
> President of one of the Burkina Faso cooperatives participating in the risk-sharing mechanism

B. OUTCOMES AND IMPACTS

1. Direct outcomes and impacts

While the implementations in Ghana and Burkina Faso are still in early stages of stability and scaling, the following **DIRECT IMPACTS** have been documented.

SCALE

- Approximately 13,000 cocoa producers in Ghana have participated in the mechanism, receiving a peak so far of $2.3 million in input credit in a single year.
- Approximately 350 rice producers in Ghana are participating in the latest consortium, receiving around $500,000 in input financing last year.
- Around 10,000 maize producers in Burkina Faso participated in the consortium in 2020, receiving $1.8 million in input financing–most of which has now been repaid. An undetermined but substantial number of these have continued farming the low-aflatoxin variety promoted through the mechanism, despite the lack of a financial institution partner in the last two years.

PRODUCERS

- Burkina producers registered 15% lower production costs than they would have had in the absence of the mechanism, due to the lower bank interest rate and bulk input orders made possible by the consortium arrangement.

- Burkina producers have seen a significant increase in the quantity and quality of their maize crop as a result of improved seeds and other inputs that the mechanism enabled them to test at lower risk. Most have continued to farm this variety as a result.

OFF-TAKERS

- The off-taker in Burkina realized a 20% reduction in their operational expenses as a result of increased economies of scale, and savings on input financing. They also likely saved because of delegating their producer training and monitoring to other consortium partners, which seems to have had negative impacts on offtaker-producer relationships that are not recommended.
- The Ghanaian off-taker has been able to increase its locally produced rice (Nana Rice) on the Ghanaian market, which is part of a national agenda to promote consumption of local rice and reduce the import burden on the Government of Ghana. Hence the risk-sharing input financing model has contributed to the vision of feeding the future, empowering smallholder farmers, and innovating using technology. As a new agribusiness company, the rice off-taking partner has grown from two farmers in 2017, to more than 400 farmers, and recently acquired 10,000 acres of farmland to promote an in-grower mechanism.

2. Indirect outcomes and impacts

It is worth noting that even in cases where the risk-sharing input finance mechanism breaks down, there can be important, long-lasting, positive outcomes associated with even short-term participation in the consortium. Such outcomes and impacts may be an argument for applying social impact grants to attempt implementing the model–as long as the rule of doing no harm is carefully observed.

Examples of **INDIRECT OUTCOMES** emerging from the experiences in Ghana and Burkina include:

- **SMALLHOLDER ENGAGEMENT IN CONTRACT FARMING:** Smallholders were able to engage in contract farming for the first time, and in many cases continued the off-taking relationship even when the original consortium dissolved for one reason or another. Even in cases where the farmer-off-taker relationship has not continued, these farmers now have a first experience with formal contracts, which positions them for a more professional approach to production and sales, as well as more contracting opportunities in the future. Hence the mechanism succeeded in connecting more farmers to formal markets and stabler opportunities to sell their product.

- **PRODUCER ADOPTION OF HIGHER-QUALITY INPUTS:** In Burkina Faso, farmers who had never perceived the value of improved inputs were encouraged and equipped to test them on their own land at reduced risk thanks to the risk-sharing model. As previously described, even in the absence of the full consortium, many farmers permanently adopted the improved inputs. This not only promises better market opportunities and prices for those farmers, but also increases the supply of low-aflatoxin maize–which could potentially have public health benefits for the broader community over the long term.
- **PRODUCER ADOPTION OF IMPROVED AGRICULTURAL PRACTICES:** Similar to the adoption of improved inputs, Ghanaian farmers participating in the cocoa value chain risk-sharing consortium have learned and adopted good agricultural practices ("GAPs"), which can have long-term impacts on production quality and quantity, as well as environmental benefits. The technical assistance and monitoring that ideally accompanies the risk-sharing mechanism encourages producers to test new farming techniques that they might otherwise not have known about or not felt compelled to try. Once they have learned and tested these GAPs, many see positive changes that lead them to continue the practices.
- **ENCOURAGING VALUE CHAIN DEVELOPMENT:** The model can encourage the development of more structured value chains. Advans Ghana is seeing off-takers in value chains such as shea taking steps to form farmer cooperatives and build their capacity so that the off-taker and cooperatives can access Advans Ghana's financing via the risk-sharing mechanism. Since shea is traditionally farmed by women, the incentive of a risk-sharing agreement is serving to bring more women into the value chain and introduce them to off-taking agreements that can make their shea production more lucrative and sustainable.

- **INCREASING LOCAL AGRICULTURAL PRODUCT SOURCING OVER IMPORTS:** The mechanism often enables off-takers to increase their local sourcing of product and reduce their imports–thereby benefiting not only their bottom line, but also local market opportunities, the local rural economy and even the environmental impact of long-distance transport. The most appropriate off-takers for this mechanism are usually those with a strong, ongoing demand for a specific quality of product who will resort to imports if necessary to meet their demand. This mechanism provides a lower risk way to expand off-takers' local producer networks.
- **CAPACITY BUILDING OF PRODUCER ORGANIZATIONS:** Finally, in implementations where capacity building of producer organizational management is appropriately addressed, participation in the risk-sharing mechanism for even a few seasons has the potential to greatly enhance the capacity of farmer groups. Reinforced farmer groups (whether cooperatives, producer organizations or other) are critical to building the market ecosystem, advancing rural development and alleviating poverty in many areas of the global South. Further testing and documentation of this farmer group capacity building component would be valuable to the sector for guiding implementation of input finance risk-sharing consortia.

C. INVESTMENT AND TIME REQUIRED

Although the AGRA-funded examples in Ghana and Burkina Faso do not provide definitive answers on the investment and time necessary to optimize implementation, these experiences do offer some points of reference for future investments in similar risk-sharing mechanisms. The following preliminary lessons learned bear further testing and documentation by AGRA and others in the sector.

- Allow for at least 12 months of ramp-up time prior to the target date of input delivery. This time is needed for starting to build individual partner understanding and capacity, cultivating a rapport among the consortium partners, conducting producer training and sensitization, ensuring the appropriate credit processes are set up both within the financial institution and among the other stakeholders (e.g., digital payment platform, application and disbursement requirements, etc.), negotiating contract details, agreeing on the input package and logistics, etc. Assembling the partners just in time to embark together on the planting season does not permit adequate preparation of all partners.

- If the implementation is receiving outside subsidy and technical support, plan for a minimum of three cycles from inputs and harvest to sale and loan retirement. Three years (or even three full growing seasons, depending on the value chain) should be sufficient to unite and equip the stakeholders, establish strong communication channels, build collaborative trouble-shooting skills by weathering some unexpected circumstances, and set the model on an autonomous path. This hypothesis does not suggest that the consortium is smooth sailing after three cycles, but rather that the risk-sharing partners should be equipped to guide the collaboration from this point, if their eventual autonomy is actively pursued from the outset.
- Do not under-estimate the investment required in technical expertise and staff time to unite the actors, build constructive processes and relationships, negotiate win-win agreements and get the model off the ground. As a point of reference, AGRA invested approximately $500,000 over three years for this technical assistance in Burkina Faso, and $186,000 in Ghana to support Advans Ghana's investment of staff and management time to test and refine the model. The differential in these investments is largely due to the learning curve in each context–in Ghana, the lead partner (Advans Ghana) had some prior exposure to consortium approaches and was ready to guide the process on its own with minimal technical assistance; whereas the Burkina partners were at the start of the learning curve; they needed third-party support to design the approach to fit the local context and to get the mechanism up and running from scratch.

Keeping in mind the likely incentives of each partner in the model can help identify appropriate actors, test assumptions, and support all partners in building and managing the consortium.

FIGURE 6: RISK-SHARING PARTNER MOTIVATIONS AND INCENTIVES

ACTOR	INCENTIVES TO PARTICIPATE IN RISK-SHARING INPUT FINANCE SCHEME
Financial Institution	▪ Expand outreach to new segment of clients ▪ Diversify product offerings ▪ Build agricultural portfolio, enhance competitive market position ▪ Contribute to social mission by reaching lower income and smaller agribusinesses ▪ Reach rural and agricultural clients more efficiently and at lower risk ▪ Build skills in consortium approaches and negotiations
Off-Taker	▪ Source of raw materials ▪ Quality standards ▪ Reduced procurement costs ▪ Lower financial risk (covering just 10% of the input risk)
Producer	▪ Access to buyer contracts ▪ Reduced risk – finding buyer, accepting low price ▪ Ability to access inputs with only 10% deposit ▪ Increased exposure and access to access to improved inputs ▪ Agricultural extension and other technical support
Input supplier	▪ Substantial risk reduction ▪ Free up working capital ▪ Build local demand for specialised inputs ▪ Increase efficiency ▪ Reduce risk of anticipatory investment in inputs being lost ▪ Reduce risk of inputs not being properly used / under-performing

VI. RECOMMENDATIONS

While the risk-sharing input finance models of AGRA's partners remain works-in-progress, there are numerous lessons learned that warrant sharing with practitioners around the world who are seeking sustainable approaches to increase input finance for smallholder farmers. Based on the experiences already outlined in Ghana and Burkina Faso, the following recommendations can be distilled as well-founded hypotheses that bear further testing in the field.

This chapter is addressed to stakeholders considering testing a risk-sharing input finance mechanism—whether you are an investor, international development organization, technical assistance provider, inclusive financial institution, fintech, off-taker, input supplier or producer network.

A. ASSESS THE CONTEXT

Evidence to date indicates that this risk-sharing model for financing farm inputs is more likely to function in contexts and value chains that meet certain criteria. It is helpful to consider these lessons learned when investigating the landscape to determine whether and how the model responds to your local needs.

CHECKLIST FOR STAKEHOLDERS CONSIDERING INPUT FINANCE RISK- SHARING

Does your target value chain have at least one buyer with a strong and ongoing demand for product that is not in adequate local supply, and are they willing to buy on contract?

Tighter, more formal, structured value chains work better with this model because the incentives of each actor depend on reliable off-taking contracts and an ecosystem of motivated actors who can work together toward their converging goals.

Is there a critical mass of producers of that crop or a related crop in a manageable geographic area and who are organised in groups or can be assembled in collaborative groups of producers?

The model requires a sufficient number of producers to make participation of all parties worthwhile as well as efficient. Since reaching out to individual farmers is time-consuming and counter-productive in the long term, we recommend favouring producers who are already working in producer organisations or cooperatives, or who would be well disposed to doing so.

Do the producers have trouble accessing inputs due to lack of financing options?

If it's not broken, don't fix it! If the relationships between farmers and input suppliers and/or off-takers are such that farmers are accessing the inputs they need to produce at or near their capacity, it may be better to reinforce that existing consortium than to introduce new partners.

Do the producers have access to a certain type of inputs but **lack knowledge, demand or appetite to invest in inputs** that would substantially increase their yield/quality/profits?

On the other hand, if there are reasons beyond a gap in input finance per se, this risk-sharing model has the potential to facilitate the testing and adoption of new crops, improved inputs or recommended practices that producers would not otherwise consider trying.

Are there **input suppliers in the value chain who are interested** in such a risk-sharing arrangement and willing to try it?

In some contexts, it is difficult to find reliable suppliers with the capacity to produce quality inputs at the scale needed, and in certain cases (like in Ghana with cashew saplings), input suppliers may not perceive an advantage to participating in such a risk-sharing consortium. Make sure that the inputs will be feasible to obtain on time and that the suppliers are genuinely motivated.

Are there **FSPs in the region(s) that have a genuine motivation to participate** and willingness to devote time and attention in collaboration with other consortium partners to launch and maintain the risk-sharing mechanism?

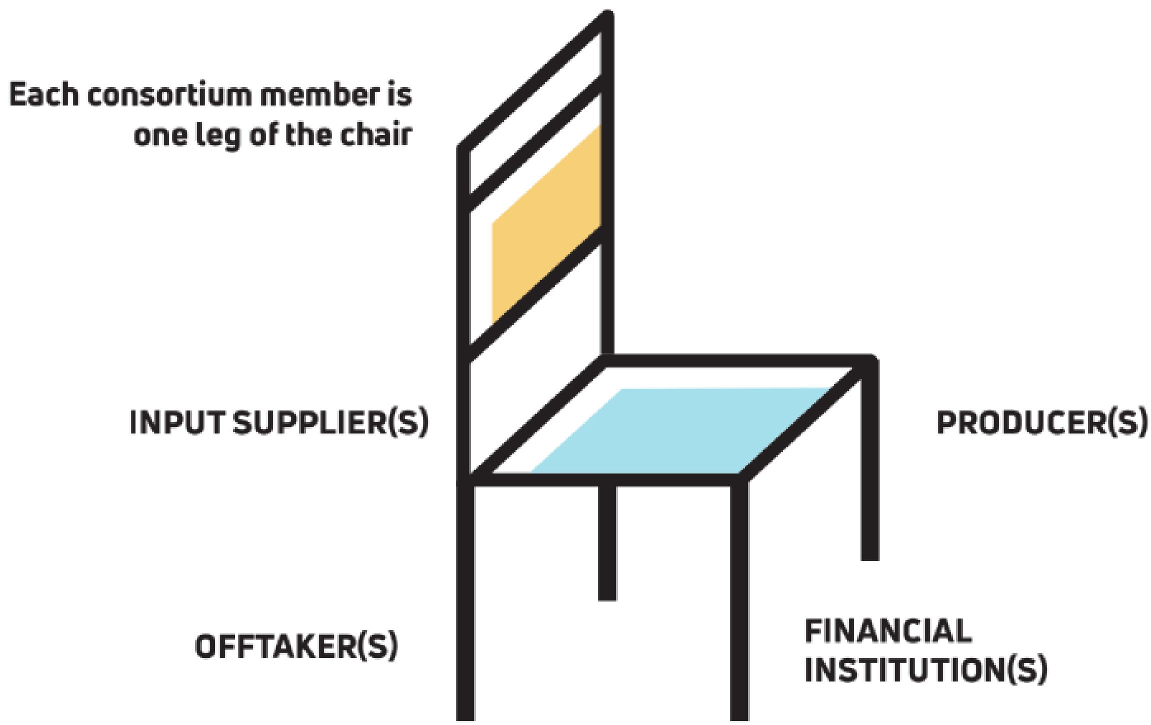
Similar to the input suppliers, the financial partner also needs to be sincerely motivated to participate actively in the consortium. The model requires that each partner come prepared to invest time and energy to build a collaborative relationship with the other partners, adjust internal risk management and operational processes, and troubleshoot together when unforeseen obstacles arise.

If your answers to these questions are all positive, you are ready to assemble the right partners to get the risk-sharing model off the ground. If you answered 'no' to some of these questions, consider looking further for a viable market segment, or seeking a different input finance model.

B. ASSEMBLE THE RIGHT CONSORTIUM PARTNERS

Each category of partner is like one leg of a chair: if any single partner does not adequately fulfill their commitment, the model collapses (Figure 7). The following criteria, drawn from the experiences of AGRA and its partners in West Africa, are recommended for your consideration in identifying appropriate partners.

FIGURE 7: CONSORTIUM PARTNERS SHARE THE BURDEN OF BOTH RISK AND RESPONSIBILITY



1. Selection criteria: Off-taker

Seek off-takers that have:

- At least two to three years of experience in the target value chain, so that they know the market landscape, the risks and how to mitigate them.
- Existing relationships with farmers with whom they have worked for a minimum of two years. A strong relationship between producer and off-taker is the best insurance that contracts will be respected and credits repaid. It seems to take around two complete planting and harvest cycles to winnow out unreliable producers and to build trusting relationships.
- (Ideally) previous experience lending to its farmers. This means that the off-taker understands from direct experience what is involved in financing farmers, and that they have enough trust in these producers to take on credit risk, themselves, for their production activities. If the off-taker has previously financed their producers, they have the product demand and financing experience to make such a risk-sharing model even more attractive.
- The capacity and willingness to provide training and capacity building to the producers involved in the risk-sharing model. Experience shows that farmers are more loyal to off-taking partners who provide value beyond simply the purchase of their products. The direct provision of technical assistance by the off-taker not only boosts production but also reinforces a trusting relationship with producers.
- Active processes to track and monitor their producers' crops over the course of the growing season. The off-taker should ideally be engaged and professional enough to employ a field team that makes in-person visits to all producers. In the absence of this monitoring, side-selling and other issues are more common.

Advans Ghana is cautious when it comes to individual market vendors who finance producers and would like to participate in the risk-sharing arrangement. The financial institution's experience in Ghana showed that such vendors tended to operate on too small and informal a scale to follow through reliably and fairly on their buying commitments.

2. Selection criteria: Financial institution(s)

Appropriate financial service provider partners for this model should have:

- Genuine, business-driven interest in learning how to gauge and manage risk in lending to smallholders and agri-SMEs. There needs to be a commitment at the leadership level that will realistically encourage and support work on this product down to the field level.
- Time, staff and operational budget necessary to devote time and attention to the consortium on an ongoing basis—not only to launch the mechanism, but also to maintain regular communication and engage in troubleshooting.
- Some experience in agricultural finance with at least a basic understanding of seasonality and the importance of timing in agriculture.
- Evidence of institutional flexibility and intention to design products to meet the needs of this market and to tackle challenges along the way. Institutions and staff that are inflexible or preoccupied with major existential challenges are less likely to play the role needed for the mechanism to succeed.
- Capacity and willingness to incorporate a digital component to foster transfers and payments among consortium partners. This reinforces transparency, enables faster transactions and renders the model more efficient.

ADDITIONAL CONSIDERATIONS

1. Rather than conducting an open search—especially one that may have grant money attached—consider approaching the financial institutions with which the off-taking partner or input suppliers already have a history and good working relationship. These institutions not only know one or more of the consortium partners and understand this market, but they are also likely to be motivated to manage their exposure by collaborating under the model.
2. Consider onboarding more than one financial partner to create some redundancy so that temporary lapses do not threaten the entire mechanism. As AGRA continues to refine the mechanism in Burkina Faso and test it in new contexts, the inclusion of microfinance institutions (MFIs) is increasingly

favored. MFIs typically have more experience with the populations that stand to benefit most from this mechanism, are more accustomed than larger banks to the small loans and adapted credit distribution systems needed to manage the mechanism, and have a mission and operational approaches that are well aligned with the objectives of the risk-sharing model.

3. Selection criteria: Producers

While an important advantage of this model is enabling the integration of new and inexperienced smallholder producers into the value chain and contract selling, striking a balance in the early days of solidifying the risk-sharing mechanism can help pave the way to greater inclusion as the consortium expands. As a rule of thumb, farmers recruited to participate should have:

- A producer group wherein the members know one another and have some experience working together. The producer groups need at least a basic level of governance that enables them to estimate collective production, negotiate and sign contracts, track production, collect harvest (or organize collection), communicate readily with all members and engage members in troubleshooting and decision-making where needed (such as agreeing to production numbers, pricing and input selection).
- Ideally, a minimum of two years of experience with the off-taker, for reasons described above pertaining to trust and reliability. Producers at least having some past experience with any buyer contracts is very helpful to getting the mechanism off on the right footing. New producers can potentially be brought on board once the risk-sharing mechanism is established.
- Minimum farm size (thresholds based on the value chain and local context) and then progressively ramping-up financing to achieve full capacity (see inset box on Advans Ghana’s experience).
- Ability to meet internal bank and regulatory requirements (age, ID card, citizenship, etc.).

Especially (but not only) in the absence of functioning farmer groups, it is important to source funding and plan on technical assistance to form groups and build their managerial and operational capacity.

4. Selection criteria: Input supplier(s)

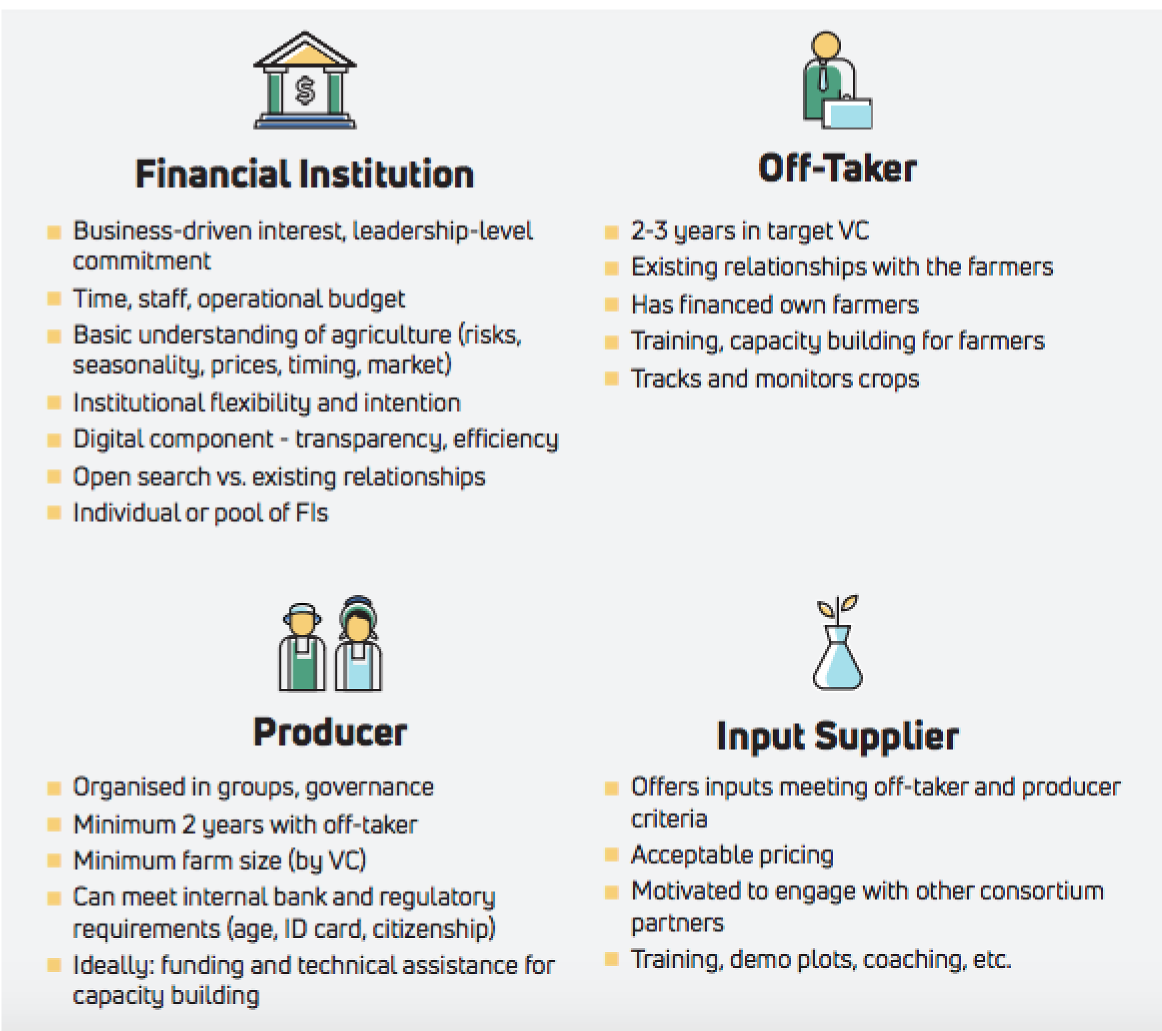
Input suppliers are diverse, and their partnership in the risk-sharing model can take a few different forms. In some contexts and value chains, the off-taker may also sell inputs to producers, or there may be an argument for selecting a single supplier and working exclusively through them for the input loans. In other contexts, it makes sense to create a pool of approved and willing suppliers from whom producers can choose to obtain supplies under the risk-sharing agreement. Regardless of the context-specific configuration, input supplying consortium partners should:

- Offer (via production and/or procurement) the seed, fertilizer, pesticide, mechanization and other inputs required to meet the criteria of both off-takers and producers. Advans Ghana learned the hard way that it is important to engage not only the off-taker but also the producers in identifying the inputs—some inputs selected unilaterally by the off-taker were rejected by producers, leading to production delays and shortfalls. In Burkina, the partners found it useful to collaborate in assembling a “package” of inputs (approved by both off-taker and producers) to be financed under the model. This is important because certain inputs go hand in hand with other, complementary input components–without which the quantity and quality of the harvest is impacted.
- Have competitive prices on their products. Advans Ghana convenes with offtakers and producers to identify their needs and preferences for inputs, and then preselects suppliers who meet those requirements; next, the limited group of suppliers are invited to submit proposals. The lead partner (in this case Advans Ghana) reviews candidates certifications and experience and compares prices to select a supplier. Producers may be reluctant to participate if they deem input prices to be too high. In cases where the price of the selected inputs are of higher quality, it is imperative that all measures be taken to enable a sound demonstration of the difference on producers’ own

land–training, coaching, site visits, etc. In Burkina, the maize farmers trying higher quality, more expensive maize inputs for the first time were immediately convinced of its value and opted after only one season to continue farming it even in the absence of a bank input loan.

- Be motivated and willing to engage with the other partners and participate in the risk-sharing model. Advans Ghana has found that input supplier willingness is a key to success and surprisingly is not a given. Even some input suppliers who go to the trouble of submitting a proposal sometimes try to negotiate their way out of the risk-sharing mechanism afterwards.
- Offer training sessions, demo plots, coaching or other technical support to producers utilizing their inputs. This adds value that reinforces relationships, trust and a productive working relationship.

FIGURE 8: SUMMARY OF PARTNER SELECTION CRITERIA



5. Order of Operations

The order in which partners are brought on can vary. In Ghana, the financial partner was the catalyst and main driver of the risk-sharing model and consortium from the outset, and they sought research and development subsidy as well as technical assistance support from AGRA. In Burkina, AGRA first contracted a technical assistance provider to guide implementation of the model and then immediately turned to a search for the financial partner around which they assumed the model would hinge, just like in Ghana. Another worthwhile approach may be to have a visionary off-taker lead development of the model—with or without external, third-party support. In East Africa, IDH has documented cases where global input supplier companies lead a similar tripartite financing consortium. The choice of lead partner among the actors—financial institution, off-taker, input supplier or external technical assistance provider—needs to be further examined and compared in future implementations.

C. LAY A SOLID FOUNDATION FOR SUCCESS, SUSTAINABILITY AND KNOWLEDGE SHARING

With all four categories of key actors on board, the consortium's next step is preparing the terrain for a successful implementation. As indicated earlier, the gearing-up process should begin 12 months prior to the target date for the first round of input loans—being sure to allow sufficient margin before the expected date of planting. The following points should be built into the implementation and maintained (ideally with some neutral, third-party support that purposefully engages all partners) for at least three crop cycles. AMEA endorses such an Agribusiness Cluster Approach[2] and has prepared a Toolbox containing peer-reviewed strategies, including iCRA's Agribusiness Cluster Coaching Curriculum.[3]

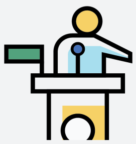
[2] Annual Learning Report
[3] Toolbox Guide

1. Consortium partner capacity building

It is crucial to educate each partner on the model and to ensure that they have the knowledge and capacity to fulfill their role. In the case of implementations involving a technical assistance provider, setting and carrying out a plan for partner-level capacity building is an important ingredient for success. Each category of actor, as well as national/local policymakers, needs some coaching and support–not only to reinforce the risk-sharing consortium itself, but also to enhance the performance of the overall agribusiness ecosystem over time.

Each consortium partner plays a critical role in the risk-sharing mechanism. To successfully fulfill their role, they require self-interested motivation, technical capacities, and a clear understanding of what drives their fellow partners and how all the pieces fit together. One of the key areas for capacity building is also to help each category of actor understand the motivations and constraints of their fellow consortium partners. Below are some of the points that should be covered over the course of consortium development and for multiple seasons of engagement in the model.

FIGURE 9: PARTNER CAPACITIES AND UNDERSTANDING TO BE REINFORCED

PARTNER CAPACITIES AND UNDERSTANDING TO BE REINFORCED	
In order for the model to function smoothly, the following categories of actors need to have a solid understanding of:	
 **GOVERNMENT/ POLICYMAKERS**	o The risks of market distortions and how to manage them (e.g., how government buying of common maize at high prices undermines the public health need of promoting low-aflatoxin corn), including questions such as price caps for local commodities
 **FINANCIAL INSTITUTIONS**	o Local agricultural cycles in the relevant value chain, such as how inputs work and what investment and time are entailed in bringing them to the market and farmers. o Agricultural lending to small actors, including risks, pricing and timeliness (e.g., late payment of inputs can lead to late delivery, which threatens the harvest and undermines the entire system) o The target market (e.g., if those who reimburse are excluded in next season due to nonpayment of others, undermines confidence in FSP and the whole mechanism) o The incentives and pain points of the other partners
 **INPUT SUPPLIERS**	o The needs and requirements of the off-taker(s) o The constraints, risks, concerns and skills of producers o The financial partner's processes, risk tolerance and methods of operating o The incentives and pain points of the other partners
	o Producer organization must be equipped to carry out basic tasks like recording member identities and locations, tracking yields, promoting a working relationship between and among members, establishing simple accounting and transport systems, communicating regularly with members and partners, and negotiating contracts on behalf of and with members o Their rights and the off-taker's expectations related to contractual agreements, as well as the value to the producers themselves of respecting their commitments to the off-taker

 **PRODUCERS**	o Their off-taker contracts and cooperative production agreements in detail, including price, transport o Basic financial education, including how the loan is repaid under the risk-sharing model and what happens in case of non-delivery of the harvest o Note: Allowing buyers and banks to reach out directly to individual producers causes problems and is not efficient or sustainable, and yet without a strong PO, such behavior is understandable.
 **OFF-TAKERS**	o Understanding of the "realities" in the field—including producers' capacities, challenges and incentives—gained through regular field presence o Aware of market price fluctuations and prepared to take rapid decisions and communicate with producers o Understanding the incentives and pain points of the other partners

2. Contracts

Contracts and other agreements between consortium members need to be very specific. Make sure that the following details are well documented and communicated:

- Precise roles and responsibilities of each consortium partner, including off-takers, input suppliers, financial service provider(s), producer organizations and any technical assistance providers. It is important to clarify where the ultimate responsibility lies for negotiations and agreements, and that wherever there is external assistance, the main categories of actors gradually assume the reins.
- Off-taking price. The contract should be specific with regard to the basis of the off-taking price and the recourse that will be taken if issues arise.
- Transportation details and who bears the costs. This should include the distribution of input supplies, the collection, aggregation and any storage of harvests, transportation of harvest to off-taker, etc.

3. Communication and Steering Committee

It is strongly recommended that mechanisms be put in place and processes cultivated from the beginning to unite all four categories of actors in transparent and active, ongoing exchange. A successful risk-sharing mechanism relies on an ongoing shared understanding, trust and buy-in of the offtaker(s), financial service provider(s), producers and input suppliers. The dynamic contexts in which these actors operate are such that any weaknesses or breakdown in understanding, trust and buy-in are quite apt to result in a collapse of the consortium as a whole. There is a high probability that issues will arise that require discussion, negotiation and agreement revisions or clarifications; waiting until challenges appear to bring partners together is unlikely to work in the long run. Each category of partner needs to have a voice in the mechanism in order for it to continue successfully.

AGRA's partners handled this in different ways, and neither of them has been completely satisfactory. Advans Ghana has positioned itself as the fulcrum for communications with each of the other partners, but the partners do not generally interact directly with one another. In Burkina Faso, the technical assistance provider ICDE served as the go-between from the beginning, and this role has become fairly entrenched. As a result of both configurations, some actors express a low level of trust and confidence in the consortium and a desire to have a voice in the negotiations, and others have dropped out or been forced out due to frustration and misunderstandings.

Based on these two experiences and extensive key informant interviews in the field, the case study researchers hypothesize that a tiered steering committee approach should be tested and documented in future implementations by AGRA and other stakeholders around the world. Uniting the partners admittedly entails logistical concerns–including virtual versus in-person gatherings, frequency and duration, facilitation, budget and staff time availability.

For these reasons, the following specific recommendations are made:

- Representatives should be tapped within each category–for example: one representative from each financial service provider and offtaker, one or more representatives of all input suppliers, and three representatives of producer organizations.
- Within each organization, there should be a "champion," or established go-to person who is responsible for continuity, communication and decision-making on behalf of the partner in the context of the consortium.

- These representatives should be charged with attending regularly scheduled consortium meetings, communicating before and after with the actors they represent, and channeling messages and decisions to other key members of their own organizations.
- The meetings should be held on a recurring, standing basis, regardless of whether there are major challenges to address; this way, an open and functional channel with existing parameters and relationships is always standing at the ready, and small issues can be clarified and resolved before they balloon to huge obstacles. In the early stages of the consortium (ramp-up and first full season, for instance), the consortium should meet more frequently (perhaps monthly), whereas it is envisioned that the partners could meet bimonthly or quarterly in the long term.
- The meetings should ideally be held via video-conference or phone conference call most of the time (perhaps the initial meeting and a biannual meeting in person if feasible), in order to minimize travel time and expense–thereby making the goal of regular meetings more attainable. In cases where in-person meetings are necessary (for example, producers lack the technology needed to participate effectively in virtual meetings), gatherings should occur at the office space of one of the consortium members.
- In order to render the maintenance of partner communication as efficient as possible, it is likely that some partners will need to engage bilaterally on a more frequent basis–such as one-to-one meetings between the head of an off-taker and the bank’s point person, or between an input supplier and the off-taker for input selection and distribution. Nevertheless, bringing together representatives of all of the actors on a regular basis appears to be a worthwhile ingredient for creating a solid foundation for the mechanism’s ongoing success.

Hopefully, AGRA and AMEA partners will incorporate these recommendations into future implementations and report back to the community on configurations that yield the most value while remaining efficient, as well as any new lessons learned.

4. Knowledge Management

The final recommendation is a call for continued improvement in knowledge management across the landscape of stakeholders committed to rural and agricultural development. While thorough reporting on project indicators is an important starting point, taking stock of learning as innovations and field activities evolve is extremely challenging. As a model encounters ups and downs, and morphs to better suit the context and target population, there is often a core group of "champions" who understand the nuances of the implementation and are best placed to analyze the model and distill lessons learned. Yet those who are closest to the action usually have scant time to formulate their knowledge for the benefit of other practitioners and programs. Meanwhile, it is difficult to obtain grants or direct resources to cover the expense of third-party research studies for projects that are not yet proven. AGRA is attempting to address this paradox through the creation of a Centre of Expertise that aims to identify, document and actively apply lessons learned to improve future initiatives.

In large organizations like AGRA, where substantial funding is devoted to innovations that can yield important learning for the broader rural development sector, investment in internal, ongoing knowledge management and knowledge sharing can have enormous positive impacts. Although an organization's pilot projects and early stage replications may reach thousands, tens of thousands or hundreds of thousands of smallholders and agribusinesses, by analyzing, distilling, documenting and sharing learning collected during the course of implementation, AGRA and similar stakeholders can leverage their work to inform, influence and impact others across the spectrum of agribusiness actors and beneficiaries.

AMEA's investment in this case study is an excellent example of active knowledge management and knowledge sharing. Hopefully, this case study will equip AGRA with learning to inform the next phase of their work on input finance risk-sharing. At the same time, AMEA members and other practitioners will hopefully capitalize on the experiences of AGRA and its partners in Ghana and Burkina Faso to test the lessons and hypotheses presented here and–importantly–report back on their own results and learning. Proactive analysis and documentation of what works and the pitfalls to avoid will enable the rural development sector to continually advance agribusiness markets and farmer organizations–perhaps with a well-functioning, win-win input finance model as part of the collective strategy.

VII. CONCLUSION

The experience of AGRA and its partners in developing and implementing a risk-sharing input finance mechanism in Ghana and Burkina Faso has yielded substantial learning to guide ongoing testing and innovation. The model shows strong potential to reduce and spread agricultural production risk across four categories of actors who all stand to profit from increased production: off-taking companies, financial service providers, input suppliers, and producer organizations and their members. This case study has provided insights and recommendations so that AMEA members and other rural development practitioners can leverage AGRA's learning to further test and improve on the mechanism in new value chains and geographic contexts.

The initial sections of the case study provided a detailed view of the model's rationale, operational structure and practical implementation in two countries. The case study then explored unexpected challenges encountered along the way–from exogenous circumstances like political unrest and COVID-related staple price fluctuations, to partner communication breakdowns. By offering a glimpse into the implementation process in two concrete situations, these chapters aim to give the reader a sense of what is entailed in launching such a mechanism and what outcomes can be expected.

Finally, the Recommendations section of the case study built on these experiences and lessons learned to present preliminary guidelines for readers considering implementing similar approaches. These guidelines include assessing the local context to determine whether the risk-sharing mechanism would be a good fit and criteria for selecting promising consortium partners. Outstanding areas for development of this mechanism were cited, including expanding financial service provider partners to include MFIs, exploring off-taker and input supplier-led implementations, and proactive strengthening of each consortium partner's capacity and understanding–with special attention paid to producer organizations. The case study wrapped up with several ways to set the mechanism on a path to sustainability and successful replication.

By sharing this case study, AMEA hopes to inform and inspire its members and the rural development sector to consider this promising tool, leverage the learning of peers, and continue honing strategies to advance the state of the practice in accelerating the development of professional farmer organizations.

Photo credit: AGRA