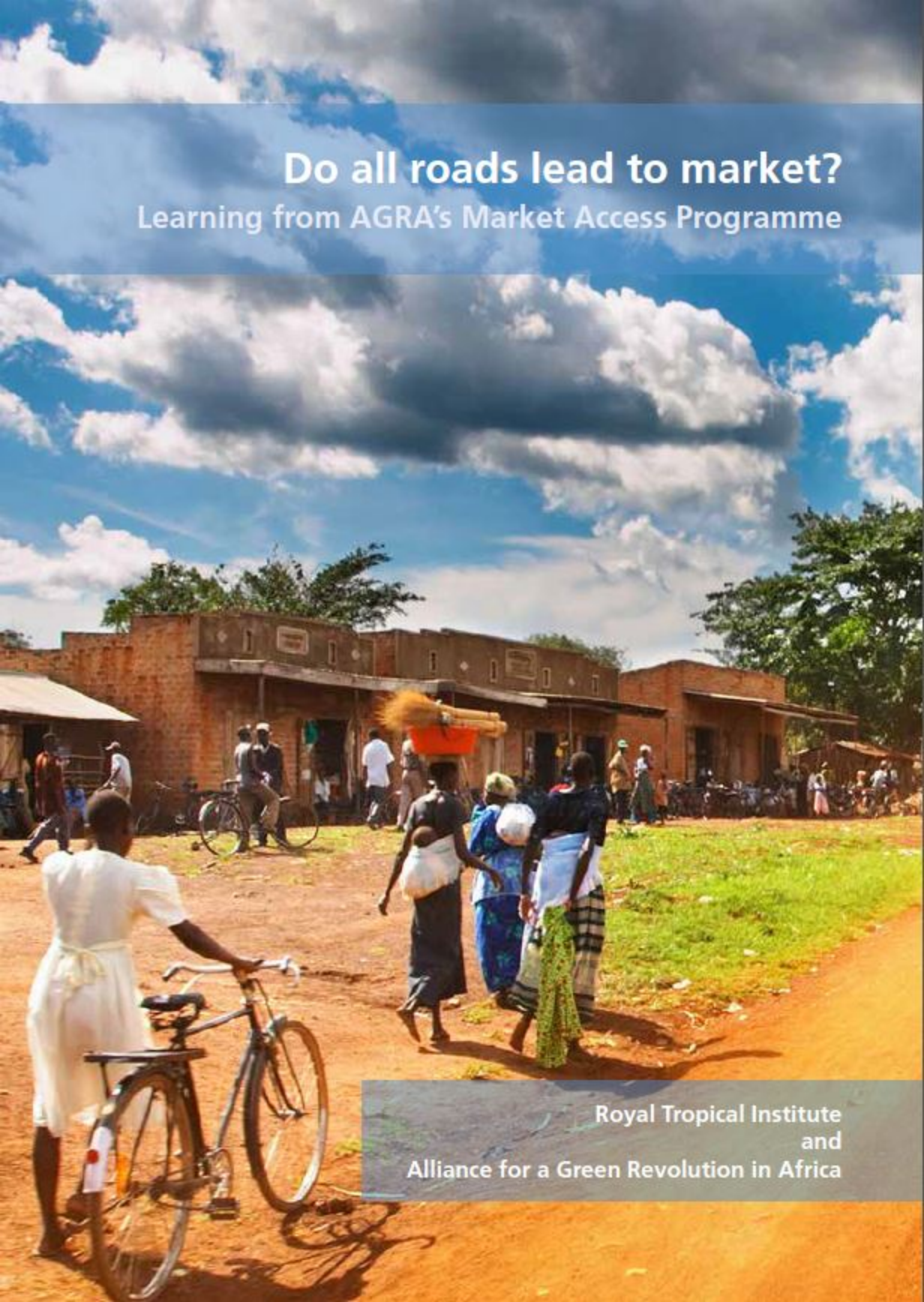
Do all roads lead to market?

Learning from AGRA's Market Access Programme



Royal Tropical Institute
and
Alliance for a Green Revolution in Africa

Do all roads lead to market?

Learning from AGRA's Market Access Programme

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Bertus Wennink and Mariana Wongtschowski
(Editors)

Royal Tropical Institute

AGRA
Growing Africa's Agriculture

Royal Tropical Institute

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Do all roads lead to market?

IN MEMORIAM

As this book was going to press, we were saddened to learn of the untimely death of Stephen Kiuri Njukia, a senior programme officer with AGRA. Stephen was instrumental in setting up the Market Access Programme at AGRA, and was a tireless advocate for enterprise development and improving the livelihoods of smallholder farmers in Africa.

Steve, we greatly miss you. May you rest in peace.

Contents

Acknowledgements

Yes, there was the confinement in the hotel in Nairobi, with plenty of mosquitoes … But it was all in all a very pleasant journey!

In 2012, AGRA approached KIT to support it in documenting the progress, successes and challenges faced by projects funded through its Market Access Programme. Together, AGRA and KIT mobilized 13 project representatives to spend some much-needed time discussing their work. They came together in January 2013 for a week to do just that.

How do we do things? What are the differences between the approaches followed by the project grantees? What can the grantees – and AGRA – learn from those differences and similarities? What has gone "right", where?

This book is a result of those discussions. It would have been a very different book if it was not for the commitment and openness of both AGRA staff and the project representatives. Thank you all, for thinking along and challenging each other on the way!

Paul Mundy, our language editor and designer, has been essential to this process – our deeply felt thanks to Paul!

Suzanne Nederlof (Van Hall Larenstein, University of Applied Sciences, The Netherlands, who in fact started the communication between AGRA and KIT while still working for the latter) and Gideon Onumah (Natural Resources Institute, UK) peer reviewed this book. Our thanks to both for the constructive and helpful comments.

We would also like to thank Mildred Okoth, who provided us with efficient secretarial support during the workshop.

Finally, we would like to thank the Dutch Directorate for International Cooperation (DGIS) for its support in the form of core funding to KIT, and the Rockefeller Foundation and the Bill and Melinda Gates Foundation for their support to AGRA in general, and the Market Access Programme in particular.

Emma Kambewa, Matieyedou Konlambigue, Bertus Wennink and **Mariana Wongtschowski**

Editors

Foreword

SMOOTHLY FUNCTIONING food markets are vital for food security. They give smallholder farmers incentives to generate a surplus they can sell, and to invest in new production and postharvest management technologies. They also ensure that food reaches consumers in deficit areas. In doing so, they contribute to food security and higher incomes, the main goal of the Alliance for a Green Revolution in Africa (AGRA).

In 2008, AGRA set up its Market Access Programme to complement the work of its other programmes on seed systems, soil health and policy. The Market Access Programme came into being as a result of the realization that increased productivity is not enough to lead to food security and improved livelihoods. If the higher output does not find its way to a market system that is well prepared to receive, store and distribute it, little will change.

The Market Access Programme's work is based on the assumption that unorganized, unskilled farmers and weak small and medium enterprises find it difficult to earn profits from marketing produce. They need the right knowledge and information, proper equipment and storage facilities to keep their produce safe, physical market places where buyers and sellers can interact, facilities to process it further to raise its value, and credit and other services to ensure they can get the inputs they need. They need to have up-to-date market information, including prices to help them negotiate with buyers. The programme provides grants to organizations so they can facilitate and tackle these issues.

Four years after the programme was established, AGRA felt it was time to review its achievements and challenges, and most importantly, reflect on the assumptions highlighted above.

AGRA asked the Royal Tropical Institute (KIT) to help with this review. It resulted in three main products. The first is this book: it shows what has been working, and what has not, under which circumstances. But it does more than that: it looks at the remaining questions which both the development literature and the recipients of the AGRA grants fail to answer. It looks at how the grantees have gone about supporting farmers' organizations, along with efforts to promote bulking and collective marketing, market information systems, access to finance, the prevention and reduction of postharvest losses, and increasing demand through alternative uses. It suggests ways that such efforts can be made more effective in the future. The analysis and lessons from various case studies are useful not only for AGRA and its partners but also for development practitioners and policymakers.

The second product is that the grantees have been able to share their successes and challenges, get to know each other's projects and learn from their work, and make recommendations for AGRA to consider in future grants.

The third main product of this process is an indirect one: it is AGRA's new strategy. AGRA used the discussions during this review process as important inputs in defining where to go next. Indeed, in its new strategy, AGRA will continue in its role of grant maker and capacity builder to develop innovative models. Knowledge management and convening have been added to its

roles to facilitate the scaling of the innovative models developed. This is a good response to the replicability and scalability issues raised in this book.

We hope this book will be of interest to others – beyond AGRA – who work on supporting smallholders in finding their roads to the market.

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1
Introduction

Donkeys transporting farm produce to the market in Kapchorwa, Uganda.

Photo: Uganda Development Trust

Agriculture remains the backbone of the economy in most countries in sub-Saharan Africa. It contributes heavily to national incomes and up to 50% of gross domestic products, and it employs the majority of the active population. It is commonly accepted that African countries need to further develop their agricultural sector in order to have a sound basis for overall economic transformation (Diao et al. 2010).

The performance of the agricultural sector, in terms of growth of agricultural gross domestic product, has been improving in sub-Saharan Africa since 2000. In the 1980s, agricultural growth was 2.3% per year, but between 2000 and 2005 it rose to 3.8% a year (World Bank 2013). The agricultural sector, which is dominated by smallholder farmers, thus has significant potential for enhancing food security, driving economic growth and reducing poverty. However, agricultural productivity in sub-Saharan Africa still lags compared to other developing countries (Diao et al. 2010). Raising smallholder agricultural productivity is only possible if smallholders can sell their products at a profit and make the necessary investments to improve productivity.

There is a growing market potential for smallholder farmers in particular domestic and regional markets for staple food crops. Sustained population growth, particularly in urban centres, increases demand for food and hence offers opportunities for smallholders (Diao and Hazell, 2004).

However, the situation varies between regions (under the influence of market integration in West, Eastern and Southern Africa), countries and even within countries.

Farmers, traders and processors seize emerging market opportunities and are increasingly involved in market transactions. Furthermore, many governments acknowledge the potential through policies to enhance market-oriented smallholder agriculture. A framework for such policies is given by the Comprehensive African Agriculture Development Programme (Diao et al. 2013).

However, many of Africa's agricultural markets are underdeveloped and inefficient. They are one of the main constraints to raising agricultural productivity and improving the continent's food security and smallholder farmers' income. Marketing problems are complex and diverse (Poulton et al. 2006, World Bank 2007; Diao et al. 2010). Generally speaking, they include the following:

- **Narrow markets.** Farmers have few channels through which they can market their produce. Most sell soon after harvest to a small-scale trader, who bulks the produce and sells it to another buyer. Few farmers process their output to raise its value, or seek alternative, non-food uses.
- **Low farm-gate price, high end-user price.** The initial quality of the product is often poor. Transportation and storage facilities tend to be inadequate, raising costs and increasing postharvest losses. The marketing chain is very long: a sack of grain may go through many different hands before it reaches its final destination on consumers' plates. Each intermediary in the chain takes a slice of the value. As a consequence, the farm-gate prices are on the one hand consistently low, and the end-user prices on the other hand remain high.
- **Weak farmers' organizations.** Smallholders typically do not leverage their numbers to secure better prices. This is due to poor understanding of how markets work, poor gov-

ernance and management of farmer-based organizations, and the low levels of trust in the societies they live in.

- **Lack of market information.** Farmers lack the information they need to produce well and sell at a profit. They cannot get reliable, timely and sufficient information on inputs, production and processing techniques, weather patterns, prices, and government policy. This calls for another role and way of operating for agricultural extension services.
- **Lack of affordable finance.** While smallholder farmers are the key players in the agricultural sector, they are the least served by financial institutions. Banks tend to see smallholder agriculture as a low-profit and high-risk business. There are few bank branches in rural areas, and few financial products are tailored to farmers' needs.

AGRA's Market Access Programme

AGRA – the Alliance for a Green Revolution in Africa – recognized that markets are key to prosperity in rural areas. It also recognized that smallholders cannot always take advantage of markets without external support. It established its Market Access Programme to complement its three other existing programmes, which deal with seeds, soil health and policy. Launched in 2008, the Market Access Programme is funded by the Bill and Melinda Gates Foundation and the Rockefeller Foundation, and specific country projects are funded by bilateral donors (USAID, DANIDA and SIDA). Its mandate is to promote efficient and profitable agricultural commodity markets that ensure higher returns to smallholder farmers. It focuses on postharvest issues and marketing opportunities for staple foods: cereals, legumes, roots and tubers.

The Programme's mission is to support AGRA's goals to "increase income, improve food security and reduce poverty" particularly "by directing investment and resources into realizing meaningful improvements to the market infrastructure of the core food staples in Africa"; where "core" refers to food crops that make up an important part of standard diets and hence cropping systems. This mission covers the overall market environment including good transport systems, market linkages, adequate storage facilities, sound legal and policy frameworks, and functioning financial systems.

The Market Access Programme has developed its own markets-specific "theory of change" which explains how markets fit into the broader picture of agricultural development in sub-Saharan Africa (Figure 1). The theory holds that increased food security, smallholder farmer income, and regional trade is achieved through:

- **Organizing and empowering smallholders.** Smallholder farmers need to know how to engage in the market to their best advantage. They need business skills and aggregation mechanisms to leverage their numbers and negotiate better deals.
- **Reducing systemic barriers.** Even if farmers are empowered, they cannot change much if barriers to the smooth functioning of markets remain. Supportive policies, better roads and transport, more and better storage, improved market information, and the introduction of grades and standards are all vital to reducing market barriers.
- **Strengthening staple food value chains.** The more options the actors enjoy, the more vibrant and effective the market will be – particularly for producers. Developing the potential to use agricultural produce in different ways will stimulate production and make prices more competitive.

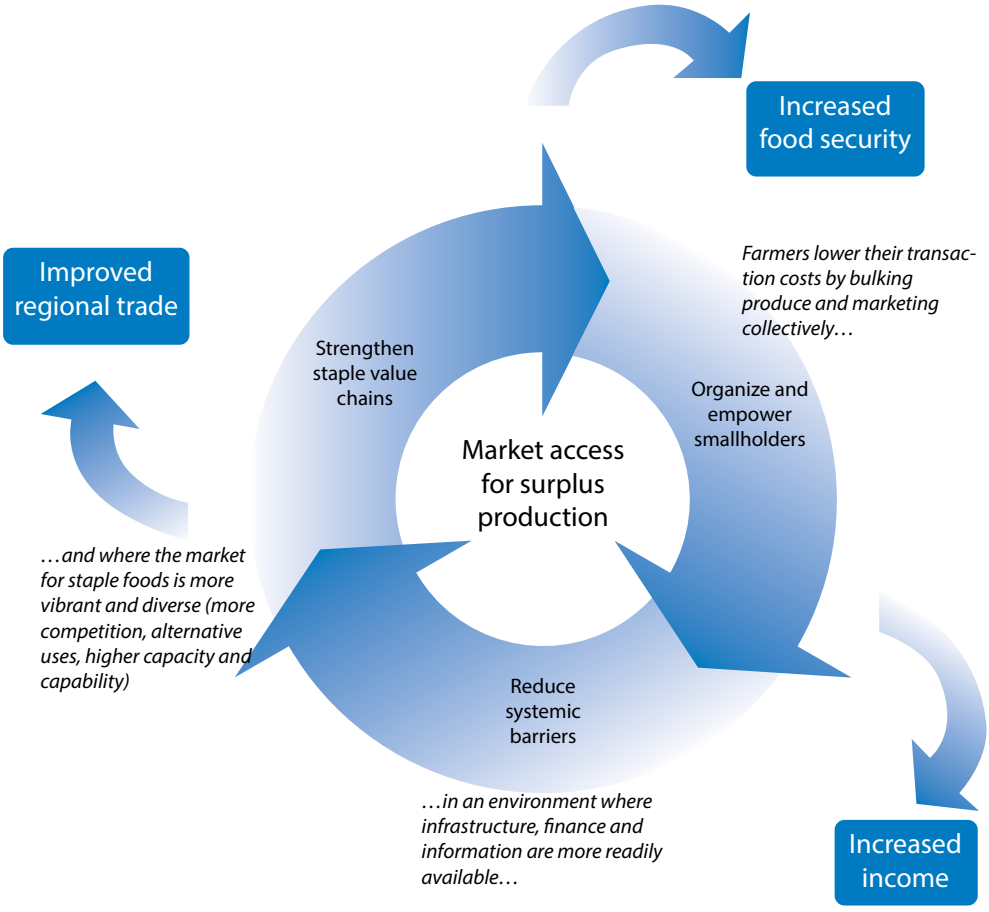


Figure 1. The AGRA Market Access Programme's theory of change

Four strategic intervention areas

Based on this theory of change, the Market Access Programme has defined four strategic intervention areas:

- **Reducing transaction costs.** The Programme aims to enhance market opportunities and incentives for smallholder farmers, transporters, traders and processors by helping farmers bulk their produce so they can benefit from economies of scale, increasing their physical access to markets, reducing the risks of trading, increasing their share of the final price, reducing their operating costs and establishing reliable supply relationships in the value chain.
- **Promoting an enabling environment.** The Programme advocates for trade policies that reduce barriers to intra-African trade in food commodities, and for better infrastructure in collaboration with the government bodies and regional economic groupings. It mobilizes support for investment and advocates additional lending by the private sector, especially financial institutions.

- **Increasing value addition.** Most processing facilities are located in urban areas, far from where the crops are grown. The Programme enables smallholders to add value, for example by threshing, drying, sorting and grading their crop. It facilitates access to processing equipment, trains farmers, traders and processors in improved technologies, and facilitates trade and service agreements between farmers and traders.
- **Increasing demand through alternative uses.** The Programme helps identify alternatives uses and users of crops, and supports research to find and analyse products which can meet market requirements. Alternative uses include any other use rather than direct food consumption. Such uses include starch for glue in textile, the packaging and paper industries, and animal feed.

The AGRA Market Access Programme awards financial grants to implementation partners, very often NGOs or farmer organizations, which submit project proposals for supporting interventions. These proposals must fit in at least one of the key strategic intervention areas.

AGRA invites its grantees to build on and link with existing initiatives on the ground – including other AGRA programmes – in order to create synergy, achieve scale and enhance impact. It is therefore not always easy to attribute results and impact directly to a particular AGRA grant.

According to its general strategy "AGRA drives innovation, funds demonstration, and works with our partners and Africa's farmers to scale up successes in smallholder farming, with a strong focus on staple food crops in high-potential breadbasket areas" (AGRA 2009).

Breadbasket areas are defined as areas "with high agricultural potential, due to relatively good soil and rains, basic infrastructure, and large numbers of smallholder farmers. In breadbasket areas, increased access to improved seeds and soil and water management has the potential to significantly and sustainably increase smallholder farmers' production of key staple food crops (ibid).

Reflecting on four years of experience

After four years of implementation, AGRA decided it was time to stop and reflect on the experiences and results of projects supported by the Market Access Programme. Critical but constructive analysis makes it possible to improve the Programme's strategy and the practices of projects that it funds. This has been done by taking a closer look at a selection of projects. The analysis tries to answer two basic questions:

- To what extent are the assumptions of the programme's theory of change still valid?
- What adjustments need to be made in AGRA's strategy?

These questions were answered by describing and analysing a sample of projects, and involving the project managers in an analysis of the project practices. This process was organized in four steps (Figure 2).

1 Selection of projects and related cases

The Market Access Programme has so far funded 56 projects implemented by grantee organizations. A total of 13 project cases were selected, based on the following criteria:

- **Contribution to the different objectives of the programme:** i.e., a balance between the four key intervention areas listed above.
- **Geographic representativeness:** a balance between East, Southern and West Africa.

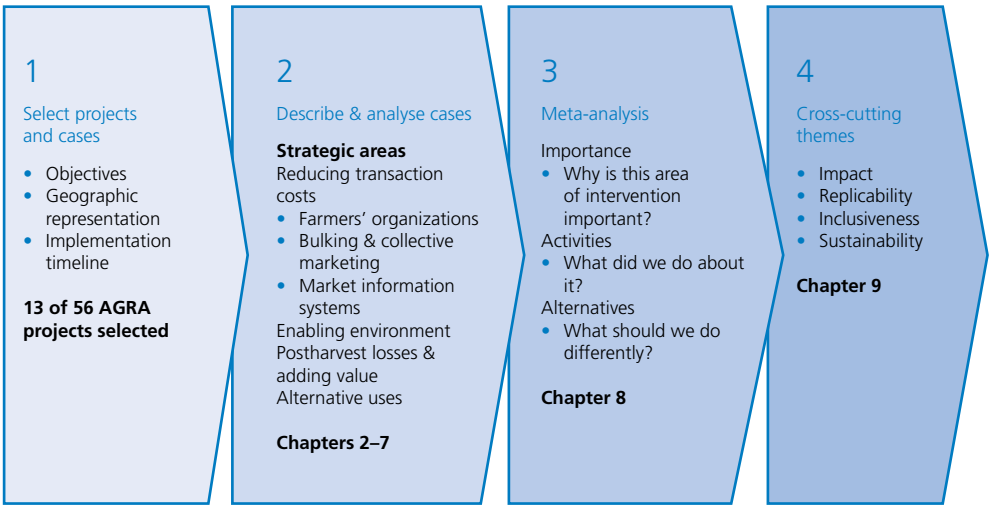


Figure 2. Steps in analysing the cases and preparing this book

- **Implementation timeline:** all projects selected should have been implemented for at least 2 years in order to be able to present results.

The 13 selected grantees came together in a "writeshop" (an intensive workshop) in Nairobi on 21–25 January 2013, which was organized by the Royal Tropical Institute (KIT). Representatives of the 13 AGRA grantees were invited to bring a short manuscript describing their project, following a format designed by KIT. They were joined by two AGRA programme officers, two facilitators from KIT and an editor. This team guided the representatives through the process of writing down their cases and analysing their experiences and results.

2 Description and analysis of project cases

Each project case aimed to answer the following questions:

- What are the lessons from the experiences and results?
- What challenges remain for the interventions supported by the projects?

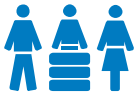
During the writeshop, grantees were requested to identify which of six strategic areas their projects touched upon, and what the focus would be of the cases they would develop. These thematic areas were based on the Market Access Programme's strategic intervention areas:

Reducing transaction costs. This is a rather broad economic concept that includes a range of activities, all based on the principle of collective action. It means individuals work together and pool their resources to reach a common goal. By working together, smallholder farmers can reduce the costs of accessing markets, and can capture a larger share of the end product's price. They can

do this by reducing the costs of collecting, processing and transporting products, handling and processing information in a more efficient way, and negotiating better prices.

Based on the diversity of projects and cases, the area of reducing transaction costs was broken down into:

- **Farmers' organizations**: organizing farmers, at several levels to undertake collective action to access markets. This includes strengthening their governance and financial management capacities.



- **Bulking and collective marketing:** gathering and storage of agricultural products, making it possible to offer large volumes to buyers and strengthen the bargaining position of farmers.

- **Market information systems:** ways to collect, analyse and update information about demands for products, trends in product prices, competitors, etc. Such information helps farmers, and others, decide on product improvement and development, organize bulking and marketing, and set prices.

Promoting an enabling environment. This involves influencing the formulation and implementation of policies which facilitate smallholder farmers' access to markets, and the creation of "hard" infrastructure (communication, transport, energy), which further reduces transaction costs for farmers, traders and processors, and "soft" infrastructure (technical, management and financial support services). Although the area is broad, cases touching upon this area in fact focused mostly on ensuring small-scale farmers could get credit.

Reducing postharvest losses and adding value. This covers appropriate storage, handling and control of products to reduce losses in both volume and quality, and to add value.

Increasing demand through alternative uses. This gives particular attention to using products or by-products from processing staple crops for purposes other than just food.

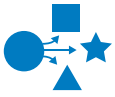


Table 1 gives an overview of the strategic areas covered by the projects and the focus of the cases in this book. As can be seen, all the projects dealt with two or more thematic areas; some covered as many as six. Figure 3 shows the countries where the projects are located.

Each of the project representatives chose one or two thematic areas that were either a particular focus of their project, or were particularly successful or challenging. They were asked to revise their project descriptions to deal with these selected aspects, as indicated in Table 1. Because of the focuses chosen for each case, the descriptions in this book are by no means a comprehensive account of either the Market Access Programme or the projects. Such a description would be far too long to fit in a book of this nature. Rather, they depict salient features of each project, focusing on specific aspects from which we can learn. They tell the story of a particular collaborating organization or group of farmers as typical of the problems faced or the approaches used.

The cases appear as Chapters 2–7 of this book.

Table 1. Projects discussed in this book

Case	Country	Organization (AGRA grantee)	Project title	Commodities	Farmers' orgs	Bulking, mkting	Mkt info	Enabling env	Post harv, add value	Alt uses
Chapter 2: Farmers' organizations										
Case 1	Malawi	Farmers Union of Malawi, **FUM**	Linking smallholder farmers to structured markets	Maize, soybeans, groundnuts, beans	•	•				
Case 2	Mozambique	**MICAIA** Foundation	Smallholder market access for rural transformation	Maize, soybeans, sunflower	•					
Chapter 3: Bulking/collective marketing										
Case 3	Kenya	**TechnoServe**	Building a competitive banana industry in Kenya, Phase 3	Bananas		•				
Case 4	Kenya	Cereal Growers Association (**CGA**)	Strengthening the capacity of smallholder cereal farmers to access markets	Maize, beans		•				
Case 5	Tanzania	Rural Urban Development Initiatives (**RUDI**)	Enhancing smallholder farmers market competitiveness in south western districts of Tanzania	Maize		•				
Chapter 4: Market information systems										
Case 6	Ghana	International Fertilizer Development Center (**IFDC**)	Linking farmers to markets	Various			•			
Chapter 5: Enabling environment: Access to finance										
Case 7	Rwanda	Rwanda Development Organization (**RDO**)	Building capacity of farmer cooperatives to reduce postharvest losses and improve quality of staple foods in eastern and southern Rwanda	Maize, beans				•		

Case	Country	Organization (AGRA grantee)	Project title	Commodities	Farmers' orgs	Bulking, mkting	Mkt info	Enabling env	Post harv, add value	Alt uses
Case 8	Uganda	Uganda Development Trust (**UDET**)	Providing business development services to small and medium enterprises sourcing raw materials from smallholder farmers in Uganda	Maize, sorghum, barley	■			•		
Chapter 6: Postharvest losses and value addition										
Case 9	Mozambique	Agência de Desenvolvimento Económico da Província de Manica (**ADEM**)	Building the capacity of smallholder farmers and small and medium enterprises to access valuable markets and finance in Tete province, Mozambique	Maize, beans	■	•		■	•	
Case 10	Burkina Faso	Fédération des professionnels agricoles du Burkina (**FEPA/B**)	Strengthening the capacity in cereals and cowpea marketing for ten provincial union members of FEPA/B	Cereals, cowpea, fruit, vegetables	■	■		•	•	
Case 11	Ghana	Agribusiness Systems International (**ASI**)	Ghana *arzakinmu* ("our wealth") programme	Maize, sorghum	■	■		■	•	
Chapter 7: Alternative uses										
Case 12	Kenya, Tanzania, Uganda	**Farm Concern** International	Cassava village processing project	Cassava	■	■	■			•
Case 13	Malawi	Trustees of Agricultural Promotion Programme (**TAPP**)	Commercialization of cassava value chain through alternative uses in Malawi	Cassava		■				•

■ Covered by project • Focus of case in this book

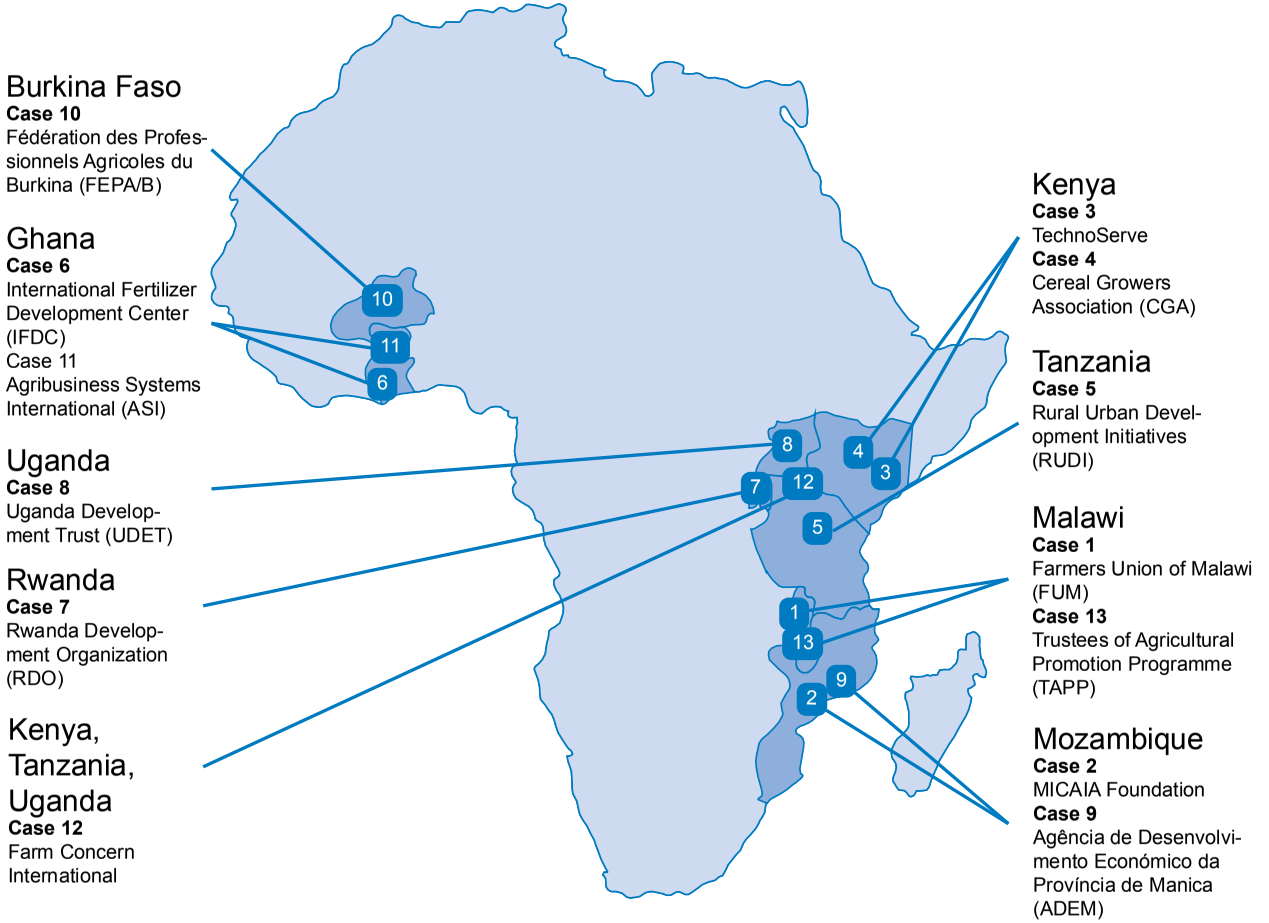


Figure 3. Locations of the AGRA projects described in this book

3 Meta-analysis

The writeshop participants analysed the experiences and results of the projects in the chosen focus areas. This analysis was based on three questions:

- Why is this area of intervention important?
- What did we do about it (approaches, activities etc.)?
- What should we do differently?

After sharing their cases with others, small groups of participants analysed their experiences in each of the chosen focus areas. The results of this group work were presented and further discussed in plenary. They appear as Chapter 8 in this book.

4 Cross-cutting themes

This meta-analysis raised the four cross-cutting themes for further discussion by the grantees and AGRA. These were:

- **Impact** of project-supported initiatives.
- **Replicability**, here understood as whether the same idea or approach can be used elsewhere – and on a larger scale – to achieve greater impact.
- **Inclusiveness** by adequate targeting. This refers to the capacity of the project or approach to reach the poorest segment of the population, as well as women and other often excluded groups.
- **Sustainability** of project-supported initiatives. This refers to the ability of the initiatives set in motion to survive after the grant has ended.

The four cross-cutting themes were further discussed in plenary, and the grantees and AGRA staff were challenged to look at their own cases from the same analytical perspective. That resulted in a self-critical review by the case authors. The results are found in Chapter 9.

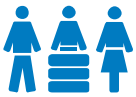
How this book is organized

After this introduction, Chapters 2–7 present the 13 cases, organized according to the strategic area they focus on.

Chapter 2 describes two cases focusing on the **organization of farmers**:

- Case 1: the project "Linking smallholder farmers to structured markets", led by the Farmers Union of Malawi.
- Case 2: MICAIA's Foundation work on "Smallholder market access for rural transformation" in Mozambique.

Chapter 3 looks at three projects focusing on **bulking and collective marketing**:



- Case 3: "Building a competitive banana industry in Kenya", led by TechnoServe and in its third phase of implementation.
- Case 4: "Strengthening the capacity of smallholder cereal farmers to access markets", coordinated by the Cereal Growers Association, Kenya.

- Case 5: "Enhancing smallholders farmers market competitiveness in south western districts of Tanzania", coordinated by the Rural Urban development Initiatives.

Chapter 4 brings the only case looking at **market information systems**:

- Case 6: "Linking farmers to markets", led by IFDC in Ghana.

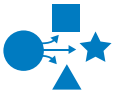
AGRA's work in supporting projects under the strategic area "**enabling environment**" is the focus of **Chapter 5**. Projects included here are:

- Case 7: "Building capacity of farmer cooperatives to reduce postharvest losses and improve quality of staple foods in eastern and southern Rwanda, by the Rwanda Development Organization.
- Case 8: "Providing business development services to small and medium enterprises sourcing raw materials from smallholder farmers in Uganda", coordinated by the Ugandan Development Trust.

Chapter 6 focuses on **postharvest handling and value addition**. Projects described in this chapter are:

- Case 9: "Building the capacity of smallholder farmers and small and medium enterprises to access valuable markets and finance in Tete province, Mozambique", led by the Agência de Desenvolvimento Económico da Província de Manica.
- Case 10: "Strengthening the capacity in cereals and cowpea marketing for ten provincial union members of FEPA/B" (Fédération des Professionnels Agricoles du Burkina).
- Case 11: "Ghana *arzakinmu* ("our wealth") programme", coordinated by Agribusiness Systems International in Ghana.

The two cases focusing on **alternative uses** are described in **Chapter 7**:



- Case 12: "Cassava village processing project", led by Farm Concern International. This is the only case in this book which operates in three countries: Kenya, Tanzania and Uganda.
- Case 13: "Commercialization of cassava value chain through alternative uses in Malawi", coordinated by the Trustees of Agricultural Promotion Programme.

The writeshop participants jointly analysed their cases in terms of the six areas listed above – looking for what works well and what could have been done differently. These discussions form the basis of **Chapter 8** of this book.

Chapter 9, conclusions, gathers the implications of the theme chapters and relates them to AGRA's current and potential future practices with a particular attention for impact, replicability, inclusiveness and sustainability.

2
Farmers' organizations

Weighing grain in Báruè district, Mozambique

Photo: MICAIA

Case 1

Strengthening farmers' organizations in Malawi

IN THEORY, joining a farmers' marketing group brings many benefits. Because they bring together their produce to sell in bulk, members can find new buyers and negotiate better prices. They pay less for transport. Higher sales prices and lower costs mean more income from the same amount of produce.

But only one in five of Malawi's 3.8 million smallholder farmers is a member of an active farmer group. One reason for this is that farmers form such groups so they can get inputs or training, not because they feel a need to cooperate with each other. And the groups that do exist often do not work well: leaders do not communicate with the members; members have few opportunities to participate in running the organization, and have little say in decisions. That leads to frustration and a loss of trust.

Supporting the Grain and Legumes Association

With AGRA support, the Farmers Union of Malawi has been helping the nationwide Grain and Legumes Association improve its services to its members. The association promotes the production and marketing of maize, soybeans, groundnuts, beans and other crops. It consists of 100 associations of primary producers and 20 producer cooperatives. These have a total of nearly 100,000 smallholder farmer members (two-thirds of them women).

Project title	Linking smallholder farmers to structured markets
AGRA grantee	Farmers Union of Malawi (FUM)
Duration	June 2011 – May 2013
Location	Malawi: Mchinji, Dowa, Kasungu, Salima, Nkhotakota, Ntchisi and Lilongwe districts
Commodities	Maize, soybeans, groundnuts, beans
AGRA grant	$626,275
Contact	Jacob Christopher Nyirongo, jnyirongo@farmersunion.mw
	Prince Kapondamgaga, Farmers Union of Malawi, pkapondamgaga@farmersunion.mw; info@farmersunion.mw
	www.farmersunion.mw

The three-year project began in 2011, and is focusing on several districts in the central region of Malawi. The Farmers Union has focused especially on two aspects: improving the association's organizational management, and helping it bulk its members' produce for sale.

Improving the organization

The first task was to find out what the organizational problems were. The Farmers Union conducted a baseline assessment of the primary producer associations in Ntchisi district, aiming to understand how the Grain and Legumes Association interacts with its members.

This was followed by a more detailed participatory self-assessment of 30 primary associations, supported by AGRA's Farmer Organization Support Centre for Africa. The farmer leaders and association staff discussed how their association was managed, who the leaders were, how they communicated with members, and what services the organization offered to its members.

The results showed areas that needed improvement. The national association had no strategic or business plan, so lacked a long-term focus. Communication between the national leadership and the primary associations needed strengthening, as did participation by members in the national association's decision making. The national association was registered as a limited company, not as an association. That limited the powers of its members to participate in its internal affairs and decision making.

The Farmers Union organized a series of training events to address these issues. These covered how the national association could strengthen its membership, improve its services and link better to its members. They also focused on how it could come up with its own vision, and activities to help it achieve the vision. A total of 100 leaders from the national association and primary producer groups were trained on the issues mentioned.

As a result of this work, the national association and its members now understand their strengths and opportunities, and have identified areas needing improvement. Reflecting on how their organization works has helped them make it better. The leaders are now more open and ready to share information with the members. That has increased the trust members feel towards the organization.

Changing organizational culture

But changing an organization can be slow. Developing a culture where leaders provide services based on the needs of the people who voted for them takes time and requires constant support. Some of the organizations did not have qualified staff who could support the elected farmer leaders in managing the organizations. Where there were such staff, tensions sometimes arose between the management and elected officials.

The project helped the Grain and Legumes Association and its member associations tackle these problems in various ways. It supported them in running board meetings and annual general meetings of members. It helped them improve the ways they kept members informed about their work, the problems they faced, and planned activities. It discussed how the organizations could be strengthened and how they could attract new members. It invited the leaders to other forums so they could see how other farmer leaders worked with their members.

Farmers tend to learn best from fellow farmers. That goes for farmer leaders too: they can learn a great deal from visiting other farmers' organizations to see how they conduct their business.

Bulking pros and cons

Bulking commodities is a key part of many marketing organizations. Typically, farmers bring their sacks of grain or other produce to a collection point, where it is weighed, graded, cleaned and dried. The amount each farmer brings is recorded. The grain goes into the organization's warehouse for storage until it can be sold. The organization can then seek a buyer who is willing to pay a premium price for the convenience of buying in bulk. Once sales are made, the organization pays each farmer according to the amount of grain he or she has delivered.

It sounds simple, but practice is harder. Members may take advantage of the cheap inputs and training that the organization provides, but still sell their grain individually. Some cannot afford to wait several weeks to get paid: they need the money immediately to pay off debts or cover other expenses. Others do not trust the marketing organization with their grain, or they think they can get a better deal by selling individually.

In addition, farmers plant different varieties, use seed from different sources, and use different production practices. That makes it hard to maintain the high quality and uniformity that big buyers require.

Learning how to bulk

The Farmers Union has been helping the Grain and Legume Association to set up a bulking and collective marketing system for its members' produce. It first interviewed groups of farmers about how they marketed their produce, who bought from them, and what they saw as marketing challenges. This revealed the strengths, weaknesses, opportunities and threats of marketing produce as a group.

There is no point in reinventing the wheel – so the Farmers Union explained how other farmers' organizations in Malawi bulk and market their produce. It trained 67 lead farmers from 34 primary associations, as well as 29 government field staff, on negotiating prices and contracts, record keeping, and determining costs and profits. It also trained them on the management of bulking centres, maintaining quality, pest control, grain cleaning, moisture content, grading and market standards. The trainees in turn trained over 1,500 members of their associations in these subjects.

Each of the 34 associations identified a building it could use to store produce. Technical staff from the Farmers Union assessed the capacity and condition of these buildings. Ten warehouses have been rehabilitated at an average cost of $550 each, and they have been equipped with scales, tarpaulins, pallets, moisture meters and sack-sewing machines. The association members have been trained on how to use this equipment. These warehouses serve an estimated 9,000 farmers in the surrounding areas.

A good start

The farmers started bulking their produce for the first time in the 2011/12 cropping season. They bulked and sold over 1,000 tons of soybeans, groundnuts, beans and maize. Buyers included Senwes, Export Trading Group, Kulima Gold and Rab Processors.

Was the effort worth it? Figure 4 compares the prices for various consignments of grain. Prices paid by the bulk buyers were higher than those offered by informal traders – for maize, 18–23% higher.

Traditional storage methods leave the grain (in this case groundnuts) vulnerable to the weather, pests and diseases.

Bulking is a vital first step in the marketing process.

Loading grain to take to the market.

Photos: Farmers Union of Malawi

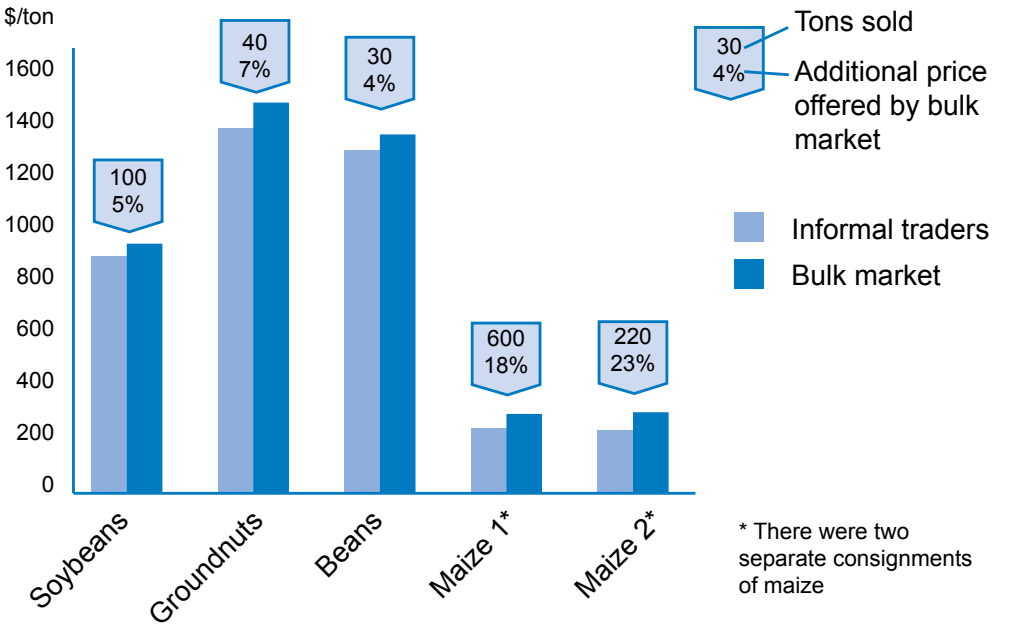


Figure 4. Price of grain sold in the bulk and informal markets by central region associations, Malawi, 2011/12

Bulking is a vital first step in a process of finding markets for farmer organizations. It attracts large companies that otherwise have to source their grain from traders. It gives the farmers' associations a chance to negotiate better prices, and to pass the income on to their members.

But bulking also forces the farmers to change how they produce their crop. To conform to the quality requirements, they have to plant certain varieties and use particular production techniques. They have to know the market requirements and how to fulfil them.

The Farmers Union is helping the Grain and Legume Association take the first steps in this direction. It has trained association members on the use of improved varieties and ways to increase yield and quality of their produce.

Linking smallholder farmers to markets

The Farmers Union's support for the Grain and Legumes Association is part of a broader set of activities under the AGRA-funded Linking Smallholder Farmers to Markets project. Other major activities centre on training lead farmers from 50 farmers' organizations. These trainees are expected to pass on their knowledge to 22,500 individual smallholders in the targeted districts. The project also rehabilitates bulking facilities, provides bulking equipment, and links the farmers' organizations to structured markets. The Grain and Legume Association has been able to secure a loan of $115,000 from a commercial bank which benefited 2,000 farmers (two-fifths of them women). An estimated 7,150 smallholders (nearly half women) have bulked and sold 4,000 tons of soybeans, groundnuts, beans and maize to various large companies.

Lessons and challenges

Strengthening a membership organization does not just mean strengthening the top leadership or the central secretariat. It is also necessary to work with the lower layers of the organization – the member associations. You have to find out how the different levels should relate to each other, and to clarify the needs and expectations at each level.

Encouraging farmers to work together, and particularly changing existing farmers' organizations which have bad experiences, is a long and complex process. It requires a mix of support interventions (training, coaching, exchange visits between farmers and between their organizations, counselling). It also requires continuous accompaniment, preferably by those who know from their own experience what it means to work together as farmers. Information sharing between leaders and members and understanding each other's expectation are key. Effectively doing things together, such as bulking and selling, is the best way to learn.

It is vital that the farmers' organizations and their members understand that the purpose of bulking is to access markets. The markets dictate standards, and the farmers have to meet these. If not, they will not reap the expected benefits. It is therefore important that farmers are aware of and informed about how these standards influence the prices and hence the benefits they can get from respecting the standards. This requires quality-control mechanisms within the organization, which are particularly important for such quality-sensitive markets as that for groundnut in Malawi.

Case 2

Organizing and collective marketing: MICAIA in Mozambique

For decades, development organizations have been organizing farmers in Báruè district into groups and associations. There are hundreds of such groups – farmers' groups, commodity associations, agriculture and livestock associations, and so on – all trying to improve their crop production, storage and marketing. They have a big role to play: Báruè is one of the breadbaskets of Manica province in central Mozambique, and more than 70% of the district's 170,000 people earn their living from farming.

But many of these groups are struggling. Membership is falling as farmers leave because they do not see any benefits from the group. Dozens of groups have collapsed.

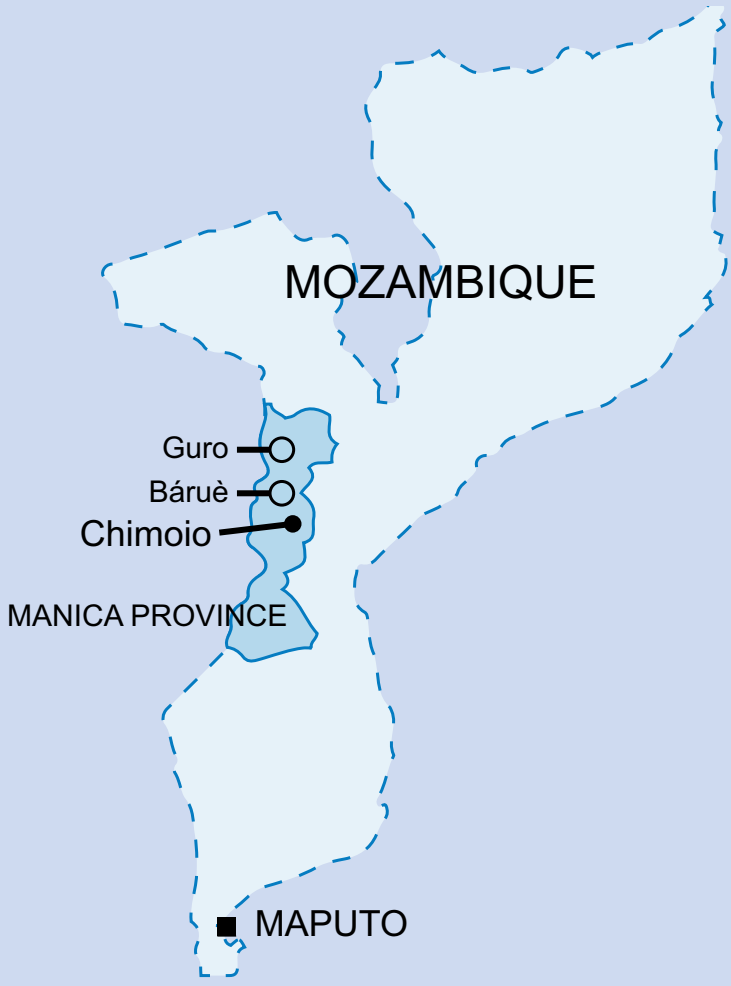
One such struggling organization is the Samora Moisés Machel Association. It started in 2007 with around 600 members, but by 2010 numbers had fallen to 212, and most of these were inactive. In that year, the association was forced to source maize from non-members in order to fulfil a contract with the World Food Programme. The association's board of directors was not able to mobilize enough members to sell their produce through the association.

Identifying and tackling weaknesses

When MICAIA launched its Smallholder Market Access for Rural Transformation project in late 2011 in Báruè, it started with a participatory organizational assessment of the Samora Machel Association. The project found the association had no work plan for either the short or the long term. The board members had limited management skills, and they put their own interests ahead of the association. That led to the farmers losing interest in the association. They voted with their feet.

MICAIA and the association signed an agreement to work together to tackle these weaknesses. Before the start of the 2011/12 marketing season, MICAIA trained the board members in governance, collective marketing principles and record keeping, and helped them prepare a strategic business plan. Because of their individual interests, the board members of the Samora Machel Association were reluctant to change the way they managed the association and its clubs. MICAIA dealt with this reluctance through a series of discussions with the board and with delegates from the clubs and the farm business facilitators. In these meetings MICAIA stressed the need to serve members and showed that this was possible only if the association was well organized. These ideas gained support, and the change started.

Project title	Smallholder market access for rural transformation
AGRA grantee	MICAIA Foundation
Duration	June 2011 – May 2014
Location	Mozambique: Báruè and Guro districts (Manica province)
Commodities	Maize, soybeans, sunflower
AGRA grant	$ 811,763
Contact	Fidel João, fideljoao88@gmail.com
	www.micaia.org



Mobilizing farmers and re-organizing them into clubs to market soybean and maize collectively was the next step. This was followed by training on the advantages of selling their produce together, and ways to get credit.

Organizations like Samora Machel do not have enough working capital to pay farmers when they deliver their grain. They rely on the farmers' willingness to wait for payment – for a few weeks in the case of soybean, and 2 months or more in the case of maize supplied to the World Food Programme. But farmers are understandably hesitant to do this, especially if they have not seen it work before.

To encourage them, the association guaranteed a higher price and made records transparent. Each farmer was given a receipt showing the quantity delivered, the price, and the amount he or she was owed. On payment day the farmer had to bring this receipt to get his or her cash. In addition, Opportunity Bank (one of the project partners) provided a loan of about $20,000 to the association so it could buy maize from its members. That allowed the association to pay the farmers part of the value of their grain just one week after they delivered it to the collection centre. That was a popular move: more farmers brought more grain to the centre for bulking. At the same time, it was a risky move, in case prices dropped.

Quality control is an important aspect of collective marketing. Each farmer club has a member designated as a farm business facilitator. These members are responsible for passing on knowledge and new techniques to the club members. The World Food Programme trained them on maize quality control, and they in turn trained their fellow club members.

The project supplied the association with files and forms for record keeping, and scales to weigh grain. Before the start of the marketing season, each club was informed about price schemes, transport, payment schemes and quality requirements for maize and soybean.

To minimize transport costs, the members of each farmer club were advised to deliver their sacks of grain to the club's collection point. The association hired a lorry to pick up the grain and bring it to the association warehouse, where it was inspected and stored, ready to deliver to the buyer. These buyers had already been identified: Abílio Antunes, a poultry-feed company, agreed to buy soybean, and the World Food Programme contracted to buy the maize. The project helped the association negotiate the soybean price with Abílio Antunes.

The Samora Machel Association depends on a few buyers that offer a good price for maize and soybean. MICAIA and the association are looking for alternative buyers that pay well, but these are hard – if not impossible – to find.

A successful marketing season

Since its founding in 2007, the Samora Machel Association had never had a successful marketing season. Volumes were low, and farmers had to wait to see any money. In 2009, the association handled only 9 tons of soybeans.

MICAIA's interventions changed this dramatically. In the 2011/12 season, farmers who sold through the association got payment only a week after delivering their soybeans. They received $0.70 per kilogram – one-third more than farmers who sold elsewhere. Over 100 farmers sold 66 tons of soybeans through the association.

The story for maize was similar. The association shifted from buying maize from non-members to buying it from its members. Over 400 of the 926 members sold 120 tons of maize through the association. The buyer, the World Food Programme, paid 25% above the regular price. Many other

Steps in a process: Cleaning grain in Báruè district...

...Weighing each sack...

members wanted to sell through the association, but their grain did not comply with the buyer's quality standards: it was not dry enough or contained too much foreign matter.

The association's record keeping has improved tremendously. The records of sales, members and revenues are now in good order. The accounts show that the association's annual profits rose from $2,000 in December 2011 to $9,000 in December 2012.

The members' trust in the association has grown, and people have joined, or rejoined. The membership has grown from 212 to 926, and new farmer clubs have been formed. The number of farm business facilitators has more than doubled, from 12 to 26.

Other associations

The Samora Machel Association is just one of five associations served by MICAIA under the Smallholder Market Access for Rural Transformation project. In all, the project aims to help 14,000 smallholders in two districts in Manica province increase their incomes by bulking and selling staple crops. It is developing and strengthening the farmers' organizations and collective marketing systems, and is promoting improved postharvest handling, storage and processing techniques.

...Loading them onto a lorry...

...And finally... payment day!

Photos: MICAIA

In the 2011/12 agricultural season, the project surpassed its expectations for membership numbers and volumes sold. The five associations' memberships have risen from 1,400 to more than 5,500 members in both districts during the first year of the project. The five associations sold a total of 370 tons of maize, 72 tons of sunflower, and 300 tons of soybean. The World Food Programme bought the maize at a price around 25% above the regular price. The soybean price of $0.70 per kilogram was 33% above the price paid to farmers selling individually.

Lessons and challenges

If collective marketing activities are to be successful, good organization is needed, and trust must be built between farmers and the elected boards. However, collective marketing does not benefit all association members equally. It tends to benefit mainly those farmers who have capital to invest, who are more educated, and who are strongly oriented towards commercial farming rather than subsistence. It also tends to benefit more men than women. Concerted efforts are needed to help other farmers to profit from the opportunities of collective marketing. MICAIA will continue to sensitize the leaders of farmers' organizations to the needs of women and those who produce

and sell only small amounts of grain. The project will also facilitate more loans so farmers can become more commercially oriented.

After a successful marketing season and premium prices, the demand for soybean seed has increased tremendously in Báruè district. Therefore MICAIA will continue looking for good markets and help the Samora Machel Association negotiate with buyers.

Training the board of directors is only half the job in strengthening farmer organizations. Follow-up and coaching are musts, along with advice on putting what has been learned into practice. MICAIA is working with its client associations on the whole process of collective marketing, including mobilizing farmers, negotiating with buyers, and selling. In its new strategy, MICAIA encourages the farmers to lead the process so they can learn by doing.

Collective marketing depends on good warehouses to store the grain safely. If a warehouse has to be built or rehabilitated, the farmers must show they are strongly committed to it. They should be required to contribute at least 10% of the investment cost.

For a commodity to fetch a good price, it must conform to quality standards. And quality is not just a question of postharvest handling, but also depends on what happens before the harvest. Farmers need to grow the right varieties and to improve their production techniques. It may be necessary to partner with other development organizations that can provide the technical expertise needed to help them do this.

3
Bulking and collective marketing

Loading grain in Barue district, Mozambique

Photo: MICAIA

Case 3

TECHNOSERVE

Establishing service centres for a competitive banana industry in Kenya

Sabina Nyambura Gitau is a determined woman. She had to be: she used to carry 30 kg of bananas on her back to sell at the local market. She did this almost every day for years. Now her legs have given up, she cannot lift much at all. But she does not have to: she now sends her bananas to the market on a motorbike or donkey. Sometimes, together with other members of her group, she even hires a lorry to carry her bananas to town.

Sabina is a member of the Sabasaba Agribusiness Cooperative – an organization of banana growers in Maragua part of Murang'a County in Kenya's Central Region. This cooperative has grown out of a small self-help group that was formed in 2004, when TechnoServe and Africa Harvest (both international NGOs) helped banana farmers in Maragua get organized. Sabina and the other group members got high-yielding banana varieties, learned how to sell collectively so they would get better prices, and studied postharvest handling and business skills. The group registered as a cooperative in 2009.

The Sabasaba marketing centre

The cooperative now has 99 members. It has established its own market service centre: a three-room building on a 0.3 hectare plot near Sabasaba town, which it bought with a KSh 1 million ($14,000) loan from Equity Bank. This centre is now a hub for producers and buyers to meet, trade and make deals, share news and exchange tips. Non-members can sell their produce through the centre at a small fee. The centre serves 15 or so other groups in the neighbourhood.

The centre links the farmers directly to urban wholesalers and institutional buyers. That has by-passed up to three layers of intermediate traders, and means that the farmers now get better prices.

Sales of bananas rose in the latter half of 2010 (Figure 5) (the TechnoServe project ended in 2010, so these are the most recent data available). But anecdotal evidence suggests the trend has continued since: the weather has been good and prices have risen, and the centre has diversified into marketing milk. The centre now sells an average of 20 tons of bananas a month to Nairobi-based traders, plus 6,000 litres of milk to Brookside, a big dairy company.

In early 2011, TechnoServe helped the cooperative management develop a 5-year strategic plan for the centre. This resulted in the cooperative getting an equity loan from K-REP, a bank, to buy water pumps and tanks, dairy cattle and generators.

Project title	Building a competitive banana industry in Kenya, Phase 3
AGRA grantee	TechnoServe Kenya
Duration	October 2008 – January 2010
Location	Kenya: Murang'a, Embu and Meru counties
Commodity	Bananas
AGRA grant	$896,033
Contact	Henry Kinyua, programme manager, TechnoServe, Kenya, hkinyua@tns.org
	www.tns.org

The cooperative acts as a sales agent for its members. It bulks their produce and finds a buyer, who pays when the bananas are handed over. The cooperative deposits the money in a group account, and then pays the members either via their individual bank accounts or through M-Pesa, a mobile-phone-based money-transfer service.

The cooperative also adds value by ripening green bananas, drying the fruit and grinding them into flour. Other products include jam, flour, crisps, chapattis and porridge – all made from bananas. These items are made from lower-quality fruit that would be rejected by the fresh market. The cooperative hires some of its members to make these items. It also has a full-time staff member who helps with marketing and office administration.

The centre is collaborating with the Ministry of Agriculture and Agricultural Technology Development Centre in nearby Ruiru to offer training to members on value addition and postharvest handling. It is also planning to set up a savings and credit cooperative so members can save money and get cheap loans.

The centre has attracted so much attention from others who want to see how it works that it has started charging a visitor fee.

Six centres: 15,000+ farmers

The Sabasaba centre is one of six such marketing centres set up under the TechnoServe project. The others are located in other parts of central and eastern Kenya. Together, they serve more than 15,000 farmers, organized into almost 400 groups. All these have learned about banana marketing through training and exchange visits, and have been linked to buyers and sources of credit.

The marketing centres have introduced a system of weighing the fruit rather than relying on eyeballed estimates. That gives them a firmer basis for negotiating prices for both producers and buyers. As a result, prices have risen to around $0.15 a kilogram – with the typical farmer selling 420 kg a month and earning $600 a year in 2010. By 2012 sales had risen to about 700 kg a month, or $1,000 a year.

Most centres are still in their infancy, so they have a lot of potential for growth. Farmers' groups are likely to use them if they add value. Some groups, however, already provide their members with the same services that centres intended to provide, such as bulking, branding and linkages to buyers. So the centres need to provide higher-level products and services that the groups need.

The project aimed to achieve sales of $2.5 million through the marketing centres over a 2-year period from 2008 to 2010. Actual figures were only half that. This was because half the farmers had not yet started harvesting their bananas as the plant takes up to 14 months to mature. By 2011, farmers are estimated to have sold 25,000 tons of bananas to the tune of $3.8 million.

Farmers could get loans for equipment through the project. To ensure that these were used for the intended purposes, K-REP made out cheques to the equipment suppliers, rather than giving the farmers money directly. That made sure that the money was actually invested as intended, and was used to buy good-quality equipment so that the farmers would be able to repay the credit. None of the groups defaulted, and only a few payments were late. However some farmers felt that the equipment suppliers whom K-REP dealt with were too expensive, and this created a certain amount of disharmony.

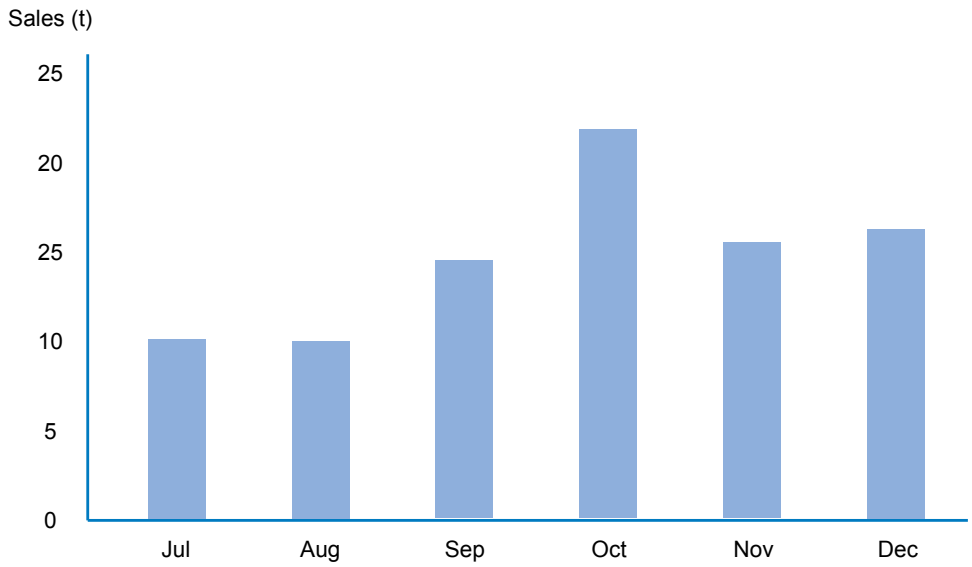


Figure 5. Banana sales of the Sabasaba Agribusiness Cooperative, July–December 2010

A nationwide association

Bananas are an important crop in Kenya, but smallholder producers had no one to represent them at the national level. TechnoServe helped the groups create an umbrella organization to do this. The Banana Growers Association of Kenya was officially registered in March 2010. This association has a nationwide scope: it has contact offices in nine banana-growing areas, with democratically elected committees and a nine-member management board, composed of representatives from each area. The association champions the producers' interests with the government, trade and industry. It aims to transform the Kenyan banana industry and improve the livelihoods of banana farmers through modern technology, by influencing policy, and through information sharing and networking.

These goals are reflected in the association's strategic plan TechnoServe helped it develop. This plan draws on technical expertise from the Kenya National Federation of Agricultural Producers, the Ministry of Agriculture, the Horticultural Crops Development Authority, the Kenya Agricultural Research Institute, and Jomo Kenyatta University.

The association was launched in 2010, towards the end of the TechnoServe project. Setting up such a grassroots-based association takes time: tasks include getting commitment from farmers in all the regions, establishing a secretariat, arranging elections for officers and helping them get started. There was not enough time before the project phased out to get the association functioning properly.

Fortunately, AGRA's Farmer Organization Support Centre in Africa has agreed to build on the work done so far and provided further support to help the association get established and to strengthen the capacities of the farmer groups. Meanwhile, the association is pressing for bananas

By bringing their bananas to a collection centre, the farmers can sell in bulk.

Bananas are now sold by weight rather than by eyeballing the amount.

TechnoServe trainers use field days to help farmers learn marketing techniques.

Photos: TechnoServe

to be priced by the kilogram all over the country, as is done by Sabasaba and the other marketing centres established through the project. It is identifying new farming and value-addition technologies, and is disseminating information about the industry.

Lessons and challenges

The banana producer groups and service centres have been successful because they are farmer-owned and driven by commercial incentives. That gives them a good chance of sustainability. The survival of farmer organizations depends largely on their being managed well; hence groups should be founded on the basis of sound governance. Many groups lack transparent and cohesive leadership. Any farmer organization must develop a constitution and a leadership system which is accountable to its members.

Through the marketing centres, the farmers have established stronger relationships with the buyers, who can buy in bulk and thereby incur lower costs. There have been no cases of bananas being returned to farmers for the lack of a market. The centres must be close to the source of bananas; if not, the farmers see no advantage in them, and continue to sell directly to the buyers at the farm gate. Infrastructure is key: for farmer organizations to sell their produce, the region must have a road network which will allow collection throughout the year.

The farmers' groups and market service centres have the potential to diversify the products and services they offer to farmers. This will provide the centres with a sound basis for self-sustainment. However, as these first experiences show, it takes more time than at first thought. More important, though, is the need for professional support to help them do this.

Capacity building is essential for sustainability. Therefore the project trained farmers as trainers on banana growing and marketing. But it omitted to develop a strategy for them to organize and deliver this training to others since they need time and to be kept updated on knowledge and technologies.

Case 4

Building and operating a warehouse in Kenya

THE BUILDING is only 95% complete, but already the Romosha Farmers Association's warehouse is in use. Sacks of grain sit neatly stacked on pallets. A clerk weighs each consignment of grain when it is delivered, and checks it for moisture levels, broken grains and discoloured kernels, and keeps careful records of who has delivered what amount. The association has a store committee that manages the warehouse, sources grain from members, and negotiates deals with buyers. And the warehouse is a handy venue for association meetings, training courses and *barazas* (community meetings with local officials).

How did the Romosha association get this far? To understand this, we have to go back to 2009, when the Cereal Growers Association (CGA), a member-based farmer organization in Kenya, launched its AGRA-funded market access project. CGA then held discussions with people in Romosha, a town in Trans Mara district in the southern part of Kenya's Rift Valley province, on the need to bulk their produce to attract large buyers.

A first bulking centre

At the time, the Romosha association, one of CGA's member groups, was largely dormant. But when members heard about the benefits of joint storage, they decided to revitalize the group. Joint storage made sense for them as most did not produce enough grain to warrant building individual stores, and they had no money to do so anyway.

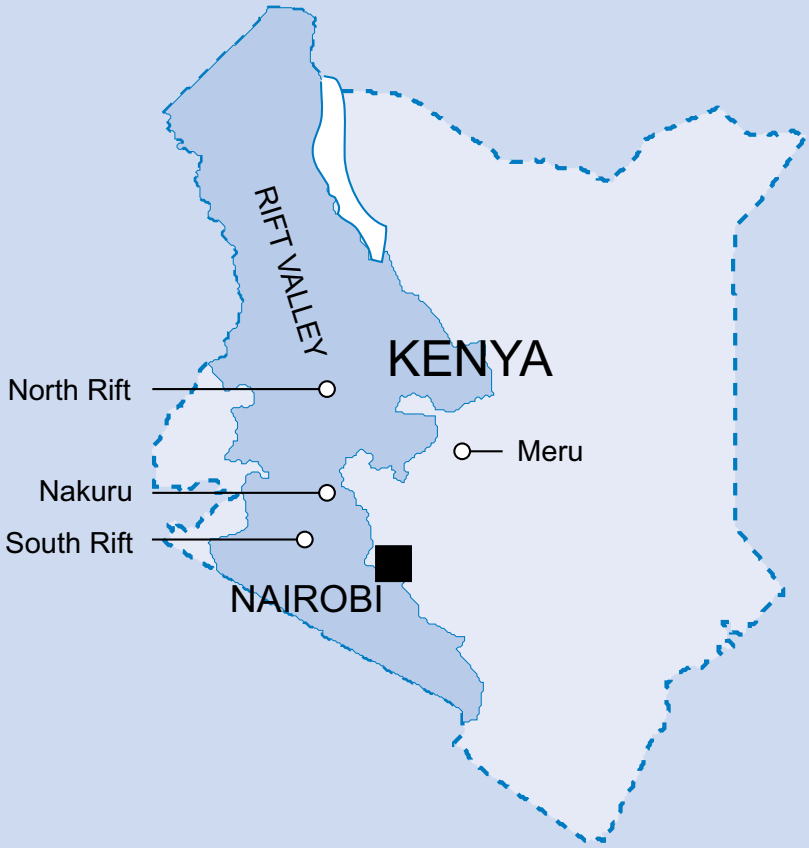
With Ministry of Agriculture and local government help, CGA and the farmers leased two empty shops in the local market. These could hold about 30 tons of grain. They became the group's first grain-bulking centre.

CGA then trained the farmers on record keeping and grain handling. After the training, the members agreed to form a stores committee to manage their joint storage activities. This committee reported to the association's executive committee. Another CGA-managed project, part of USAID's Competitiveness and Trade Expansion (COMPETE) programme, bought the group some basic equipment: tarpaulins, a moisture meter, scales, pallets and grain-cleaning sieves.

CGA advised the group to hire a stores clerk from the local area to keep records and check quality on a day-to-day basis. The COMPETE project agreed to pay the clerk's salary for the first 2 years.

When enough grain had been bulked, CGA informed the World Food Programme, a big buyer of grain. Staff from this buyer met the group members at the bulking centre, and negotiated a purchase. In 2010, the group sold 150 tons of maize to the World Food Programme valued at

Project title	Strengthening the capacity of smallholder cereal farmers to access markets
AGRA grantee	Cereal Growers Association (CGA)
Duration	July 2009 – September 2012
Location	Kenya: South Rift, North Rift, Meru and Nakuru areas
Commodities	Maize, beans
AGRA grant	Total cost: $1,274,110; the balance was leveraged CGA funds AGRA grant: $999,642
Contact	Cereal Growers Association, cga@wananchi.com; www.cga.co.ke Anthony Kioko, akioko@cga.co.ke



$39,000. The following year, it sold 78 tons, worth $25,000 (the smaller amount was because of lower demand), as well as 57 tons of beans, valued at $47,000.

Our own warehouse

After two seasons of joint selling, CGA suggested that the group build its own warehouse. The group applied to the district council for some land, and was allocated a 1,100 square-metre plot, along with a grant of $2,000, on condition that the store would be available for use by the whole community.

The Ministry of Agriculture then linked the farmers to the local Ministry of Public Works, which designed a community warehouse that could hold 400 tons of grain. This would cost a total of $20,000. Part of the funding came from a fee of $12 charged on each ton the association sold collectively. The rest came from grants of $3,750 from Good Neighbours, a local NGO, and $7,000 from the World Food Programme. The association overestimated the amount that it could raise from its members, leading to a delay in completion of a few months.

It is hard to tell how many people have benefited from the warehouse. The Romosha association has only 33 members (12 of them women), but their relatives and friends also bring in their grain for bulking. Local traders also use the warehouse as a storage facility; the association charges a fee for this service.

Sourcing grain

The association's stores committee has encountered two major sets of problems in running the warehouse. The first is in sourcing grain from members. Members have found it difficult to meet the quality standards demanded by large buyers. If a farmer brings in a consignment that contains too much moisture, for example, the warehouse sends it back for further drying. That leads to delays in bringing together enough volume to sell.

There is also the question of whose grain should be sold. If the warehouse gets an order for grain, but it has more than this amount in store, how should the order be shared out among the individual farmers? Which ones should get paid? The group solved this dilemma through discussions: members agreed that those who brought their grain in first should be given preference. At the same time, quotas were established, so farmers could only bring so much produce at a time.

The association needs to persuade more of its members to bulk their produce in the warehouse. If they do not do this, the warehouse will be used mostly by local traders, meaning that the small-scale farmers in the area will miss out on the benefits. CGA will continue to work with the association on this issue.

Finding buyers

Finding buyers is the second major problem faced by the stores committee. Most farmers wait until the warehouse has a firm order before they bring in their grain for sale. But most large buyers require that farmers bulk the produce before they can start negotiating a purchase. Faced with an empty warehouse, the stores committee cannot start making deals.

While the group now sells regularly to the World Food Programme, it is dangerous to rely on a single major customer. A varied portfolio of buyers is important to ensure financial sustainability

A training session on post harvest handling for farmer trainers in Trans Mara

This refurbished shop was the Romosha Farmers Association's first bulking centre

Photos: Cereal Growers Association

of the association. The group needs to find other big buyers to provide alternatives if the World Food Programme does not offer to buy its produce.

Looking back, the store operations would have been even more successful had CGA and the Romosha association put more efforts at the early stages to inform more potential buyers of the group's plans.

Building trust, managing expectations

Farmers in Kenya often distrust one another because of the difficult history of the cooperative movement in the country. Many cooperatives had been mismanaged and collapsed. That makes farmers understandably reluctant to entrust their grain to anyone else. The involvement of government staff has been very helpful in overcoming this hurdle as it builds the farmers' confidence in the association and its work. The fact that the stores clerk is a local is also important: members know and trust him more than an outsider.

Managing the group's expectations was a challenge: members often assumed that simply because the World Food Programme was a large buyer, they could demand a high price for their produce. They expected CGA to solve problems for them – for example by finding money to complete the warehouse. Some members were sceptical that the project could be a success, and would discourage others during the group discussions.

Old and new: A traditional household granary in Trans Mara district...

...And the Romosha Farmers Association's new grain bulking centre in Trans Mara

Photos: Cereal Growers Association

CGA has worked hard to sensitize the group members about the need to wean themselves off dependency on the project. It has linked them with other, more permanent entities, such as government agencies. To offer an alternative to the World Food Programme, CGA has trained the group on negotiation skills and introduced to it other bulk buyers such as major traders who operate in the district.

Leveraging other projects

The market access project benefited from close collaboration with the USAID-funded COMPETE project. The latter had a budget of $430,000 over two years (2010–11) to train farmers in Trans Mara on grain quality and to equip storage facilities. CGA used funds from this project to provide extra grain-handling equipment.

At the same time, CGA had become one of the World Food Programme's Kenyan partners. It used this linkage to maintain the farmers' interest in collective sales and to introduce them to the World Food Programme's market requirements.

The market access project

Trans Mara was just one of the areas where the project operated. It also served several other key cereal-producing areas: around Mount Kenya, Western Province, and the central Rift Valley. The project entailed mobilizing farmers into groups, training them how to meet the quality standards

demanded by the market, and linking them to large grain buyers. In total, it mobilized over 17,000 farmers in 196 groups and facilitated the sale of over 25,000 tons of grain through 60 grassroots storage facilities. Over 1,000 farmer trainers were trained in 281 training sessions; they continue to work within their communities.

Frustration in Trans-Nzoia

Things do not always go as smoothly as in Romosha. The Abasani Women Group, in Trans-Nzoia district, signed a contract with the World Food Programme to supply 56 tons of maize at $352 per ton. At the time that was about $30 above the market price. The members quickly bulked the required quantity, but it did not meet the quality standards specified in the contract. The group was given a chance to fix the quality issue, and ten days later another sample was taken, which did meet the quality specifications.

The local warehouse was inadequate, so the group transported the bulked grain to a warehouse they had leased in Eldoret, about 100 km away. It was then issued with World Food Programme-branded bags, which is usually the last step in this buyer's procedure. They re-bagged their grain, with the promise that the produce would be collected in a few days.

Three weeks later, there was no sign of the produce being collected. By this time, the market prices had started going up, and the farmers' patience was running out. On the fourth week after re-bagging – three months after the contract was signed – another buyer came by and offered them $444 per ton, payable on the spot. This proved irresistible, and they sold all 56 tons they had promised to the World Food Programme. They re-bagged the grains once more, and sold them to him.

That same day, someone from the World Food Programme arrived to let the farmers know the grain would be picked up the very next day. But the new trader was already loading the produce onto a lorry.

Lessons and challenges

Inspired by the success in Romosha, farmers in the neighbouring communities of Angata-Barrakoi and Lolgorien have started building similar stores to serve about 500 farmers in all. These will be completed by June 2013, and the World Food Programme has agreed to cover part of the costs.

The experience in Romosha shows that if farmers are confident of a market, a significant number of them are willing to invest in building and equipping community-managed stores. However, they will need assistance in planning the size of store that they can comfortably build and manage.

From the debacle in Trans-Nzoia, CGA learned that large buyers such as the World Food Programme are often bureaucratic and slow. When dealing with such buyers, it is probably better to allow farmers to sell at least part of their produce to other buyers who pay cash immediately.

Another lesson is that farmers need to be constantly advised on the consequences of not fulfilling a contract. In this case, most likely, the Trans-Nzoia farmers lost the chance to ever sell to the World Food Programme again. In that respect, it is important to link with other projects or service providers to ensure regular advice and coaching of local farmers' associations.

Case 5

Setting up trading companies in central Tanzania

Savings and cooperative societies are community-based organizations that collect savings from their members and provide small amounts of credit to them. In areas with few banks, they are a popular and effective way of helping people save money and to get the capital they need to pay for expenses and invest in their businesses.

Central Tanzania is one of those under-banked areas. Several of these societies had branched out into buying and selling maize to the World Food Programme, which offers attractive prices to smallholders who are organized into groups. Unfortunately, Tanzanian law prohibits these societies from such trading activities, so they fall foul of financial audits. An alternative was needed to comply with the law.

Rural Urban Development Initiatives (RUDI), a Tanzanian non-governmental organization, addresses this issue through an AGRA-funded project in collaboration with the World Food Programme. This project helped six savings societies to set up new organizations to trade maize. That would let them continue to sell to the World Food Programme, but without getting into trouble with the financial authorities.

Setting up a trading company

One of the six savings societies was named Muhangu, which had 385 members, most of them farmers who grew 1–3 ha of maize in Mkaiama district, part of the Singida region. RUDI helped Muhangu members set up a company called Kampuni ya Uuzaji Mazao Muhangu Ltd (Muhangu Produce Marketing Company), to trade in maize.

RUDI helped the leaders of the savings society to prepare articles and a memorandum of association, to get the company legally registered. It also identified a warehouse in the area, and with support from the World Food Programme, had it rehabilitated and equipped with essential equipment: pallets, scales and a moisture meter.

The trading system now works like this. Farmers get a loan from the Muhangu savings society, which they use to grow for maize. At harvest, individual farmers sell their maize to the newly registered marketing company. The company hires a warehouse, where maize is stored, fumigated and repackaged. It then sells the grain in bulk to buyers.

The World Food Programme buys only about 20% of the maize produced in the area. So it and RUDI have helped the company to link with other traders, including the National Food Reserve

Project title	Enhancing market competitiveness of smallholder farmers in central Tanzania
AGRA grantee	Rural Urban Development Initiatives (RUDI)
Duration	December 2012 – December 2013
Location	Tanzania: Dodoma and Singida regions
Commodity	Maize
Project cost	$298,000
Contact	Hamisi Kitonka, kitonkahs@yahoo.com www.ruditz.org

Agency. So far, though, the farmers did not have enough maize to sell to these other traders. The marketing company sees this as a lost opportunity.

Apart from handling and trading grain, the company also trains farmers on quality control, warehouse management, price negotiation, etc.

The company's board has nine members: five men and four women. Having women on the board was a requirement of both the World Food Programme and RUDI. The board decides on the buyers and negotiates prices on behalf of the farmers. Periodic meetings of members are called to approve such decisions. The company's members are the same as the members of the savings society.

To ensure that the warehouse was managed efficiently, a warehouse service business was established. This separate private company is composed of the warehouse staff. The company charges for their professional services (weighing, quality control, spraying, fumigating, etc.). The project trained the leaders of the savings society, marketing company and warehouse company on basic business skills, postharvest management, negotiation and warehouse management.

Wanted: Skills, facilities, capital, technology

All companies in Tanzania with an annual turnover of over TSh 5 million ($3,250) have to employ an accountant registered by the National Board of Accountants and Auditors. Since the marketing company was new, it could not afford to do this, so it had problems getting tax clearance. RUDI advised the company to use the services of the savings society accountant, who is experienced in keeping financial records. This was done during the first year of operations, when there were few transactions. The marketing company hired a registered accountant on a temporary basis to oversee the records at the end of the year.

The marketing company leaders had been trained, but the business needed experienced staff with business and financial management skills. Hiring someone was not possible: the company did not have the money. As a stop-gap measure, RUDI employed a staff member with a business background to support this and other marketing companies in the area. He helped them to prepare business plans and reports. It is expected that by the end of the project in December 2013 the company will be able to employ staff with the proper expertise.

Despite the renovations that had been made, the warehouse structure was still weak. And it could hold only 150 tons of grain – too little to accommodate all the grain expected. The World Food Programme provided a "tarpaulin warehouse" (a temporary structure) to solve this problem on an interim basis. Members of the marketing company are building a larger warehouse that will be able to hold 500 tons of grain. They made fired bricks without any payment; the World Food Programme has agreed to pay the remaining costs. Construction began in early 2013.

But so far, the warehouse handles only a small proportion of the grain sold by the Muhangu members: most sold their maize directly to private traders without going through the warehouse. An estimated 1,000 tons of grain, worth $39,000, changed hands in this way. The marketing company had no funds to pay cash, so many farmers sold their grain instead to private traders who paid immediately. The savings society loaned some money to the marketing company to pay the farmers, but the amount was too small.

A final obstacle was the low production of maize in the area. The farmers would like to raise their yields by using more fertilizer and better production techniques. But RUDI did not have the means to work with the farmers on this. This remains an issue throughout central Tanzania.

Sensitization meeting at Mrijo savings and credit cooperative.

Farmers' association leaders learning the importance of cooperation during a leaderhip training course at Singida.

Warehouse receipt system operators learning about moisture meters.

Photos: Rural Urban Development Initiatives

A clean audit, but more work to do

The savings and trading functions are now in different hands. Because it no longer trades in grain, the Muhangu savings society now complies with the law, and it has received a clean audit certificate.

The marketing company is also making progress: it sourced 60 tons of maize from 48 smallholders and sold it to the World Food Programme for $2,350. Two-thirds of the farmers who delivered this maize were women, because they said they could wait for their money. One reason for the low volume of grain deposited in the warehouse was a misunderstanding: the farmers assumed that only maize to be sold by the company was to be delivered to the warehouse. They did not realize that they could use the warehouse to store grain that they could sell themselves.

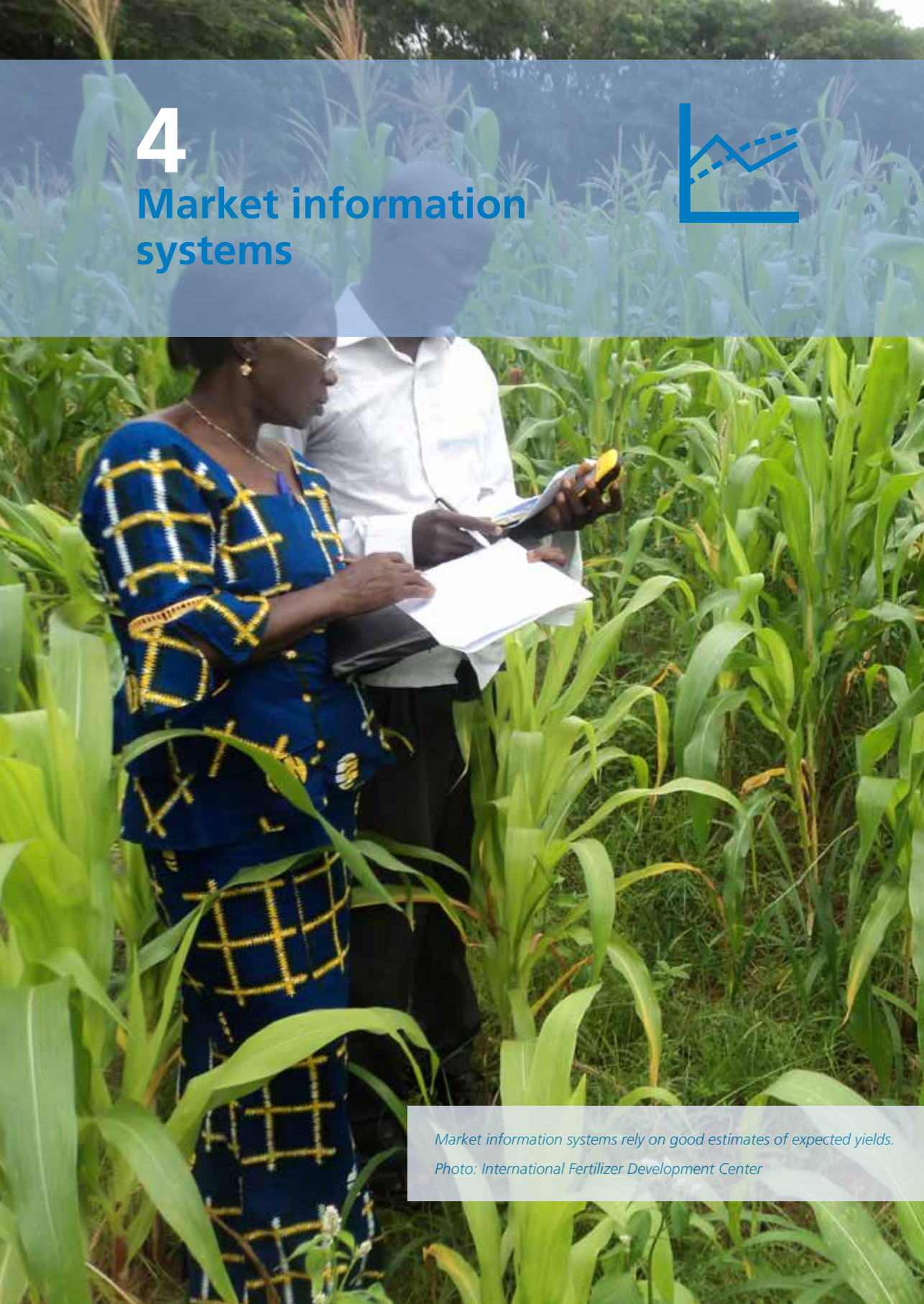
Lessons and challenges

RUDI has helped five other savings societies in the area to form marketing companies. Three companies have performed well; they sold a total of 180 tons of maize to the World Food Programme for $7,050. Two of them, however, had no warehouse to renovate, so were unable to accept and sell maize as planned. Projects should consider helping savings societies only if they have such facilities available.

Trading in grain requires sufficient working capital. A stronger savings cooperative would be able to loan enough money to the marketing company, so the farmers can be paid on delivery. That would attract more farmers to market their grain collectively. The savings cooperative could be strengthened by attracting new members and increasing the savings rates.

To benefit from the prices offered by the World Food Programme and other bulk buyers, maize farmers have to increase their production, an area of work not currently supported by the AGRA Market Access Programme.

4
Market information systems



Market information systems rely on good estimates of expected yields.
Photo: International Fertilizer Development Center

Case 6

Information for farmers: The Linking Farmers to Markets project, Ghana

A LACK OF information is a problem for both farmers and grain traders in northern Ghana. Farmers have few information sources: they rely on word-of-mouth, the radio or the extension agent to get information about prices, production and markets. Traders face similar constraints: they have to go from place to place in the hope of finding grain they can buy. Such a system is not very cost-effective.

Farmers have no bargaining power: they are forced to take the price the agent or trader offers. The traders are not sure they can fill a contract from a large buyer: the quality is variable, and they cannot be sure they will have enough stocks at the right time. Similar problems affect the whole value chain: farm input suppliers do not know how much seed, fertilizer and agro-chemicals to stock, and industrial buyers find it hard to source their raw materials.

The mFarms platform

That was the situation that the International Fertilizer Development Center (IFDC) found when it started work on the Linking Farmers to Markets project. IFDC believed that a combination of a website and mobile phones could offer a solution. It partnered with ImageAD, a software company based in Ghana, to design a system called mFarms (www.mfarms.org) that gives users a range of information on production and marketing of crops. Users get or send messages via their mobile phones.

- **Individual smallholder farmers** can get messages through their mobile phones on produce purchases, meetings, technical information and produce pricing.
- **Farmers' organizations** can gather information about their members, and communicate with them via SMS or voice messages. That enables the organizations to calculate the crop areas, input requirements and expected yields. This is valuable information when ordering inputs and negotiating with potential buyers.
- **Extension agents** can send farmers extension advice via SMS or voice mail. The agents can send in photographs of a crop, pest or disease, and ask experts questions. They can also use photos to monitor the status of a crop: whether a field has been planted or harvested, for example. The photographs can be geo-referenced so a landowner can check on work without actually having to visit a field.

Project title	Linking farmers to markets
AGRA grantee	International Fertilizer Development Center (IFDC)
Duration	December 2009 – February 2013
Location	Ghana: Northern, Upper East and Upper West regions
Commodities	Various
AGRA grant	$1,881,770
Contact	Susan van Keulen-Cantella, svankeulen-cantella@ifdc.org Abass Karim Nyo, anyo@ifdc.org

- **Traders** can find out how much of what crop has been planted where, and can contact the farmers' groups to negotiate a purchase. A trader can use the mFarms system to communicate with the farmers or organizations that he or she is working with.
- **Input dealers** can use the same information to predict the demand for seeds, fertilizers, agrochemicals and other inputs.
- **Transport companies, warehouse operators and other service providers** are also included in the system. That allows farmers and traders to know where they can store their produce and how they can move it from A to B.

Launching mFarms

The platform was launched in October 2012. Before this, it was piloted by 17 partners who collected data to feed into the system, and provided feedback to make the software more user-friendly. The system now lists over 42,000 farmers, 1,400 farmer-based organizations, 60 small and medium enterprises and aggregators, 87 marketing agents, 2,500 input dealers, 100 warehouses and 42 haulage companies.

The mFarms system is particularly useful for aggregators – small businesses that source grain form farmers and bulk it for sale to larger buyers. It costs less than half the equivalent paper-based system of data-gathering and record-keeping. Plus, the information in mFarms is geographically referenced, the manager can monitor the activities of field staff and the farmers the enterprise works with.

"We usually spend three months registering these farmers at high cost, but with the introduction of the mFarms, the staff spends only a month to carry out this particular activity", says Naresh Shukla, managing director of Durga Agric. Ltd. "It has also reduced the paperwork and there is no cost associated with data entry."

Because mFarms is still new, it is hard to tell how successful it will be. Currently (January 2013), eight aggregators are using the platform to manage their operations. The platform has also been replicated in Nigeria, Burkina Faso and Sierra Leone in West Africa. Even though it is still at an early stage, it is already attracting interest among development partners and private companies in other parts of Africa. ENAS, a fertilizer distribution company in Rwanda, is using the platform to monitor supplies, sales, stocks and forecasts for its network of 86 agricultural dealers in Eastern Province. In Kenya, MEA, a private fertilizer-distribution company, is using it to manage its communication and distribution network.

Reducing postharvest losses

Reducing postharvest losses was a second focus area of the IFDC project. Such losses occur for various reasons. One is that farmers do not have the facilities they need to thresh and dry their grain. They are forced to do so on the bare ground. Soil, stones and trash get mixed with the grain, contaminating it, encouraging spoilage, and reducing its quality and price.

IFDC collaborated with the Savanna Farmers Marketing Company to set up 17 collection centres in the project area. These centres are owned by farmers' organizations. They were equipped with concrete floors for threshing and drying, tarpaulins, scales, sack-stitching machines and pallets. They were also provided with threshing machines to hire out to farmers to thresh their crops. The centre staff coordinated smallholders to bring their produce to the centres for bulking.

mFarms (www.mfarms.org) is a computer-based market information system that works on the internet and mobile phones.

One way to promote mFarms is through fairs and exhibitions.

To take advantage of market information, farmers must offer quality produce.

Photos: International Fertilizer Development Center

The project trained 1,575 farmers on improved postharvest management. This training included study visits to well-managed farmer organizations and warehouses. These farmers in turn trained their friends and neighbours, and received further information on this subject through the mFarms mobile service.

Nearly 14,000 farmers currently benefit from the equipment provided by the project. Postharvest losses have fallen by 8–10%, and incomes of all actors along the value chain have risen. For example, Savanna used to have to clean grain supplied by farmers twice, and re-bag it before delivering it to its customers. With this equipment, it bulks produce from each community that is already cleaned, and transports it directly to the buyer. No further cleaning and re-bagging is needed.

That shows up in the price paid to farmers. In 2012 they could sell a kilogram of soybeans for 0.65 cedis ($0.31); three years before, they could get only half this.

Savanna has trained the farmers' organizations that own the equipment how to maintain it. They charge a fee for its use, and will invest this money in maintenance and new equipment.

Lessons and challenges

mFarms is still too young to draw lessons from its use. The first challenges, however, have arisen. These include poor internet connectivity (particularly for farmers) and the cost of collecting reliable data. IFDC is working with other partners to gather additional data. The more people who use it, the more useful mFarms will be (this is a common feature of such networking software). A vigorous publicity campaign is needed to promote the platform and ensure uptake.

Projects are often too short; just when they are beginning to have an impact, they end, and their efforts are wasted. Plus, donors often fail to take cropping seasons into account. Funding or inputs arrive at the wrong time, so cannot be used efficiently. This commonly affects at least some of a project's planned activities.

The study tours enabled farmers and aggregators to see how their colleagues work and adapt their own procedures. This has enhanced productivity, produce marketing and price negotiations and the respect of contractual agreements.

There is still not enough postharvest equipment to serve all the farmers. Transporting threshers and tarpaulins from farm to farm is a problem. The equipment is heavy, so is hard to haul about. IFDC has advised the farmers' organizations to use part of the fee to pay for donkeys and carts to move it around.

The smallholders are eager to buy equipment themselves, but they do not have the capital (or access to credit) to buy their own. Banks' current lending requirements are not suitable for smallholder farmers or enterprises. They lend only to legal entities that have business track records; most farmers' associations and small enterprises do not meet these criteria.

Donors should lobby banks to adjust their lending conditions for farmers and small agricultural enterprises. They should also explore alternative ways of providing finance to farmers and enterprises. One possibility is to work with rural banks to create a revolving fund with affordable rates and flexible terms so smallholders can get credit to buy postharvest equipment and cover production costs.

5
Enabling environment: Access to finance

Installing a grain dryer at KACOFA, Uganda
Photo: Uganda Development Trust

Case 7

Group credit and group selling in Rwanda

Grain traders face huge problems in rural areas. They have thousands of potential suppliers – the farmers who grow maize and other crops – but they are scattered in scores of villages, linked by bad roads. The cost of reaching each one is enormous. Traders have to identify people they can buy from, turn up at the right time, negotiate a deal, and then take away a few bags of produce that may be of variable quality. The grain from one farmer is almost certainly a different variety or grade from the sacks they have just bought from the last village.

No wonder that big traders avoid buying direct from farmers, and rely on agents or small-scale aggregators to purchase and sort their grain. And no wonder that the prices that traders offer to farmers are so low.

Bankers face a very similar set of problems. They also have thousands of potential clients, all desperate for loans and the chance to save money and insure their crops. But the challenges are the same: scattered villages, a huge range of individual farmers' needs, and the same miserable roads.

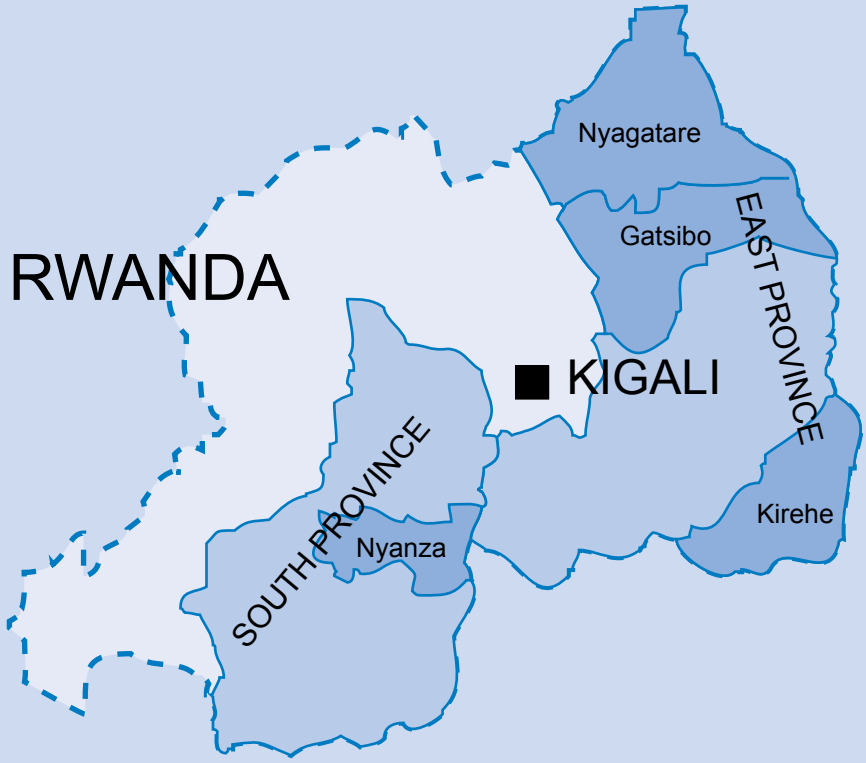
There are a number of possible solutions to both these problems. One is mobile phones, which have revolutionized trade in rural Africa (see Case 3 and Case 6).

Another solution is to bring farmers together in groups. In grain trading, farmers bring their grain to a collection centre, where it is graded, checked for quality, and bulked up ready for the trader to pick up (see Chapters 2 and 3). In finance, groups of farmers approach a bank or micro-finance institution and get a group loan. Both these approaches reduce the transaction costs for the trader or the bank, and make it possible for them to provide the service to the farmers. The project described in this case used both.

Working in groups is particularly important in Rwanda, where the government strongly supports the idea of cooperatives. This chapter describes how the Rwanda Development Organization (RDO), an NGO, is helping farmers' groups to sell their grain and to get loans. This work is funded by AGRA as part of a project to reduce postharvest losses and improve the quality of staple foods. RDO is implementing the project in partnership with Hand in Hand (another local NGO), two banks (the Bank of Kigali and Banque Populaire du Rwanda), and several large grain buyers. It aims to serve at least 50 cooperatives adopting a "warrantage" (grain storage) system throughout eastern and southern Rwanda. Its beneficiaries include 20,000 farmers organized in 79 maize and 21 bean cooperatives in Nyagatare, Gatsibo and Kirehe districts in Eastern Province, and Nyanza in Southern Province

We begin by looking at the loans.

Project title	Building capacity of farmer cooperatives to reduce postharvest losses and improve quality of staple foods in eastern and southern Rwanda
AGRA grantee	Rwanda Development Organization (RDO)
Duration	December 2011 – November 2014
Location	Eastern and southern Rwanda: Nyagatare, Gatsibo, Kirehe and Nyanza districts
Commodities	Maize, beans
AGRA grant	$506,325
Contact	Claver Gasirabo, cgasirabo@yahoo.fr; rwibasirae@yahoo.com http://rdorwanda.org



Credit for Ibyizabirimbere

The 460 members of the Ibyizabirimbere cooperative grow maize and beans on small farms in Kirehe district in Rwanda's Eastern Province. The cooperative helps them to get the seeds and fertilizers they need, and collects their produce for sale in bulk.

RDO conducted a number of training courses for lead farmers, including those from Ibyizabirimbere. These covered business skills and planning, financial management and accountancy, proposal writing, and working with financial institutions. They also dealt with cooperative law, registering a cooperative, and the rights and obligations of members.

RDO also organized training sessions and meetings where cooperative officers and bank officials could get to know each other. The cooperatives presented their business plans, and the banks described their loan application procedures and conditions.

Because farmers have no collateral other than the crops they grow, banks are unwilling to lend to individuals. But once the farmers organize into groups and present a credible business plan, they become more attractive as borrowers. The RDO training helped the farmers do this: once the bank was convinced that the farmers would be able and willing to repay, they were willing to lend them money.

In this way, the Ibyizabirimbere cooperative obtained two loans from the Kirehe branch of the Banque Populaire du Rwanda. The first was worth $100,000 at 19% interest; the cooperative used it to buy a lorry to collect produce from its members, and to buy produce from them. The cooperative has already repaid this loan. The second loan was for $170,000 at 17% interest; the cooperative used this to buy more produce from the farmers.

From group to individual accounts

All 460 members of the cooperative now have their own accounts with the bank. That makes it easy for the cooperative to pay them for their produce. Because they have accounts with a positive balance, a source of income and a track record of saving, the bank is now willing to make loans to individuals under a credit scheme called "Sarura" (Save for Loan). The maximum amount of the loan depends on the volume the farmer sold the previous season, and the amount deposited in his or her account. The bank is willing to lend up to three times the farmer's seasonal deposit. Sixty Ibyizabirimbere members have so far borrowed money under this scheme.

This credit arrangement depends on Ibyizabirimbere's success in bulking and selling its members produce. During the second cropping season in 2012, the cooperative aggregated and sold a total of 450 tons of maize on behalf of its members, for a sum of $210,000.

Other cooperatives in the district also benefit from the Sarura scheme. "This is not only benefiting the farmers, but also the bank whose portfolio has risen as a result," says Gatete Emmanuel, manager of the Kirehe branch.

RDO is replicating its experience in Kirehe in three other districts. In all four districts, farmers from 12 cooperatives (with 1,800 members) borrowed $400,000 in the last six months of 2012. They used the money for a variety of purposes: to cover their household expenses, to buy farm inputs, and to purchase grain. The repayment period ranges from 1 to 3 years, payable at harvest time.

The success of this approach shows that farmers are able and willing to repay their loans. Other banks and microfinance institutions can copy the approach and lend to farmers growing other crops. The key features of the approach are the sale of bulked produce through a cooperative,

A branch manager from the Bank of Kigali meeting farmers in Nyanza District.

Training on postharvest handling in Nyagatare District.

Photos: Rwanda Development Organization

with payments made through the bank into individual accounts. This opens the way to individual loans for farmers.

Bulking in Kotebaru

We now turn to look at organizing farmers and bulking produce for sale.

Like most other farmers in Rwanda, the 96 members of the Kotebaru cooperative in Nyagatare district, Eastern Province, used to sell their maize and beans individually. But the stocks were poorly stored, leading to low quality. And the only people interested in buying small amounts of grain from individual farmers were local traders, who offered low prices.

RDO has helped the Kotebaru members to sell their grain collectively. It met the cooperative officers and explained how bulk selling works. It set up a revolving fund so Kotebaru and other cooperatives could rehabilitate their grain stores. The cooperative borrowed the sum of $33,500 from the fund, which it had to repay in four seasonal instalments, without interest. RDO could then lend the money to another cooperative. Fifteen stores with a capacity of 2,800 tons, and five drying yards that can accommodate large volumes of grain, were rehabilitated in this way.

The Kotebaru cooperative manages a bulking centre in one of these stores. RDO trained the cooperative staff and lead farmers on bulking and collective marketing, and facilitated meetings between the cooperatives and big buyers. It also showed them how to use mobile phones to get market information through the government's "e-soko" system (www.esoko.gov.rw).

In the 2011/12 season, the Kotebaru cooperative provided its members with seed and fertilizers obtained from the district on credit, on condition that they would sell their produce through the cooperative. The members duly did so, and the cooperative signed a contract just before harvesting to supply 500 tons of maize and beans to the World Food Programme. This fetched them RWF 130 million ($210,000), which was deposited in the cooperative's bank account. The same buyer has offered another contract for 800 tons in the 2012/13 season. The Banque Populaire du Rwanda is now willing to give the cooperative a loan of $500,000 to handle farming activities and buy more stock from its members.

"We could be the richest people in the district!"

"Gone are the days when we could depend on handouts. I wish we knew this long ago, we could be the richest people in the district," says Mutabaruka John, a member of Kotebaru cooperative in Rukomo, Nyagatare district. His cooperative has rehabilitated its storehouse; it has an ambitious plan to build a new one to hold 1,000 tons of grain. It also wants to buy a lorry to transport produce and to rent out to other cooperatives.

Overall, the RDO project has set up 12 aggregation centres like the one operated by the Kotebaru cooperative. In the first year of the project (2012), these centres bulked and sold over 9,200 tons of maize and 660 tons of beans. The total value of the produce sold was $3,930,000.

As Mutabaruka John has realized, selling collectively confers big advantages. In 2012, grain sold in bulk fetched between 11 and 26% more than the same grain sold by individual farmers at the farm gate. If they sold to the World Food Programme, farmers earned 27% more than if they sold to local traders.

Opportunities for Rwanda's farmers

The RDO project has opened a number of major opportunities for Rwandan farmers. It has enabled them to negotiate contracts before harvesting with buyers like the World Food Programme and the Rwanda Grain and Cereal Corporation.

Banks have started offering credit using grain that has been stored in a warehouse as collateral. This is called "warrantage", or inventory credit. This has been made possible by rehabilitating the storehouse and linking the cooperatives to banks. This has built the foundations for the future introduction of a warehouse receipt system.

Lessons and challenges

By bulking produce through a cooperative, with payments made through the bank into individual accounts, the farmers became acquainted with formal financial systems. They are beginning to develop a culture and track record of saving, making them valuable future bank customers. Production loans make it possible for them to increase their output and boost their income.

Nevertheless, many challenges remain. It is still difficult to get farmers to see the benefits of working together rather than on their own. Mutual trust and a willingness to work, save and sell together are still lacking.

A lot of produce is handled poorly and is of insufficient quality. Storage facilities are insufficient, market information is limited, and records are sometimes poorly kept.

RDO plans to overcome these challenges through training and meetings to link farmers and banks. It will also continue to support the rehabilitation of storage facilities using the revolving fund, and referring farmer organizations for bank credit.

Working and selling together make it possible to access more profitable markets, win the confidence of banks, and take advantage of the economies of scale. Ample opportunities exist for others to promote the bulking of produce. Focus areas include contract negotiation and management, mobilizing more farmers for larger volumes, informing buyers about the availability of commodities, and developing durable business relationships.

Case 8

UGANDA DEVELOPMENT TRUST

Helping farmers' associations get loans in Uganda

THE TWO biggest enemies of a sack of maize? Insects and mould. If the grain is not dried properly – to a moisture level of around 14% – then harvest will be soon turned into dust. Damp is ideal for mould too: it reduces the grain quality and can make it unfit for consumption.

These were the twin problems facing the Kapchorwa Commercial Farmers Association (KACOFA), an organization of over 6,300 smallholder farmers in Kapchorwa district in eastern Uganda. Founded in 1999, the association buys maize, sorghum and barley from its members, cleans, packs and stores them, and sells them to the World Food Programme, Uganda Breweries, Kenyan traders, local processers and local traders.

KACOFA wants to get good prices, and for that it needs to sell high-quality grain. But its members often deliver grain that is damp and dirty. Individual farmers spread out their grain to dry in the sun, but the climate is rainy and cool (Kapchorwa is 2,000 m above sea level). In the wet season it can take months to get it down to an acceptable moisture level. Plus, the grain contains a lot of dirt and stones, picked up during the threshing and drying. In 2009, KACOFA lost up to 40% of its grain because of these problems.

The association did what it could. It hired cleaning equipment, but the only one available in the district was designed for coffee, so is unsuitable for maize and barley, KACOFA's major crops. It employed workers to sort the maize by hand, but that is inefficient and costly. It hired a warehouse to store the grain, but that pushed costs up further. KACOFA was losing money and failing to meet its contractual obligations with buyers.

From business plan…

KACOFA needed its own equipment to clean and dry grain, and its own warehouse. But that would cost money.

The Uganda Development Trust (UDET) has helped KACOFA get the finance it needed. UDET helped KACOFA develop a business plan that it presented to donors and commercial banks. Well-run and now with over 6,000 members, KACOFA is an attractive partner for donors that want to support agricultural development in this part of Uganda. It is also a good potential client for banks. UDET showed KACOFA how to tap into both these sources of funds.

The business plan had two aims: to enable KACOFA to acquire funds to solve the problems mentioned above, and to expand its ability to deliver high-quality grains that meet national and international standards. This would improve the incomes of its members, boost revenues from sales, create jobs and increase the workers' incomes.

Project title	Providing business development services to small and medium enterprises sourcing raw materials from smallholder farmers in Uganda
AGRA grantee	Uganda Development Trust (UDET)
Duration	April 2011 – March 2014
Location	Uganda
Commodities	Maize, sorghum, barley
AGRA grant	$539,650
More information	Brenda Kwatampora, programme officer, Uganda Development Trust, brendak@udet.co.ug Joan Rutaroh, programme director, jrutaroh@udet.co.ug www.udet.co.ug, udet@udet.co.ug

UDET also trained KACOFA staff in financial management, marketing, stock management, good governance and participatory monitoring and evaluation.

…to financial support…

Stanbic Bank provided KACOFA a series of loans:

- An equipment loan of $284,000 for four tractors and a set of implements. KACOFA rents these out to its members for ploughing and other field work.
- A 6-month production loan of $267,000 to cover the costs of growing 2,800 tons of sorghum on 800 ha of land.
- A commodity loan of $900,000 for buying and bulking maize.
- A $19,000 overdraft facility for working capital.

The United States Agency for International Development provided a grant of $1.2 million to build a 2,000-ton warehouse, offices and weighbridge.

The World Food Programme provided a generator and a grain-cleaner/dryer with a capacity of 5 tons an hour. It also agreed to buy $300,000-worth of maize.

…to profits for farmers

The results have been impressive. KACOFA's grain losses have fallen from a disastrous 40% in 2009 to a more acceptable 5% in 2012. Its transaction costs have fallen by 65% because it now has its own cleaner, dryer and warehouse, so does not have to hire them. Its revenues have risen from just $2,400 in 2009 to nearly $290,000 in 2012. KACOFA has improved its management and staff, and has launched a warehouse receipt system, where farmers or traders can deposit their grain in the warehouse and get a receipt for it that they can use as collateral for a loan.

KACOFA has found new buyers for its grain. It sold 900 tons of maize to the World Food Programme in 2011. In 2011 it signed a contract with East Africa Maltings (part of East African Breweries) to supply 13,000 tons of sorghum over a period of 2.5 years.

The loans and overdraft facility mean that KACOFA can buy more grain from its farmer members. It has more than doubled its maize purchases, from 700 tons in 2010 to 1,650 tons in 2012.

That has boosted the farmers' own incomes: from an average of $472 in 2009 to $1,000 in 2011.

The tractors have made it possible for the farmers to more than double the area they cultivate, from an average of 0.8 ha in 2009 to 2 ha each in 2011.

Farmers are attracted by the prospect of tractor services, input loans and higher incomes. More and more have been joining KACOFA: membership has risen from 3,250 in 2010 to 6,328 in 2012.

Bumps in the road

Progress has not always been smooth. A 3-month delay in loan disbursements delayed project activities, and UDET and KACOFA had to persuade the bank to reschedule the loan so it could be repaid on time.

Flooding damaged some of the sorghum harvest, so yields were less than expected. KACOFA had taken out an insurance policy to mitigate such losses, and has submitted a claim for compensation.

Harvesting sorhum in Ngegnge with support from KACOFA.

Cleaning maize at the KACOFA warehouse.

Packing of "Baby Soya" at East African Basic Foods Ltd.

Photos: Uganda Development Trust

High inflation affected the original budget. More expensive fuel, seeds and labour pushed up the cost of producing grain by 20%. And, with the increase in the number of members, there are not enough tractors to serve all KACOFA's members.

UDET's approach

KACOFA is just one of many small and medium enterprises served by UDET as part of its AGRA-funded project. UDET specializes in helping such enterprises get loans, grants and other financial support.

When an enterprise applies for support, UDET helps it to assess its business potential. It helps conduct a financial analysis of its proposed project. It visits the enterprise's sites, interviews staff and stakeholders, and carries out the "due diligence" to check that the information is correct.

UDET then helps the enterprise write a business plan and loan request for submission to a commercial bank. After the bank has approved the loan, UDET provides the enterprise with any technical assistance needed to set up production processes, choose technologies, procure equipment, set up financial management systems, improve marketing, and establish systems for monitoring, evaluation and reporting.

UDET has so far helped develop 42 business plans for 35 enterprises, which have led to $9.5 million in loans from commercial banks. Eight enterprises have received nearly $3 million in grants from donors (KACOFA was one of these).

As a result, over 110,000 farmers throughout Uganda have been guaranteed sustainable markets, and they have sold nearly 120,000 tons of produce valued at nearly $80 million. Over 1,000 casual seasonal jobs have been created.

Seven of the 35 enterprises have acquired new farm machinery and processing equipment. That has boosted their output by 70% through greater production, more timely harvests and better postharvest handling.

The enterprises' performance and management have also improved. They now sell 25% more produce, and better marketing has increased their market share.

Lessons and challenges

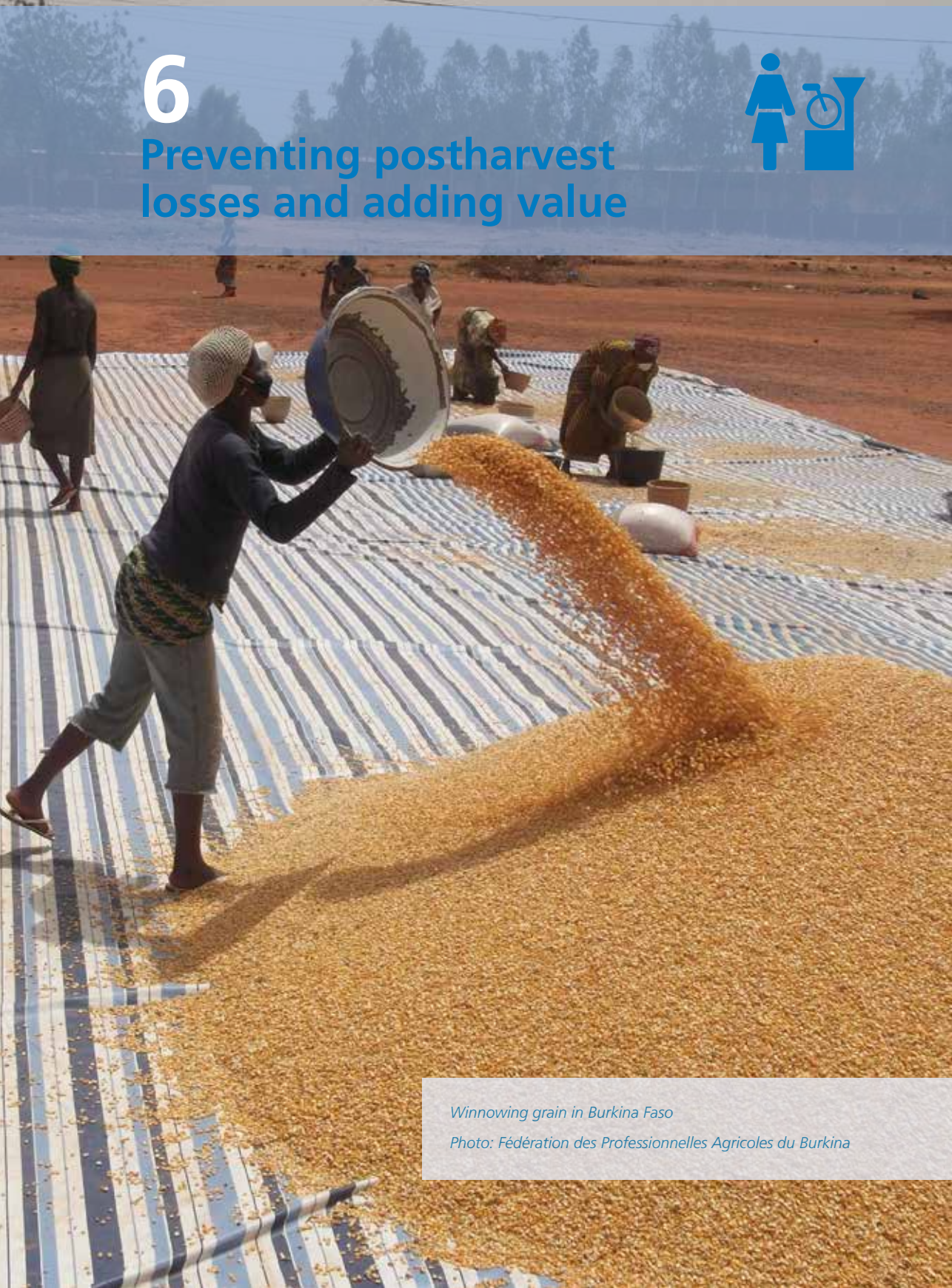
Weather insurance is potentially valuable for Ugandan farmers, but it is currently not working well in the country. The current insurance system uses a South African firm that does not know about weather conditions in Uganda, and which relies on satellite imagery, not on the reality on the ground. Alternatives need to be explored further.

Enterprises, banks and famers' organizations have different orientations, so they often do not understand each other. It is the job of the business service providers (like UDET) to bridge this gap and nurture the relationships among the various actors.

The current lending requirements of commercial banks are not suitable for smallholder farmers or small agricultural enterprises. Banks will lend only to legal entities that have business track records in their operations (a bank account, good business records etc.). Most farmer associations and small agricultural enterprises do not meet these criteria.

AGRA's partners could lobby banks to soften their lending conditions for farmers' associations and small agricultural enterprises. AGRA could also explore alternative ways of providing finance to farmers, their associations, and small enterprises.

6
Preventing postharvest losses and adding value



Winnowing grain in Burkina Faso

Photo: Fédération des Professionnelles Agricoles du Burkina

Case 9

Threshing and bulking grain in Mozambique

Tete province, in central Mozambique, has huge potential for agricultural development. Smallholders who farm between one-quarter and five hectares grow nearly all the maize and beans produced in the province. So any efforts to promote development must focus on helping them improve their output and income.

The Agência de Desenvolvimento Económico de Manica (ADEM), a Mozambican NGO, is implementing an AGRA-funded project to build the capacity of smallholders and small enterprises to access markets and finance in the province. The project is serving four districts in the northern part of Tete, close to the border with Malawi: Angonia, Tsangano, Macanga and Chifunde.

This chapter focuses on two aspects of this project: the introduction of threshing machines to improve postharvest processing, and helping farmers get organized to sell their produce in bulk rather than individually.

Promoting threshers

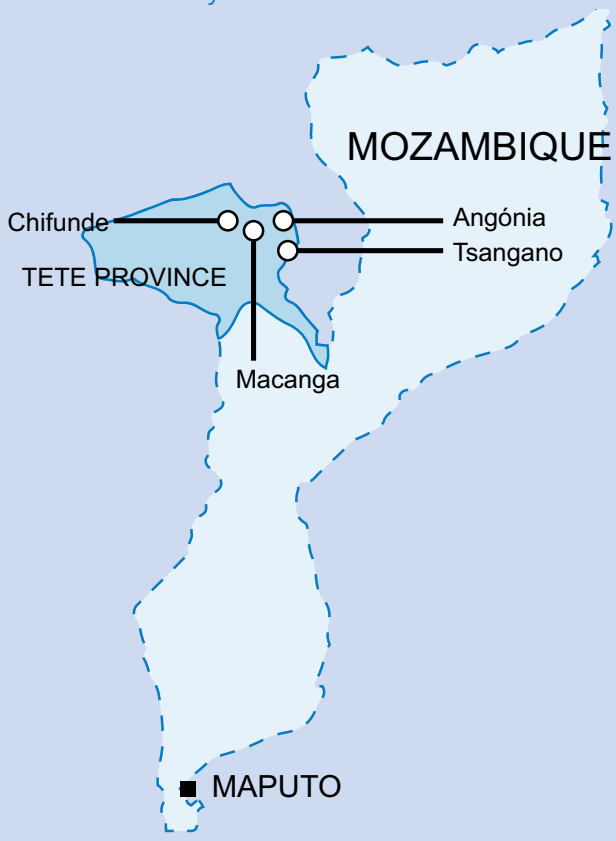
Threshing grain is a big problem in Tete. Most farmers beat the maize cobs or dried bean pods with sticks to separate the seeds. But that is laborious and takes a huge amount of time, and it damages a lot of grain, reducing the quality and making it easy for pests to attack it when it is in storage. The traditional method also leaves lots of foreign matter – soil, stones, bits of plant waste – mixed in the grain. Understandably, buyers do not like this: they either reject the grain, or have to put it through an expensive cleaning process to get rid of the unwanted matter. That lowers the price they are prepared to pay the farmer.

The answer is mechanical threshing. But threshers are expensive, and few farmers can afford them. A previous development programme had brought a small number of threshers into areas where ADEM is working, so some farmers had seen them and knew what they could do. But there were just not enough threshers to serve all the farmers who wanted to use one. No other development projects were supporting this area, and financial institutions were reluctant to offer loans to buy the machines, especially as few farmers can offer the necessary collateral.

ADEM decided to provide some more threshers to help fill this gap. It bought three, each costing around $7,000, for small enterprises in the province. The idea was that the enterprise would pay half the cost in instalments.

To ensure the equipment would be used effectively, the enterprises chosen were owned by individuals, not farmers' associations. So it was important to choose the right people who would receive this assistance. They had to live locally, be willing to take on the responsibility, have a

Project title	Building the capacity of smallholder farmers and small and medium enterprises to access valuable markets and finance in Tete Province, Mozambique
AGRA grantee	Agência de Desenvolvimento Económico da Província de Manica (ADEM)
Duration	November 2011– October 2014
Location	Mozambique: Tete province (Angónia, Tsangano, Macanga and Chifunde districts)
Commodities	Maize, beans
AGRA grant	$685,978
Contact	Manuel Queiroz dos Santos Junior, ADEM, adem.chimoio@gmail.com or msjqueiroz@yahoo.com.br



business mindset and experience, and have oxen that could transport the thresher from place to place. Leaders of each district's smallholder farmer associations and local government extension workers helped ADEM choose the right people.

Matias's thresher

In Macanga district, the project selected Matias Wilson Becelemu, a member of the 38-strong Tithandizane farmer association. He signed a contract with ADEM stating his rights and responsibilities, as well as penalties if he did not fulfil his side of the agreement. ADEM trained him how to operate the equipment and manage an enterprise, and helped him develop a business plan and register his business with the authorities.

Matias now offers threshing services to local farmers. He brings the thresher to the field, sets it up and runs it. The farmers feed the grain into the hopper and put the threshed grain in bags or spread it out on tarpaulins to dry.

Farmers will not hire the threshing service if they do not know about it, so Matias has paid for advertisements on the local radio. The extension service and ADEM also publicize the service, explaining to farmers about the advantages it brings in terms of grain quality. The provincial governor has even visited Matias to show his support.

Matias got his thresher in July 2012; by October he had threshed nearly 100 tons of maize for 13 farmers. He charges the equivalent $0.53 per 50-kg bag of threshed grain, and has earned over $1,000. Farmers from up to 65 km away have hired the thresher; they used a tractor to transport it to the threshing site. For closer sites, Matias uses his oxcart.

Farmers who have used the thresher are happy because of the time saved and the better quality grain it produces. They are acting as cheerleaders for the service.

But business has been slower than expected because farmers do not know about the service, or they think it should be free. They are reluctant to change their traditional threshing practices, especially if they have to pay for the alternative. That has made it hard for Matias to repay his debt: he has so far repaid $214, though according to his business plan, he should have repaid $600 by now. Slowly the hurdles are being overcome.

The arrival of several big grain buyers in the district is likely to push up demand for well-threshed grain. As more farmers see the thresher in action, demand is rising, and other farmers are interested in buying a thresher. But they lack the capital to do so, and it is hard for them to get a loan. ADEM has tried to interest two local banks in making such loans, but has so far been unable to arrange a meeting between them and the beneficiary farmers.

Scaling up threshing services

Trying things out on a small scale and learning-by-doing: they are good ways to introduce and promote new practices. ADEM should set up a seed fund for such experiments and for campaigns to promote successful technologies (like threshers) and demonstrate them to farmers.

To serve new markets (such as the big buyers which are now entering the districts), farmers need to change the way they do things. They need to be aware of the new trends and be prepared to enter these markets. One way to do this is to use threshing machines, which save time and add value as well as increasing income.

Traditional hand-threshing is laborious and time-consuming, and risks contaminating the grain.

A modern thresher avoids these risks, and produces a better-quality product.

Photos: Agência de Desenvolvimento Económico da Província de Manica

Farmers and entrepreneurs need credit if they are to adopt new technology. But getting credit is difficult: banks either refuse to lend to such people, or they set impossible requirements or charge prohibitive interest rates. Mechanisms are required to provide seed money, grants or low-interest credit to rural borrowers. Farmers and entrepreneurs have to learn about financial management, and may need assistance in setting up savings-and-credit schemes. They should be more aware of how credit can be used and how to use it to support profitable business ventures.

Organizing to bulk

Most smallholder farmers in Tete province sell their produce individually to small-scale traders who buy from door to door or at local markets. They cannot sell to large buyers who buy large amounts on contract. It is estimated that intermediary traders buy up to 70% of the maize sold in the province; smallholders are left with meagre margins.

Some farmers in the province are already members of farmers' associations, but many of these organizations do not work well. Members often do not abide by their association's bylaws, and members and leaders do not understand their roles and responsibilities. Many of the leaders

Using a moisture meter to test the moisture content of grain.

The operator puts a sample of grain in the cup. The moisture meter is simple to operate.

Photos: Agência de Desenvolvimento Económico da Província de Manica

seem to run the organizations for their own advantage rather than for the members as a whole. Some members benefit more than others, and they do not share information that might help their colleagues.

A related problem is that farmers (both association members and non-members) do not have the skills they need to engage with formal markets that rely on predefined quality standards, large volumes, and fixed delivery schedules.

Finally, the smallholder farmers do not have facilities to store their grain until it can be sold at a decent price. They therefore have no experience in managing such facilities.

Various small grain-handling enterprises in the province already have links to large buyers; they purchase produce from smallholders to sell to the big players. Such enterprises play an important role in commercialization as they bypass smaller traders. They are able to pay better prices to farmers that supply them the quality and volume they require. But few farmers are able to take advantage of this opportunity because they are poorly organized.

Taken together, these weaknesses mean that despite gains in agricultural productivity and the market offered by these enterprises, farmers get very little returns for their output.

The Chicumba Association

ADEM has been helping various farmers' associations in northern Tete to get organized and build links with grain handlers. One of these is the Chincumba association, an umbrella grouping of nine farmers' clubs in Macanga district. The association has a total of 393 smallholder members. About one-quarter of them are women.

ADEM trained two lead farmers from each of the nine clubs in group management and governance. It trained another 18 farmers on postharvest management and marketing. This pool of trainees in turn trained their colleagues on the same subjects.

All this work has paid off. A year later, the Chincumba members clearly understand their role and responsibilities. The constitution has been revised. A new board and secretariat have been elected which understand their roles and are committed to them.

On collective sales, the members agreed that the association should have a storage facility where they could aggregate their produce. This centre should be managed in an appropriate way. It should replace the current system, where members brought their grain to the association leader's house for bulking. The farmers contributed half of the construction costs in form of labour, poles, stones and sand, and paid a guard for the store. The other half of the costs came from the project as a grant.

The members built a storehouse that can hold up to 70 tons of grain. A team of two association members manage it: one controls the buying of the produce and checks the quality, while the other manages the books.

Links to Leo

ADEM introduced the Chicumba Association to Comercio Geral Leo (Leo General Trading), a grain-trading enterprise in the district, and to Senues and Compagri, two international companies that buy maize, beans and soybeans. Leo, Senues and Compagri first discussed their requirements in term of quality, moisture content and waste content, and payment and delivery schedules. In a second step, ADEM arranged a meeting between the manager of Leo and the leaders of the association and its member clubs. They discussed the requirements of the international companies and of Leo itself.

Senues and Compagri supplied over 7,000 bags for Leo to pass on to the farmers to fill with maize. Leo advanced money to the association so it could buy maize from its members in cash. Between July and December 2012, Leo paid nearly $35,000 to the Chincumba association to purchase maize from its members.

The prospect of quick cash payments was a strong incentive for the individual farmers to bulk their grain. Another incentive was an agreement that for each kilogram of maize bought, the association would receive 3.5 US cents for its purchasing and bulking services. In the second half of 2012, at least 85% of the members sold their maize through the aggregation centre.

Leo bought 170 tons of maize from the Chincumba association at a price of 19 cents a kilogram, 19% higher than the informal market price of 16 cents. In all, the farmers earned over $33,000. Leo sold the grain on to Senues and Compagri for 21 to 23 cents a kilogram.

Leo paid the Chincumba association about $6,000 for its purchasing and bulking services. The association used the money to pay for the guard and to improve its storage facilities.

Several other farmers' associations in Macanga are interested in copying the approach used with the Chincumba group. They learned about it through exchange visits and information sharing, and technical staff from ADEM have started working with them. Leo and Cacebola, another trading firm linked with big buyers, are interested in joining this initiative, and they are already buying some grain from these associations.

Lessons and challenges

Linking farmers' organizations and traders is an effective approach to start up capacity building of smallholders and their organizations for accessing markets. Some lessons from ADEM's experiences:

- The approach must be customized for each farmers' association, as one size does not fit all. This takes time and effort.
- Where investment is necessary, the farmers should be required to co-fund at least half of the cost. This ensures that they are committed and feel ownership for the initiative.
- The association's bulking and storage centre should have an independent management team. This may be drawn from the association leadership or members; outsiders may be hired if enough money can be raised. The team must be well trained. They must report regularly to the association members. ADEM technical staff must be available to follow up and correct any errors.
- Large buyers are sometimes reluctant to sign formal contracts. To make sure they stay involved, negotiators should require them to supply tangible items, such as bags, scales, storage space, and cash to buy produce from farmers. It is also important to agree on the terms and conditions such as quality standards and timing.
- The association must make sure it spends its earnings wisely so all their members and clubs benefit. Such spending decisions must be taken collectively.
- Coaching and follow-up by an external partner (like ADEM) is very important at all stages.

At the same time, challenges remain:

- Farmers want immediate payment of their produce. This is understandable: they have mouths to feed and bills to pay. Big buyers, on the other hand, will pay only on delivery; payment requests must be sent to their headquarters and made through a bank. Someone has to bridge the gap, or the deal will not go through.
- In the Chincumba case, Leo paid the farmers before it had itself received money from its buyers. It had to use its own working capital to do this. But most small enterprises do not have this capacity. They need a credit facility for short-term working capital of this type. In Mozambique, unfortunately, most financial institutions consider agriculture and related business as too risky to invest in.
- Farmers in the associations need to gain trust and confidence in their leaders. Many farmers look back on a history of corruption and misuse of resources in their associations. Both leaders and members need training and coaching in organizational management, and organizations must share information and records transparently with their members.
- Senues, Compagri and other big buyers do not like to sign contracts directly with farmers' associations or small enterprises. They do not want the hassle of having to take them to

court if the contract is not fulfilled. They prefer to work on the basis of informal agreements for at least 3 years before they are ready to sign a contract.

Case 10

Credit and postharvest management in Burkina Faso

Women in Burkina Faso face many problems. By tradition, they cannot own, buy or sell land, and they are second-class citizens when it comes to accessing credit and other resources. Despite this, many Burkinabé women are active entrepreneurs, running many different types of small businesses.

Burkina Faso has a system of local credit unions that offer loans to farmers. But many women cannot access these loans for two reasons: the credit institutions tend to distrust the women, and the women themselves do not know how to apply for credit. However, the credit unions often have money to spare that they could lend out to trustworthy borrowers.

The Denbagnouman ("good mother") women's group is a village group within the provincial farmers' union in Kénédougou, a province in the far west of Burkina Faso. The group was formed in 2000 and was officially registered in 2010. Its 30 members sell cereals, fruit and vegetables that they grow themselves or buy from other members of the Kénédougou farmers' union. They wanted to increase their production and sales, but to do so they needed money to invest.

Access to credit for women: supporting the Denbagnouman women's group

The AGRA-funded marketing project gave FEPA/B an opportunity to assist Denbagnouman and other groups like it. It deposited a credit guarantee worth FCFA 1.4 million ($2,800) with the credit union network in the name of the Kénédougou farmers' union. Other donors deposited another guarantee worth FCFA 38 million ($77,000) in the name of all the provincial farmers' unions affiliated with FEPA/B. These guarantees gave the credit unions confidence that if a loan went bad, they would be able to recoup their money.

In addition, the Kénédougou farmers' union signed an agreement with a local microfinance institution, the World Food Programme's grain-purchasing scheme and three other national development agencies. This agreement was to facilitate the marketing of crops and the provision of loans to the Kénédougou union. The union members, including the Denbagnouman group, were trained on partnerships, administration and finance, and cooperative management. All 30 members of the Denbagnouman group were trained in business planning and credit management. These courses gave the trainees the skills they would need to negotiate partnerships and maintain transparency.

To improve potential borrowers' understanding of applying for and managing credit, the Kénédougou union took part in coordination meetings with FEPA/B and the credit union network.

Project title	Strengthening the capacity in cereals and cowpea marketing for ten provincial union members of FEPA/B
AGRA grantee	Fédération des Professionnels Agricoles du Burkina (FEPA/B)
Duration	January 2011–December 2013
Location	Burkina Faso: 10 provinces (Léraba, Kénédougou, Houet, Mouhoun, Nayala, Passoré, Boulkiemdé, Sanematenga, Namentenga, Nahouri)
Commodities	Cereals, cowpea
AGRA grant	$822,426
Contact	Athanase Birba bathanase@fepab.org Ismaël Nignan mansael80@yahoo.fr www.fepab.bf

These meetings were an opportunity for women to meet and discuss directly with the credit union management.

Credit where credit is due

The farmers' union members can now prepare much better credit applications and business plans (all applications so far have been approved). A meeting of the group decides how much credit to apply for. Each member presents how much money she will need and what she wants to do with it. The group checks and approves each person's activities and how much should be financed by a loan. The group then applies for a lump-sum loan to cover all the members' credit needs.

Once the group has got the loan, it divides it up among its members. The members use the money to run their businesses: selling fruit, vegetables, cereals, hibiscus and *néré* (seeds of *Parkia biglobosa*, the African locust bean) which are used to make a condiment. Their main markets are Mali (for maize and sorghum), Côte d'Ivoire (cowpea and roselle (*Hibiscus sabdariffa*)), and the cities of Pouytenga, Bobo-Dioulasso, Ouagadougou and Orodara in Burkina Faso (mangoes). The members run their businesses independently, but they repay their loans through the group.

The women each pay a fee of FCFA 500 ($1) a day into a kitty. This money is used to pay off the loan and to cover for any defaults by one of the group's members. Such an arrangement gives the group a good reputation and builds trust.

The Denbagnouman group has managed to diversify its sources of credit. It can now get loans from the Kénédougou credit union or two other banks. In 2010 it borrowed FCFA 55 million ($110,000); by 2012 this had gone up to FCFA 82.5 million ($167,000).

The members keep simple accounts, so it is clear they make good use of this money. One member earned FCFA 3.3 million ($6,700) a year, with a return of 4.6%. Another member earned FCFA 14.8 million ($30,000) and a return of 6.5%.

Postharvest processing in Houet

The second example in this chapter looks at the work carried out by FEPA/B with the farmers' union in Houet, the province to the east of Kénédougou.

Postharvest losses in Burkina Faso are shocking. According to some studies 30% of cereals and 40% of cowpeas are lost after harvest – and that does not include quality deterioration. Such figures would be serious anywhere. In a region that is subject to poverty and persistent food insecurity, they are scandalous.

Why is so much grain spoiled or lost after it is safely out of the field? One problem lies in how the grain is threshed and dried. Many farmers thresh their grain on the bare soil because they have no other option. Others spread it out on the ground and hire a tractor to drive over it to separate the grain from the husks or pods. Small wonder that so much is damaged or ground into the soil.

With AGRA support, FEPA/B is helping 10 of its member provincial unions to improve the post-harvest facilities and practices in their areas. One of these, the Houet union, has 20,500 farmer members (more than half of them women) organized in 483 groups.

FEPA/B has used the AGRA funds to invest in a range of postharvest processing equipment: seven threshers for maize, three for cowpeas, 10 for sorghum and millet, plus 10 machines that can be used to clean any type of grain. The Houet union received threshers for maize and for sorghum and millet, and a grain cleaner. These are expensive pieces of equipment: a thresher

How it used to be done: This farmer is winnowing millet that has been threshed by a tractor driving around in circles on it (in the background).

A better way: Learning how to operate one of the new threshers.

Photos: Fédération des Professionnels Agricoles du Burkina

costs around $3,500, and a cleaner two-thirds of that. So they have to be managed efficiently and made to pay for themselves.

To do this, the Houet union set up a management committee. This has seven members: a chairperson, treasurer, one operator for each machine, and two mechanics. The operators and mechanics were trained in how to operate and repair the equipment.

The union set some rules for using the equipment. Members of the union who hire the equipment may pay in kind (1 sack of grain for every 15 threshed), or in cash (FCFA 400 ($0.80)) per sack). Non-members pay more: FCFA 500 ($1) per sack. The machines are big and heavy, so there are restrictions on their movements. To move it up to 1 km, the farmer must have at least 1 ton of grain to thresh. To move it more than this (6 km is the maximum), the farmer must have 2 tons.

The union uses five types of management forms for planning and recording the equipment's use. These are for:

- Planning equipment use
- Recording maintenance and repairs
- Calculating breakeven points for use
- Daily expenses and receipts (in kind and in cash)

- Summary of receipts and expenditures.

To ensure quality of the threshed grain, over 21,000 farmers (half of them women) have been trained in harvesting and threshing practices, the use of triple bags (which keep out air and suffocate pests), and managing grain stocks.

"The dead have missed a miracle"

On seeing a maize thresher swallow whole ears of maize and spit out grain on one side and the cobs on the other, one old man exclaimed "*ceux qui sont mort avant aujourd'hui ont raté un miracle*" (those who have died before today have missed a miracle!).

In two months, the Houet union threshed more than 740 sacks of grain from 47 producers. In all 10 provinces served by the project, more than 1,200 producers threshed 3,500 tons of grain between December 2012 and January 2013. Only 3% was rejected because it did not conform to the buyer's standards.

The machines make it possible to thresh 2–6 tons of grain in an hour with only 2–5 workers. Threshing the same amount by hand would take 20 people up to two days. So the savings in time and effort are considerable.

The threshers also produce better-quality grain. It has 0.5% foreign matter (compared to 10% for tractor-threshed grain). It contains fewer crop residues (0.5% compared to 5%). And only 1% of the grains are broken (compared to 4% for tractor threshing). It is cheaper, too: one 100 kg sack costs FCFA 985 ($2) to thresh with the machine, compared to FCFA 1,715 to 2,300 ($3.50–4.70) when using a tractor.

Nevertheless, FEPA/B feels that the contracts for making equipment should be given to several different manufacturers. That would lead to faster delivery and competition among the manufacturers.

Looking at the overall work done by FEPA/B, the quality of grain to be stored and quantities sold have gone up. The amount of foreign matter in stored grain fell from 15% to 5%. The quantity of cowpea and cereals sold rose more than fourfold (from 805 tons in 2010 to 3,821 tons in 2012). Furthermore, farmers have got better access to finance: seven farmers' unions obtained production and marketing loans amounting to FCFA 63.4 million ($130,000) in 2011. In 2012, eight unions received loans totalling FCFA 190.4 million ($390,000). Four of them, in Houet, Kénédougou, Nahouri and Passoré, got the loans without any support. In 2012, 6,066 producers sold cereals and cowpeas through their unions, compared to only 487 in 2011.

Lessons and challenges

The Denbagnouman women take pride in the trust that the local credit union now has in their abilities. The group was awarded a prize for the best partner of the whole region's credit unions. That leads to better deals: another bank has offered them a loan at an interest rate of 11.75% – much lower than the normal rate of 15%.

Some lenders will lend money for production, but not for marketing. They fear that doing so will overload the women with debt. But the women can sell far more than they can grow themselves, so they need money to buy produce from other farmers. The Denbagnouman group now draws on it savings, or approaches another lender for credit.

FEPA/B ordered the threshers from a manufacturer based in Bobo-Dioulasso, the capital of Houet province, and helped the manufacturer finalize the design. Other projects and large individual producers have since also ordered equipment for their own needs. This local manufacturing capability makes it unnecessary to import expensive equipment.

Machine-threshed grain contains less dirt and fewer residues, so has less weight and volume than grain threshed in the traditional way. So farmers will lose out if they cannot get a better price per bag or kilogram. They need to find buyers that are prepared to pay extra for clean, well-dried grain. Without such a premium, the farmers have no incentive to produce good-quality grain.

Moving the threshers to where they are needed remains a problem. Without proper transport, only a few farmers will be able to benefit from using the equipment. A suitable vehicle must be available for each large piece of equipment provided by the project. Some of the unions use motorized tricycles to pull them around. But this is risky where the roads are bad.

Maintaining the equipment is also a challenge. They are difficult for unskilled users to maintain, and the project had to support training and several visits by the manufacturer to explain how to maintain them.

Case 11

Ghana Arzakinmu "Our Wealth" Programme

DRIVE ALONG the bumpy roads in northern Ghana after harvest time, and you will see mounds of maize cobs and sorghum heads in the fields. Some of the mounds stay there for days or even weeks before they can be threshed, put in bags and carried away to safety. Much of the grain is eaten or spoiled even before it gets to the storehouse. And some goes up in flames, burned by the bushfires that plague the region at this time of year.

The threshing itself is a problem: farmers dislodge the grain from the cobs or seed heads by beating it with sticks on the ground. That adds contamination by insects, soil and trash. A lot of grain is broken (which makes it easier for pests to bore their way in), or is scattered and lost.

The problems do not end when the grain finally arrives in the homestead. Many farmers do not have enough space to store their grain, so they leave it outside, where it can get wet, eaten by rats or chickens, or stolen.

Because they have no way to store the grain, the farmers have to sell it quickly. Many are organized in groups, but these are not strong, so the farmers have to sell individually in small volumes. With little bargaining power, they are forced to take whatever price the trader offers.

The Arzakinmu project

The AGRA-funded Arzakinmu project, implemented by Agribusiness Systems International (ASI) in collaboration with the Ghana Grains Council, has been tackling these issues head on. It is working in the three northern regions of Ghana (Northern, Upper East and Upper West), as well as the northern parts of the Volta region.

This is a multi-faceted project that aims to reduce postharvest losses, improve storage and bulking, increase farmers' access to finance and services, and improve their access to higher end markets. Here we will focus on two aspects: training on postharvest management, and the construction of warehouses.

Training on postharvest management

The original project concept was to train farmers on warehouse receipts – a system that allows farmers to deposit their grain in a warehouse and store it until they wish to sell. In the meantime they can get a receipt for the grain, which they can then use as collateral for a bank loan. That gives the farmers the money they need immediately, but lets them hold onto their grain until they feel they can get a good price.

Project title	Ghana Arzakinmu Programme
AGRA grantee	Agribusiness Systems International (ASI)
Duration	January 2010 – December 2012
Location	Ghana: Northern, Upper East and Upper West regions, and northern part of Volta Region
Commodities	Maize, sorghum
AGRA grant	$800,000
Contact	Hlupeki Phiri, hphiri@acdivocaghana.org, phirisavar@yahoo.com, www.acdivoca.org

But the project staff quickly realized that the grain did not conform to quality standards, so could not be used in such a system. The farmers would first have to improve their grain quality. The project consulted with the major stakeholders (buyers, traders and farmers' groups), and designed a training programme tailored to suit their needs.

The training covered a range of common faults and their effects on grain quality: late harvesting, leaving grain on the ground, threshing by beating with sticks (or using threshers with defective teeth), drying grain on dirty surfaces, and storing grain in damp and dirty conditions. The training showed how these practices harmed the grain quality, and how to avoid them. It also introduced the warehouse receipt system. Many of the farmers in northern Ghana have low levels of education, so the project used pictures and demonstrations to get the messages across.

The project wanted to train a lot of farmers quickly. The only way to do this was through a training-of-trainers approach. The project staff trained individual members of each farmers' group, "nucleus farmers" (who provide services to other farmers), and traders who aggregate grain from large numbers of farmers. These then trained other farmers in their groups or localities, or their suppliers.

It started off focusing on farmer groups in the Northern Region who supplied two large aggregators, the Gundaa Produce Company and Savanna Farmers Marketing Company. These aggregators identified the most organized and established groups for consideration. Fifty selected groups were then given the training.

In the Upper East and Upper West Regions, the project collaborated with the Ministry of Agriculture and USAID/Ghana Feed the Future project, an agricultural value chain development project working in the area. "Nucleus farmers" in these two regions are larger farmers who provide services such as ploughing, purchase of inputs and threshing to their neighbours, in return for a share of their yield. Community aggregators are residents who buy grain from other farmers, bulk it and sell it on. The project trained both the nucleus farmers and aggregators in warehouse management, the use of warehouse receipts and postharvest management. They then trained the farmer groups on postharvest handling and management.

In all, the project trained more than 12,000 smallholder farmers in over 200 groups. About one-third of the trainees were women.

Where to store the grain?

It is not enough to bring sacks of beautifully threshed, clean grain out of the field. Farmers also need somewhere to store it, out of the rain and damp, and safe from thieves with six, four or two legs.

The project originally aimed to rehabilitate and upgrade 25 warehouses throughout northern Ghana. But it discovered there were very few suitable buildings. So it had to build new ones. That was more expensive, so it reduced its target to 18 warehouses in all.

In each region, the project identified farmers' groups or businesspeople (chosen from the nucleus farmers or aggregators who had been trained) who would be able to manage such facilities. The farmers' groups had to provide land, labour and water for the construction: this was equivalent to about 5% of the total cost. The businesspeople had to provide sand as well, amounting to about 15% of the total cost. Each warehouse was equipped with scales, pallets and moisture meters.

The funds to build and equip these warehouses came from the AGRA grant ($100,000) and the USAID/Ghana Feed the Future project ($150,000).

Building a warehouse: beneficiaries have to contribute in the form of labour and materials.

Foreign visitors inspect a warehouse under construction.

How grain should be stored! Safe from pests and diseases, in neatly stacked sacks on pallets.

A completed warehouse is a convenient place for traders to buy in bulk.

Photos: Agribusiness Systems International

In all, the project completed 18 warehouses: six in the Northern Region (owned by farmers' organizations), four in the Upper East, and eight in the Upper West (owned by business people).

Clean grain, safely stored

As a result of the project, 20,000 farmers now have access to a warehouse where they can bulk and store their grain. In January 2013, the warehouses held a total of 1,560 tons of bulked grain: 600 tons in the Northern region, 240 tons in the Upper East, and 720 tons in the Upper West.

The farmers and community aggregators now have a better understanding of product quality and markets and the prices of commodities. They are better able to negotiate with buyers and large-scale aggregators. The community warehouses allow the farmer groups and the community aggregators to store their produce and have volumes that are commercially attractive for large-scale buyers.

The aggregators and farmer groups are linked to formal markets. When the warehouse receipt system is launched in Ghana, they will be ready to use it.

Lessons and challenges

Collaboration with strategic partners. Effective collaboration with strategic partners was key to achieving the objectives of the project. This collaboration meant that the project could take advantage of each partner's knowledge, good practices and contacts. The farmers benefited for the same reasons.

The collaboration worked well, though more could have been achieved if all partners had been equally enthusiastic to share information, especially on their plans to build and upgrade warehouses. One strategic partner was a large government development programme in the Northern Region, which had resources and plans for warehouses. Unfortunately only occasional meetings took place, and the expected close collaboration did not take off.

Beneficiary contributions. It was important to require beneficiaries to contribute to the cost of building and rehabilitating the warehouses. This cemented their participation and commitment to use and maintain the facilities.

Longer-term interventions. Many project-built silos and warehouses are scattered across the three northern regions of Ghana. But without the appropriate training and mentorship support for the farmers, many lie unused or derelict, while the farmers' situation has not improved. Smallholders need longer-term interventions to mentor and guide them so new practices become part and parcel of their farming activities. Short projects will not achieve this, so will not have the desired impact.

The project encountered various challenges in working with the farmers. Many people in northern Ghana are illiterate. That makes training and implementation harder. Many farmers are busy, so cannot attend training sessions. This is particularly a problem for women, who do most of the postharvest work. And poor roads (or lack of roads in some places) and bad weather made it difficult to reach some communities.

The training of trainers approach helped overcome some of these problems. When farmers train their own neighbours, they do not need to travel far. Such farmer trainers are more effective than outside trainers, and can offer training at the most suitable times for their colleagues.

The problem of reaching women is more complicated. Perhaps a project could require participating farmer groups to have a certain number of women attend training as a condition of collaboration.

7 Alternative uses

Chipping cassava using a manual chipper.

Photo: Farm Concern International

Case 12

Boosting cassava processing and marketing in East Africa

CASSAVA IS a traditional crop in Tangakona, a village in Busia district in western Kenya. But farmers there have been growing less and less of this crop: yields are low, and the traditional varieties take a long time to mature, so take up land that the farmers could use for other crops. Prices are low too: farmers can earn more from a kilogram of maize than from the same amount of cassava chips. Plus, cassava roots spoil quickly after they are harvested, so they have to be processed fast. As a result, many farmers in Tangakona switched to other crops, growing cassava only for their own use. Low production meant that few traders were interested in sourcing cassava from this area.

Farm Concern International helped cassava farmers in Tangakona to break out of this vicious circle. A multi-faceted problem requires a multi-faceted solution, covering production, processing and marketing.

Production

Farm Concern introduced high-yielding, disease-resistant cassava varieties from the Kenya Agricultural Research Institute. These are ready to harvest in only 9 months, freeing up the land for other crops. It has trained 15 farmers to multiply the cuttings needed for planting. And it has established sites where the surrounding farmers can bring their cassava, so reducing the cost of transporting the bulky roots.

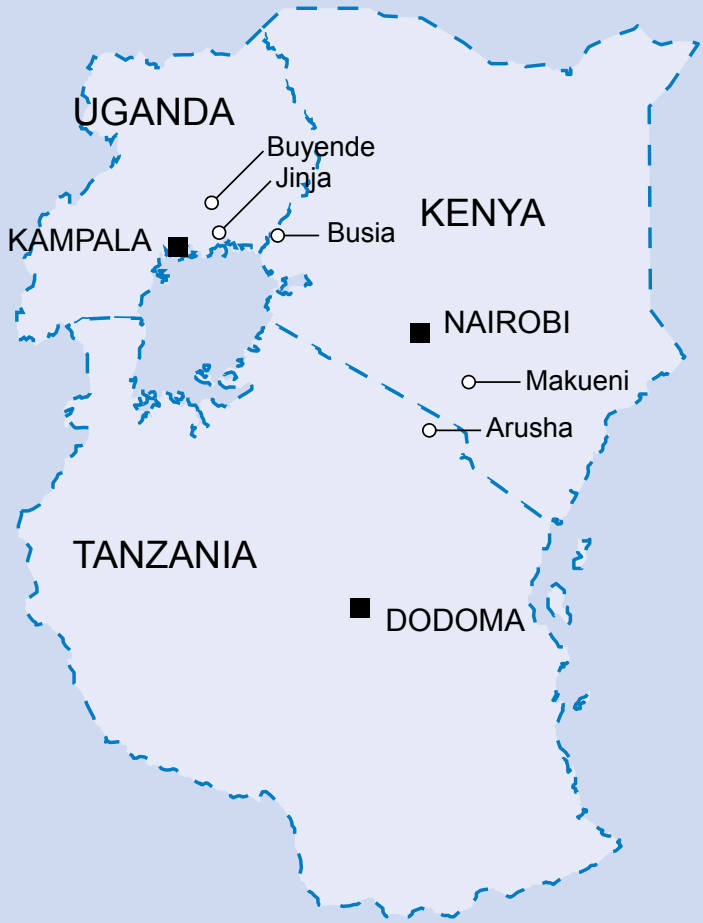
Processing

In collaboration with Muharata Foods, a local equipment manufacturer, Farm Concern designed and built two types of equipment to chip the cassava roots. The manual chipper can handle 2 tons a day; the motorized version can handle 10 tons. Farm Concern provided one of each type to the farmers in Tangakona.

Why cut cassava into chips? Because the chips can be dried, which stops the cassava from spoiling. The chips can be stored until they can be sold or processed further. But making the chips is laborious: the roots have to be washed, peeled and washed again before they are chopped into chips and dried on racks or tarpaulins. A mechanical chipper reduces the amount of drudgery involved.

The Tangakona farmers have a rotational schedule for using the chippers. That allows the farmers to plan when to harvest their cassava so it can be processed when it is still fresh. When it is each farmer's turn, he or she takes the chipper to the field, peels the cassava, and puts it through the chipper, before setting the chips out to dry. The farmer pays KSh 2 (about 2 US cents)

Project title	Cassava village processing project
AGRA grantee	Farm Concern International
Duration	February 2010 – January 2013
Location	Kenya: Busia and Makueni districts Uganda: Jinja and Buyende districts Tanzania: Arusha region
Commodities	Cassava
AGRA grant	$681,834
More information	Mumbi Kimathi, mumbi@farmconcern.org www.farmconcern.org



for each kilogram of dried chips made. This money is used to cover the equipment maintenance costs. Nevertheless, it is still rare for farmers to go one step further and buy equipment with their own money (or getting credit to do so).

Farm Concern trained the farmers how to operate the chippers, how to keep the cassava and equipment clean, and how to dry the chips so as to produce the best quality.

Cassava is traditionally a women's crop in Tangakona, so the chippers have increased women's labour productivity and at the same time reduced the amount of work they have to do. At the same time, machinery and income have attracted men into this enterprise, threatening to push women out of the business.

Marketing

Buyers of cassava chips like to buy in bulk, and they need a continuous supply. That means the farmers have to be organized to meet the demand. Farm Concern helped 196 farmers in Tangakona form production groups of 15–25 people. These in turn are federated to form the Tangakona Commercial Village, the body that bulks and markets the chips.

Farm Concern trained the farmers on the skills they would need for commercial cassava production and marketing. The training covered working as a group, good farming practices, cassava processing and product development, business skills and management, savings, investments and collective marketing. It arranged a series of forums to bring farmers and traders together to discuss things like moisture levels, the colour and size of chips, the frequency of sourcing, volumes, prices, and payment arrangements.

As a result, the traders place orders with the Tangakona Commercial Village, which then coordinates the harvesting and marketing schedule.

Working together to produce a quality product

Working together does not come naturally for many farmers: they are suspicious of each other and of outsiders, so find it difficult to coordinate production and marketing. Many still prefer to work on their own. Farm Concern invested in organizing groups and showing that by working together they can earn a better income. It promoted savings and internal lending within the producer groups so members can get low-cost loans.

The farmers saved nearly KSh 1.5 million ($17,000) over the 3-year project period. That enabled them to buy inputs such as certified seeds, fertilizers and farming implements at a discount. They bought clean planting materials from the village seed multipliers, and paid for land preparation, planting, harvesting and processing.

Improving quality was a challenge. Many farmers prefer to slice the cassava with knives, then to dry the chips on the bare ground. That results in low-quality, discoloured chips. Farm Concern tried to improve these practices by training farmers on processing and drying techniques.

By far the most cassava is still sold as fresh roots. The project focused mainly on adding value through chipping, but it also helped farmers improve the marketing of fresh roots. It trained them about harvesting the roots without damaging them, and storing the roots in a dry place, away from the sun. It also discussed grading and bagging of roots to improve the farmers' profits.

Selling cassava in Jinja, Uganda. Fresh cassava must be sold quickly after harvest, before the quality begins to decline.

Drying cassava chips on rocks: The traditional method.

Peeling cassava in Busia, Kenya.

Photos: Farm Concern

Cassava as animal feed?

Farm Concern originally wanted to promote cassava in the animal-feed industry. It wanted to build direct links between the farmers and feed producers. That did not work, for two reasons.

The first has to do with the reputation of cassava among livestock keepers. Raw cassava is poisonous: it contains cyanide. This breaks down into harmless substances when the cassava is cooked, and the water used when making cassava starch washes the cyanide out.

But the cyanide has given cassava a bad reputation, especially in the livestock industry. Suitably treated, cassava can be used as a feed ingredient without any problems, but livestock owners still do not want to buy feed if they think it contains cassava. Feed processors do not want to buy cassava directly: instead, they source their supplies through agents who buy cassava from farmers without disclosing the end-use.

The secrecy pervading this industry means that up till now, Farm Concern has been unable to get farmers and feed producers to talk to each other. Instead of selling in bulk directly to the feed processors, the farmers are forced to sell to the agents, who offer very low prices. Farm Concern has trained farmers how to reduce the harmful effects of cyanide through chipping, grating and milling. AGRA sponsored a study on these practices by the University of Nairobi, and shared the findings with buyers, but this study was done too late to guide the project's work.

The second reason has to do with the price of maize. The price of cassava is tied to the price of maize because both contain starch, so can to some extent be used as alternatives. When formulating animal feed, processors have a choice: they can mix cassava (which is almost pure starch) with soybeans (which contain protein). Or they can use maize (which has both starch and protein). What they use depends on the price: when the maize price is low, they tend to use more maize. That pushes down the price of cassava. The cassava farmers can make a profit only if they increase their yields. That is one reason Farm Concern is interested in helping farmers boost their production.

We can see this in the price of cassava chips: the highest prices (KSh 60, or 67 US cents per kilogram) are in the low maize season (March–June). Just after the maize harvest, cassava chip prices drop to only KSh 15 (17 cents) per kilogram. In general, dry cassava chips fetch 70% of the price of the equivalent amount of maize.

Fortunately, Farm Concern has been able to help the farmers find alternative markets for their cassava. Cassava has a number of other actual and potential uses, including as human food, and in beer making, pharmaceuticals and chemicals. Farm Concern has been helping the farmers' organizations explore these markets. The food industry offers better prices than feed processors, and the market for fresh roots has absorbed much of the production.

A revived industry

Cassava production in Tangakona is now recovering. Farmers have doubled the area of their cassava plots, from 0.2 to 0.4 ha. Many have bought or rented more land to grow the crop. Yields have risen from 17 tons to about 25 tons per hectare. Farmers have embraced the improved varieties: they have planted over 3 million cuttings. The farmers who multiply the cuttings have sold KSh 2 million ($23,000) worth of planting materials. They also use the groups to sell other products, such as sweet-potato roots and vines.

The equipment has reduced postharvest losses, boosted labour productivity, and improved product quality. Four food-processing companies now buy cassava chips from Tangakona to turn

into cassava flour. Industrial buyers such as Kirinyaga Millers, Azuri Health and Kimwa Foods also buy chips. Local millers also grind the chips into flour. Many new jobs for young people have been created, especially for harvesting, transporting and chipping.

The community has built long-term business relationships with industrial food-processing companies, intermediaries who buy on behalf of animal-feed companies, fresh cassava root markets, and informal buyers. By bulking and marketing their produce, the farmers have supplied 24,000 tons of dry cassava chips to various buyers.

A network of commercial villages

Tangakona is not an isolated case. It is one of 214 such "commercial villages" supported by Farm Concern's Cassava Village Processing Project. These villages are clustered in five areas: Busia and Makueni districts in Kenya, Jinja and Buyende districts in Uganda, and the Arusha region of Tanzania. The project ran a series of exchange forums so farmers in different villages could learn from each other and share their experiences. The project also used videos and printed materials during training and other events.

This project engaged over 54,000 smallholder households in commercial cassava production. It worked with 53 informal and five formal or industrial traders across the three countries. It facilitated 25 village business forums to discuss quality, quantity, price, supply schedules, bulking and modes of payment. The project worked with a range of partners, including national ministries of agriculture, research institutes, food and animal-feed industries, machinery manufacturers, traders, banks, input dealers and local community organizations.

The commercial villages traded $27 million worth of cassava, mainly during the project's final year, which focused on commercialization. The vast majority of this ($26 million worth) was for fresh roots. The rest included $700,000 worth of chips sold to industrial buyers, $40,000 for cuttings, and $4,000 for value-added products.

Some 25 million cassava cuttings were planted, increasing the area under the crop to around 26,000 hectares. The production per unit area increased from 12 to 22 tons per hectare. There were 53 savings schemes; they had saved a total of $45,000.

Lessons and challenges

The food industry and the fresh market offer better prices for cassava than the animal feed industry. Developing these markets shows most promise for boosting farmer's incomes and improving food security.

But processing cassava is either very labour-intensive, or requires expensive machinery that individual smallholders cannot afford. It makes sense for farmers' groups to invest collectively in this equipment. The project hoped that by supplying processing equipment to certain villages, other farmers would see it and start to buy their own. This has happened in a few cases because of the costs involved. Kitise Commercial Village, for example, used its group savings to buy a chipper for use by the entire group. For this to occur more widely, capable leadership and well-defined roles within farmer groups are required.

The informal trade for fresh and processed cassava dominates cassava marketing in East Africa. Individual traders buy relatively small volumes on a regular basis. They sell on to urban markets such as Nairobi and Mombasa, or to processors in these cities.

Strategic partnerships between development organizations and the private sector can stimulate the cassava market. This enables market-led production, where farmers produce in response to demand and use appropriate technologies to add value and maintain quality. In addition, village-based multipliers of cuttings seem to be sustainable for cassava production.

Poor nutrition is a risk for cassava-producing villages, since cassava contains nothing but starch. Other crops are needed to supply proteins, vitamins and minerals.

Case 13

Adding value to cassava in Malawi

Elemasi Masimbe's company, the Masimbe Cassava Starch Factory, delivered five tons of starch to a packaging firm in Blantyre. But the consignment was rejected: the quality was not good enough to make glue for the firm's corrugated cartons. The firm said that the starch contained too much iron. That affected its binding properties – making it useless as a binding agent.

If Elemasi could not sell starch, he would not be able to buy raw materials. His suppliers – 1,200 small-scale farmers around his factory near Lilongwe – would lose their market for cassava roots.

A development project had helped Elemasi start his factory. It had provided him with the equipment he needed: a grater, a mixer, sedimentation tanks and a hammer mill, along with some initial working capital. The idea was to create a demand for cassava and thereby benefit the area's tobacco farmers, who needed an alternative crop. The project helped Elemasi get the equipment set up – but it had phased out before all the teething problems had been solved.

That was where the AGRA-funded Trustees of Agricultural Promotion Programme (TAPP), a Malawian NGO, stepped in. TAPP realized that if the quality problem could be solved, Elemasi could again start buying and processing cassava.

Finding the source of the iron

But where did the iron in the starch come from? Finding the cause of the starch quality problems took time, especially as different experts pointed to different possible causes and solutions. At first, experts suspected the groundwater that the factory used: a lot of water is needed in processing cassava to clean the roots and remove the cyanide that they naturally contain. TAPP had the groundwater tested, and found that this was not the problem.

Further inspection showed that the processing machinery was at fault. It was made of cheap steel, which rusted, contaminating the starch. Painting the machinery did not work, so the key components such as blades and graters had to be replaced with more expensive stainless steel. Using a local fabricator rather than ordering from abroad reduced the cost and time to do this.

TAPP also arranged for the packaging company to train Elemasi and his staff in starch production. The Malawi Bureau of Standards trained them on how to maintain quality. It has also taken Elemasi to agricultural shows and arranged meetings with potential buyers so he can get in contact and understand their requirements. He has sent them starch samples so they can see the sort of quality that his factory now produces.

Project title	Commercialization cassava value chain through alternative uses in Malawi
AGRA grantee	Trustees of Agricultural Promotion Programme (TAPP)
Duration	June 2011 – May 2014
Location	Malawi: Central and Northern Regions (Lilongwe, Dedza, Dowa, Salima, Nkhotakota and Nkhata Bay districts)
Commodity	Cassava
AGRA grant	$699,000
Contact	Winfred Chanza, TAPP, chanzawinfred@gmail.com, www.tappmalawi.org

Better quality, more customers

Before TAPP started working, Elemasi was producing only 150 kg of starch a month. He sold this to a sausage-maker in Lilongwe, who mixed it with corn starch imported from South Africa. When the sausage maker saw the improvements in Elemasi's starch, he stopped using the imports. He now buys 500 kg a month from Elemasi.

TAPP has helped Elemasi identify another buyer in Blantyre, who is now buying 500 kg of starch per month. This buyer used to import potato starch from the Netherlands, but he is now using the locally available cassava starch. He says it is of superior quality and easier to buy – he does not have to go through the hassle of importing from abroad.

Since the laboratory experiments have shown that Elemasi's starch is within the national quality limits, a big buyer has bought 1,000 kg for a test run.

Reviving Malawi's cassava industry

Elemasi and other cassava starch processors in Malawi now have a golden opportunity to adhere to quality standards and take advantage of the reliable local market.

TAPP is helping five other cassava processors like Elemasi to revive their businesses. It is helping them develop their business plans, get bank loans, solve equipment problems, and improve their marketing. Together, these processors buy cassava from more than 14,000 farmers in central Malawi.

Collective marketing

TAPP has trained over 7,600 farmers in postharvest handling and marketing of cassava. Because farmers sell cassava in bulk, they can negotiate a better price from buyers such as Elemasi. In one deal (between August to November 2012), Elemasi's company bought 63 tons of fresh cassava from a group of 28 farmers. The agreement covered amounts, delivery times, quality, time from harvest to delivery (important to maintain freshness), and mode of payment.

As demand from processors has risen, more farmers want to get together to sell cassava. The benefits have cascaded to other farmers. Some processors grow their own cassava. Now they are buying from other farmers, keeping their own crop in the ground for harvest, and processing when supplies from elsewhere are short.

Alternative uses

Apart from producing cassava starch for industrial use, Elemasi's company also produces cassava flour for food and briquettes for heating. It also multiplies cassava cuttings for sale as planting materials. TAPP is also working with Elemasi in the production and marketing of dried cassava leaves for human consumption

TAPP is exploring other uses of cassava. For example, it is working with broiler chicken growers to test feed that contains cassava as a partial substitute for maize. And it has distributed cassava cuttings to dairy farmers with the view to making cassava silage for use as a dairy feed supplement.

Facilitating the cassava chain

TAPP is also working at other points in the cassava value chain.

TAPP's cassava project has gained high-level recognition. Here, project manager Winfred Chanza explains about cassava products to Nigerian president Goodluck Jonathan (second from right) and Malawian president Joyce Banda (right).

Elemasi Masimbe with his newly built solar dryer.

Delivering cassava starch to a customer.

Photos: Trustees of Agricultural Promotion Programme

Multiplying planting materials. Cassava is grown from cuttings, not seeds. But cuttings of high-yielding varieties are scarce, and many farmers cannot get enough to plant. TAPP has established 176 centres to multiply cuttings to supply neighbouring farmers with planting materials. These supply over 8,000 farmers with improved varieties.

Cassava comes in two main types: sweet and bitter. The sweet varieties can be eaten raw, but they have low yields. TAPP promotes the bitter varieties, which have to be processed before they can be consumed. It prefers them for two reasons: the bitter varieties yield more, and they are not as important for household food security; so there is no competition for their use.

Training in production methods. TAPP has trained over 14,000 farmers on improved production practices and pest and disease management. It has run nearly 800 demonstration plots to show farmers how to use fertilizer, manure and legumes to maintain soil fertility. It is teaching children in eight primary schools about cassava growing.

Logistical and marketing support. For some producers and buyers, TAPP acts as a logistics centre: the processors deliver the starch to TAPP's warehouse, and the buyers then pick it up. It also creates linkages between farmers, processors and buyers; helps arrange verbal contracts; and issues pro-forma invoices to facilitate trade.

Lessons and challenges

AGRA chooses to work with crops that are of national importance. This is certainly the case for cassava in Malawi: in its economic recovery plan, the government has named cassava as a strategic crop for smallholders. Promoting cassava starch is important to Malawi's economy because it reduces the need to import starch, thus saving foreign exchange. AGRA's and TAPP's efforts are also in tune with the government's emphasis on adding value to agricultural produce.

It is important to work closely with all relevant stakeholders to address problems that affect farmers. Rather than producing a product and then looking for a buyer, it is better to identify the market first. That makes it possible to tailor a product to suit it. The challenge is now to maintain links between producers and buyers, in which both parties keep each other informed on the quality and volumes they expect and need. TAPP is facilitating the links between starch producers and buyers. It is important to build strong links between them to avoid creating a vacuum after the project phases out.

Careful scientific analysis – not speculation – is vital to identify the critical control points in production. Once the source of the problem is identified, the solution follows easily. However, quality requirements and standards change and evolve all the time and require new equipment (investments) in the future. The entrepreneur has to plan for this, as he or she cannot rely on project help.

Most of the cassava which was being delivered to the processors was old roots. Ideally, cassava should be processed when 18 to 24 months old; after this, the roots get more fibrous and the starch content declines. TAPP found that this makes old roots unsuitable for the dried cassava market. But such roots can still be used for livestock feed. TAPP now advises farmers to sell their old cassava as feed, and to plant fresh cassava for processing into starch. So TAPP is continuous in its quest for alternative uses of cassava.

8
Analysis

Farmers peeling and chipping cassava in Mbuguni Commercial Village Tanzania.

Photo: Farm Concern International

In this chapter we explore the different thematic areas listed in the introduction to this book, which are part and parcel of AGRA's theory of change.

For each of the strategic areas, we look into the reasons the grantees (and AGRA) think it is important to work on; the diversity of approaches used in implementing projects; and what – according to the grantees – should and could be done differently so as to improve these approaches and the potential impact of the projects.

Theme 1

Farmers' organizations

Why is this area of work important?

Being organized in groups is important for smallholder farmers for three main reasons:

- **It enables outsiders to engage with them in a cost-efficient manner.** It is very costly for a trader, credit officer or development organization to serve individual farmers separately. It is time-consuming to go to each house or farm to meet with each person individually. In a group, this is a lot more efficient. The group can take on a lot of the organizational tasks, manage contributions, motivate people, facilitate information exchange, etc. If the group does this, the outsider can reach more farmers, more cheaply. Such arrangements make it possible for buyers to buy in bulk, credit providers to channel loans through the group, and development organizations to offer training.
- **It enables the farmers to achieve economies of scale.** Being part of a group gives the farmers advantages too. With enough hands, they can build a warehouse or dam a stream. Individuals can each contribute their own skills to the common good. A group can generate the volume of demand needed to buy inputs in bulk. Together, they have enough output to fill a lorry, and can keep up a regular supply of produce to the market. That gives them a stronger bargaining position, which can lead to better prices. They can become players in the market, rather than merely having to accept the prices they are offered. Groups can also be a conduit for the farmers to express their concerns collectively to policymakers.
- **It enables information sharing among farmers.** A group makes it easier for farmers to share information with, and learn from, other members. It serves as a platform of information sharing and peer learning as farmers come together for meetings and work closely together. It makes it possible for farmers who have been trained by outsiders to pass on

Groups offer many benefits apart from lower costs and higher income. They also enable joint planning, information sharing and learning.

Photo: Farmers Union of Malawi

their new knowledge to other members. This is effective because farmers speak the same language and are likely to understand each other better than an outsider. The group also facilitates formal information transfer through demonstrations and field days.

Farmers' organizations may be formal or informal. All the projects in this book have worked with organizations of one type or another: associations, cooperatives and unions. Being organized formally gives a group recognition as a legal entity, making it easier to engage with other value-chain actors and supporters such as processing companies and banks. But it does make a number of things more complicated. The members have to agree on systems and procedures to manage the organization, and the leaders must acquire the necessary skills. Often, these leaders are the better-off and more educated farmers, which may lead to suspicion by and isolation from the members. Poor governance and leadership are common problems. Improving them is a focus of many of the projects in this book.

What do we do about it?

With one exception (Case 13 in Malawi), all the projects described in this book work to strengthen farmer organizations. They have done so in several ways.

Training and coaching on joint selling, bulking and postharvest handling

In Mozambique, **MICAIA** (Case 2) organizes farmers into clubs and helps them to market soybean and maize collectively. Because the clubs are small and the members know each other, monitoring and control of activities is easy. In Ghana, **IFDC** (Case 6) provided equipment to farmers' organizations and trained them how to maintain it. In Kenya, **CGA** (Case 4) taught the farmers about record keeping and grain handling. Even the two projects which did not consider themselves as working with farmer organizations (Case 11 in Ghana and Case 13 in Malawi) did work on training farmers for joint selling and bulking.

Organizational strengthening

The projects have tried to improve the financial management of farmers' organizations, enhance their leadership and governance, help them develop business plans, and facilitate communication between the leadership and the members.

The **Farmers Union of Malawi** (Case 1), for example, found that poor communication between the national leadership and the primary associations was a big problem. Members played little part in the national association's decision making. To deal with these issues, the Union coached the associations on how to organize their meetings, took farmers on exchange visits to see how other associations work, and offered training on management and leadership.

In Mozambique, **MICAIA** (Case 2) also identified weaknesses in group governance. Though it offered training on management skills and governance, MICAIA concluded that these were not enough to change how the associations were operating, or how they were perceived by other farmers. What was fundamental was a series of discussions with the associations' leadership and its members.

In the case of **CGA** in Kenya (Case 4), the support shown by governmental officials for the association was an important factor to overcome farmers' suspicions. However, such demonstrations of support are unlikely to work everywhere.

Elsewhere in Mozambique, **ADEM** (Case 9) faced similar issues. ADEM's approach was to train both leaders and members in organizational management, and to demand that organizations they work with share information and records transparently with their members. Farmers often look back on a history of corruption and misuse of resources in their associations – which makes them rightly suspicious. The same was noted in all three cases from Kenya (Case 3, Case 4, Case 12). In Rwanda, however, cooperatives are better regarded, and **RDO** has made organizational strengthening the focus of its work (Case 7).

Linking with buyers

IFDC in Ghana (Case 6), **TechnoServe** (Case 3) and **CGA** (Case 4) in Kenya and **ADEM** in Mozambique (Case 9) have supported farmer organizations to get in contact and make deals with buyers. They have organized meetings between buyers and farmers' organizations, training on negotiation skills, and partnership building. The World Food Programme was an important buyer in a number of cases in this book (see Chapter 9), often coming in contact with the farmer organization in question through the AGRA grantee.

Facilitating access to credit

A number of grantees also supported farmer organizations to access credit, and to manage the credit once they had obtained it. This is the case of **FEPA/B** in Burkina Faso (Case 10), **TechnoServe** in Kenya (Case 3), and **ADEM** in Mozambique (Case 9). In Rwanda, **RDO** (Case 7) offered farmers' organizations training and support in accessing credit, as well as helping them to write business plans they could use to get loans to develop entrepreneurial activities.

Farm Concern in Kenya took a different approach, promoting savings and internal lending within the producer groups so members could get low-cost loans (Case 12).

All projects report excellent loan-repayment rates, and big benefits from the credit. Among other things, the loans were used for production (buying inputs, seeds), buying postharvest equipment, and modernizing warehouses. They were also used to pay farmers up-front for their produce, making it attractive for them to bring their output to a collection centre, where it can be sold in bulk.

Whatever the approach, it is clear that the way to support a farmer organization depends on the organization's history, context, capacities, membership and its role in developing collective bulking and marketing systems. The approach must be customized, as one size does not fit all.

Role of farmers' organizations in collective bulking and marketing

The roles of farmers' organizations differ according to the strategies for developing collective bulking and marketing systems. In one such strategy, the farmers' organizations take a leading role. They can do this either by organizing themselves at local and regional level to supply quality products in the required volumes (Case 4 and Case 12 in Kenya, Tanzania and Uganda; Case 1 in Malawi; Case 2 in Mozambique) or by creating structures (centres, companies) which are governed or managed by farmers (Case 3 in Kenya, Case 5 in Tanzania, Case 8 in Uganda). They often have to find buyers for their products themselves.

In a second strategy, private enterprises take the lead. In this scenario, farmers' organizations can concentrate on organizing themselves to respond to the requirements communicated by the buyers (Case 9 in Mozambique and Case 6 in Ghana) – and leave the further processing and

large-scale trading to private entities. These private companies secure the supplies they need, and are better positioned to pre-finance purchases of produce at the farmer level and to provide other support services to farmers (bags, training, etc.).

What should we be doing differently?

Payment for services

A lot of NGO activities such as training and market linkages are funded by donors; the NGOs provide them for free to farmers. But such subsidies distort reality and hide the value and cost of the services. Ultimately, they diminish the chances of replication and continuity. To ensure sustainability of project's achievements, farmers need to be ready to contribute financially both to services and maintenance of structure and equipment.

Many NGOs try to strengthen farmers' organizational management in general, and particularly their financial management. This is often motivated by the need to ensure the farmers handle the donor funds properly. But it may be more important (and more sustainable) to strengthen their capacity to mobilize and correctly manage funds themselves. They can raise the money through membership fees or by charging a fee on the products they sell. In the long term, the market is a potentially sustainable source of income for farmers' organizations. It is, nevertheless, a challenging one since markets are always changing.

Ensuring that farmers' organizations continue to receive services after the end of a project is a major concern. They should be able to identify the services they need, find suitable providers, and pay for their services. In the same way, when farmer organizations reach a certain level of maturity, they may be able to hire professional managers. To do this, they have to have a transparent and solid governance system.

Farmer trainers

Many of the projects described in this book have trained farmers to provide training to their peers. But most of these trainees envision themselves as project employees, rather than as serving (and being responsible to) their community. While they pride themselves in their work, the training they give may not actually accomplish the aims envisaged. Follow-up of the work done by trained farmers, and on-the-job coaching by grantees and other local partners, are important to ensure farmers remain committed to train and support other farmers.

How should such farmer-trainers be paid? Different NGOs in a particular area use different approaches in their training and remuneration. This is confusing for all concerned. It is important to harmonize approaches with other organizations working in the area.

New groups or old?

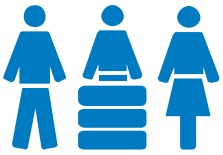
NGOs should consider whether to work with new groups or existing groups within their projects. Existing groups appear to be the better choice: the farmers are already familiar with the group, and it is not necessary to expend time and effort to create a new one. Many farmers are already members of a group.

Understanding the historical context of the existing farmer organizations is very important. In some countries, farmer organizations are highly politicized. In Kenya, the word "cooperative"

reminds farmers of bad experiences. Yet, in Rwanda, farmers are expected to be organized in co-operatives. Those who aim to support farmer organizations need to understand such differences and their implications.

At times, project planning documents – and not the level of maturity of the farmer organization or other on-the-ground reality – determine the timing of activities. For example, a project document may indicate that a certain farmer organization needs to be formalized by the second quarter of the year. The project implementers sometimes press the organization to do so even if it is not ready for such a step. The timing of training, the formal registration of an organization and other project activities should instead be led by and based on reality on the ground.

Theme 2



Bulking and collective marketing

Why is it important?

Small-scale farmers produce small volumes of output, so do not attract the large buyers who might be willing to pay higher prices. Small traders go from farmer to farmer and from village to village to buy produce. They bulk the produce and sell it to bigger buyers – a service for which they take a share of the market price. Big buyers, on the other hand, do not buy small quantities from individual producers.

When farmers get organized and bring their produce together, they can attract buyers who are interested in larger volumes, and they have a better bargaining position while negotiating prices. They can reduce their marketing costs and enhance the product quality (by cleaning, drying and bagging it). Collective marketing enables them to increase their profit margins.

The higher prices offered to farmers who sell collectively influence the price offered by other traders: they enhance competition among traders, and farmers in general benefit from better prices.

Marketing collectively encourages buyers and sellers to make formal agreements, and it forces the group to keep records of volumes and transactions. That in turn opens up new opportunities: with a secure market and good financial records, the group can qualify for credit. Their professional organization and coordination attracts other investors and buyers, helping the farmer organization develop its business further.

Bulking also means in practice that farmers come together, which is an opportunity to share information and exchange experiences among themselves and with extension services.

What are we doing about it?

The **Farmers Union of Malawi** (Case 1) started by informing and training existing farmers' organizations on bulking practices, including the management of bulking centres, the quality control of produce, and price negotiations with buyers. Local farmers' associations identified suitable buildings and had them rehabilitated as bulking and storage centres.

In Tanzania, **RUDI** (Case 5) supported savings and credit cooperatives to set up a separate marketing company and a warehouse management business to allow farmers to sell their produce together and process it efficiently.

In Kenya, the **Cereals Growers Association** (Case 4) also trained the farmers' organizations about bulking practices. It then helped one of the organizations to rent empty shops to use as stores. After two seasons of successful collective selling, the organization decided to build its own warehouse, and paid for it partly with levies on the sale of bulked products.

In Ghana, **Agribusiness Systems International** helped build new warehouses if no suitable buildings existed (Case 11). The organization identified local farmer groups as well as businessmen (local traders and big farmers) to manage the warehouses.

Delivering grain to the market, Ntchisi, Malawi.

Storage in a warehouse in Ntchisi, Malawi. Photos: Farmers Union of Malawi

Ownership of facilities

In all the cases described, bulking and collective marketing go together. Both often require existing facilities to be rehabilitated and new warehouses to be built. While the grants fully supported the building costs in the Malawi case, the warehouses in Kenya were completed by farmers' contributions and other grants on condition that others in the community could use the facilities. In Ghana, the future managers of the new warehouses contributed to the costs by in-kind contributions. These contributions ensured that the managers felt they owned and were responsible for the facilities.

Whoever pays for the rehabilitation or construction, capable managers have to be recruited and trained to manage the facilities. To do this, the AGRA grantees have used various funding and management arrangements involving donors, farmers and businesspeople.

The first option is to confer ownership on the **farmers' group**. The idea is that the group will use the asset for the benefit of all its members. Any member can use a thresher or store grain in a warehouse, and the organization charges a fee for this service. If non-members wish to use the asset, they have to pay a slightly higher fee. The asset is managed by a committee, who are trained in the necessary operation, maintenance and administration skills.

A different approach is to consider the warehouses as **service centres** which the cooperative needs to run as sustainable businesses. One example is the banana marketing centres that **TechnoServe** has helped set up in Kenya (Case 3). These centres are managed by cooperatives; their strategic plans envisage them as sustaining themselves from the income they generate. These plans have enabled the cooperatives to attract bank loans for upgrading the centres (meeting rooms and cleaning, drying and processing equipment).

Another example is the trading companies in Tanzania established with support from **RUDI** (Case 5). These originated as an offshoot of savings and credit societies, and provide storage, cleaning, marketing and training services to farmers. They are managed as businesses with their own board and management.

A third model is to select **individuals** with the right skills and qualifications, and confer ownership of the facilities on them. The work of ADEM (Case 9) and ASI (Case 11) are examples of this. Certain conditions may be imposed on these persons: they must use their assets to serve the local smallholders, and they may not sell them. They charge farmers a fee for using the asset, and can reinvest the proceeds in maintenance and new equipment.

Each of these approaches has advantages and disadvantages. If the group owns the asset, it can make sure that all members benefit. But the committee may not have the skills or incentive to manage the asset efficiently.

Individual ownership and working with service centres both avoid this risk: the owners have more incentive to keep the asset fully used and maintained. But how to ensure that the asset is used to benefit smallholders as intended, and not used to serve the larger farmers who are most able to pay for it? One way to handle this is to provide incentives for the individual owner to serve the smallholders – by subsidizing the price paid by these smaller farmers at an earlier stage, for example, or by using a voucher system. Farmers can pay the service provider with vouchers, and the providers later exchange the vouchers for money.

Links with buyers

Collective marketing relies on finding a suitable buyer and matching the timing, amount and quality with the buyer's needs. Potential buyers include large-scale traders, processors and organizations such as the World Food Programme, prisons and schools. Many of the AGRA grantees arranged meetings between the farmers and potential buyers to establish contact, learn about the buyer's requirements, negotiate deals and arrange pick-up and transport. In Ghana and Malawi, the grantee organization helped to link farmers with private trading and processing companies.

Fulfilling the buyers' requirements begins long before the farmers deliver the produce to the warehouse. It starts with using quality seed, sowing appropriate varieties, and using the right cultivation methods. Farmers need to be trained in these techniques. And once the produce is in the warehouse, quality control, cleaning, drying and bagging are needed. Warehouses have to have the necessary equipment, including scales and bagging gear. The AGRA grantees therefore provided cleaning, drying and bagging equipment to farmers, and trained the farmers how to use it.

Training

Bulking is a first step for smallholder farmers who sell their surplus staple foods, to get a better position in the value chain. To sell to big buyers and get the higher prices on offer, they must comply with the buyers' requirements. For many farmers, this is a feasible step – albeit not an easy one.

Farmers who grow export commodities such as coffee and cotton have a tradition of bulking. Many of the projects in this book are trying to help growers of staple crops to do the same thing. Training and coaching help the farmers to link with private companies, diversify their market outlets, and understand how markets work and prices are set. The skills they learn will have an effect on their production and marketing of other crops and livestock products too. Examples of grantees that trained farmers on bulking and collective marketing are **MICAIA** and **ADEM** in Mozambique (Case 2 and Case 9), **RDO** in Rwanda (Case 7) and **CGA** in Kenya (Case 4).

Payments

A major obstacle to collective marketing is smallholders' need for cash quickly when they sell their harvest. They cannot afford to deliver their grain to a warehouse and then wait for several weeks or months before they get paid. A solution is to arrange credit for the farmers' organization so it can pay its members when they deliver produce. Without this, the farmers are likely to side-sell to traders who pay immediately (as in the **RUDI** case in Tanzania, Case 5), or to someone who offers a higher price (as **CGA** found in Trans-Nzoia in Kenya, Case 4). See also Theme 4 on the *Enabling environment* for more on this.

The AGRA grantees developed various arrangements for such credit. The most common was to link the farmers' organizations with banks or other financial institutions so they could get marketing loans. The financial institutions require a guarantee that the loans will be repaid: either an assurance that there is a buyer for the produce offered (as in **MICAIA** in Mozambique, Case 2) or a bankable business plan (arranged by **RDO** in Rwanda, Case 7).

Another arrangement was for the buyer, usually a bigger company, to pre-finance the payment to members on delivery of the product. In the **ADEM** case Mozambique, the international trading companies pre-financed the marketing operations and provided bags in order to facilitate buying from the farmers' groups (Case 9).

However the payment is made, transparency is essential to maintain the farmers' trust and to engage them in collective marketing. Hence the importance of record keeping, weighing, and delivery receipts. Using money-transfer systems such as the M-Pesa mobile-phone-based system (**TechnoServe** in Kenya, Case 3) and opening individual bank accounts (**RDO** in Rwanda, Case 7) acquaints farmers with banks and the financial services they offer.

What should we be doing differently?

Costs of bulking and collective marketing

Proponents of bulking by farmers tend to concentrate on the benefits that it brings: higher prices. They tend to disregard the added costs that it entails. Many of the costs of warehouses and equipment are borne by grants from donors – or governments, which is a defensible practice because such items are one-time outlays that are necessary to kick-start a value chain.

But even if these costs are covered, bulking is not cost-free for farmers. They have to make sure that their grain is dry and clean enough to be accepted by the warehouse. That means more careful and perhaps more expensive processing (hiring a thresher, for example, rather than beating it with sticks). They then have to transport the grain to the collection point, and have it weighed and tested. If the grain is too damp or dirty, the warehouse will reject it, or will charge a fee for processing. The farmers may then have to wait several weeks before they get paid. They must trust the warehouse manager to look after their grain – which for most is their main, or only, source of income. They must also trust the warehouse to negotiate a good selling price, and not to charge too much for its services. That is a lot of trouble, and involves a fair number of risks.

Compare that with the alternative. The farmer could sell to an informal trader (who may be a neighbour or relative), who picks up the produce at the doorstep, is not too fussy about quality, and pays cash immediately.

So bulking and marketing as a group are worth it only if they fetch significantly more than selling to an informal trader. That is the case for some buyers (like the World Food Programme), but not for all. Others do not offer a higher price for high-quality, clean, bulk produce. In such a situation, farmers will actually lose money if they go to the trouble of bulking. They would be better off selling the traditional way.

To overcome this barrier, buyers have to be convinced that by purchasing in bulk from a farmers' organization, they will obtain a product that is worth more and cost less to handle than buying through alternative channels. Only then will they offer a higher price for it. That implies the need to educate and build trust among buyers as well as among farmers' organizations. Several of the projects described in this book indeed have done this.

It may be possible to stimulate traders and processing companies to provide bulking services to farmers, embedded in the price of their transactions. Traders already buy from farmers and are usually well-informed about business opportunities. They often deal with informal, unregistered, farmers' groups. By building their relationships with traders, these farmer groups can formalize their businesses and resolve some of the barriers to market access.

Price fluctuations create a lot of uncertainty in the market for staple foods. It makes it hard for collective marketing organizations to set a price at which they will buy produce from farmers. And both farmers and buyers may fail to honour contracts if the market price rises or falls. Contracts should be flexible by setting minimum prices; these can be adjusted depending on the market movements at the time of delivery. Such arrangements require reliable market information and clear pricing criteria which are accessible to and accepted by all contracting parties. An alternative could be for traders to pay a part of the price upfront to farmers and the rest later, when the precise price for the produce is worked out.

The AGRA grantees say that both volumes traded and the prices paid to farmers have increased. But it remains unclear whether enough profit was made to justify the expenditure on infrastructure and equipment. The managers of collective-marketing systems need to develop the skills needed to analyse the costs and benefits of their operations and improve their sustainability.

Such cost-benefit analyses would help the farmers' organizations decide what prices they should aim to charge and how much they should set aside to cover their expenses and investment costs. They would also indicate how they can reduce costs related to production, transport, storage and handling.

Marketing strategies

Farmers can make profits on staple crops either by selling large volumes at competitive prices, or by selling low volumes of improved quality at higher prices. The first strategy is doable for smallholder farmers who are relative beginners in collective marketing. The second strategy requires considerable investments in equipment and skill development. Initially at least, the farmers should thus aim to supply big volumes to the warehouses. This implies they need to increase their production and productivity as well as diversify their list of potential buyers. It means that options for marketing strategies need to be discussed with farmers in order to define the first steps that need to be taken.

Financing purchases

As mentioned above, most smallholder farmers are reluctant to deliver stocks to the central warehouse without being paid cash on delivery. The offer of immediate payment is a strong incentive for farmers to market collectively. To be able to make such a commitment, farmers' organizations need to arrange marketing credits from banks or buyers. Savings and credit cooperatives could be strengthened so they can offer credit to the marketing organizations. Value chain financing arrangements such as inventory credit and warehouse receipt systems should also be explored.

Through a warehouse receipt system, farmers (or more likely, a farmers' association or aggregator) can get a receipt for grain deposited in the warehouse. They can then use this receipt as collateral for a bank loan. That gives them the cash they need immediately, but means they do not have to sell the grain until they think they can get a good price.

One of the organizations described in our cases has launched such a scheme: the Kapchorwa Commercial Farmers Association in Uganda (Case 8), with **UDET** support. Two other cases aimed to introduce farmers to a warehouse receipt system. In Ghana, **ASI**'s Arzakinmu project (Case 11) aimed to do this, but quickly discovered that the farmers' grain did not conform to the required standards, so it had to switch focus to improving grain quality through better postharvest management. **RDO**'s project in Rwanda (Case 7) has introduced an inventory credit system as a precursor to warehouse receipts. Under inventory credit (known as "warrantage" in French-speaking countries), the organization keeps the grain in its own warehouse, then approaches a bank for a loan using the grain as collateral. This is riskier for the bank than a true warehouse receipt system, where the grain is stored in an independently run warehouse.

Warehouse receipt systems are fairly new to Africa, but successful examples do exist (e.g., in Kenya). However, they rely on a suitable legal and banking framework, strong farmers' organizations, good postharvest handling, suitably equipped warehouses, and skilled management. These preconditions are often lacking.

Theme 3

Market information systems

Why is this area of work important?

As in any other business, traders, farmers and their organizations need adequate, timely information about the supply and demand of agricultural products and the current market price. They need this information to negotiate a trade that benefits all concerned. Market information systems are the mechanisms through which traders and farmers connect and share information. The main mechanisms are the mobile phone, internet, radio and magazines.

Market information systems are particularly useful for smallholders who want to sell their surplus crops on markets that are not well structured. Up-to-date information helps them decide on a price and negotiate a deal. They can look at trends in prices and demand to plan the next season's production.

What do we do about it?

Electronic information systems

IFDC's mFarms platform in Ghana is an example of an internet- and mobile-based market information system (Case 6). The system provides information on the location of warehouses, farmers' production, farmers' associations that want to sell, buyers and their agents, agricultural dealers, etc.

A lot of information is needed to start up such a system. This can be collected by the future users of the system (farmers, associations or traders), or by an outside facilitator (for mFarms this was done by IFDC itself). Considerable time and resources are needed to ensure the information is reliable before it goes into the system. To do this, IFDC collaborated with other organizations such as **ASI**, another AGRA grantee (Case 11). The farmers and traders do not have to submit information, but buyers' agents have supported the process by communicating data to IFDC.

The mFarms system is very new: it was fully functional only at the end of 2012, so it is difficult to judge its performance. But so far, it seems to be very useful for small aggregators who buy grain from farmers' associations and sell to larger companies. These aggregators now have timely information about the volumes that each association has on offer. They are thus the first to benefit from the system: it makes their operations easier and less time-consuming.

Electronically based systems need considerable skills and resources to set up and maintain. A website on banana resources in Kenya was supposed to be hosted by banana growers' associations, but none felt capable of managing it. It ended up being hosted by KENFAP, the Kenyan national farmers' federation, and receives few visitors. In addition, the internet is not yet widely available in rural areas, making it hard for farmers to access it.

In Uganda, the Grameen Foundation and MTN Uganda have established a call centre that provides farmers with a wide range of information on agricultural value chains in local languages.

Cheaper alternatives

The banana marketing centres established by **TechnoServe** and described in Case 3 have a more successful approach. Market information systems are often equated with virtual platforms (websites and mobile phone applications). But newspapers, magazines, brochures and noticeboards are still important ways of keeping farmers informed about market prices. The Banana Growers Association of Kenya issues a yearly memo with banana market prices for banana which reaches farmers in the whole country, helping them to negotiate with buyers. In Uganda, a weekly magazine, *The Farmer*, informs readers on market prices of agricultural produce.

What should we do differently?

Know your audience

Many organizations that want to improve smallholders' and traders' access to information start by building websites. The few experiences here and elsewhere teach us that the users' needs (business orientation), skills (literacy level) and communication infrastructure must first be assessed. That will allow systems to be tailor-made for the situation. This is particularly important for smallholders who rely on staple crops for their income. They are often illiterate and live in areas without internet access or mobile-phone coverage. Well-to-do farmers and well-established, urban-based traders know how to take advantage of complex, web-based systems, so are the main beneficiaries. Smallholders are also quite diverse, so different means (SMS, magazines) may be needed to inform them.

Who will pay?

Designing a market information system, inputting data, and keeping it updated all cost money. A donor can invest in the design and start-up, but in the end, the system has to support itself financially. This means charging users a fee to cover the costs. No-one will pay for old news, so keeping information up-to-date is vital. This in turn attracts more users, who pay more fees, in a virtuous circle of sustainability.

Collaboration

Many organizations invest in developing and setting up market information systems. There may be several different systems in one country, targeting the same users with the same information, or sometimes even conflicting data. Organizations should therefore collaborate, learn from each other's experience, and design and operate systems together.

Theme 4

Promoting an enabling environment: Access to finance

Why is this area of work important?

Virtually all the cases in this book depict the importance of improving farmers' and their organizations' access to land, inputs, finance, knowledge and markets. The challenges involved all relate to the policy and institutional environment in which the farmers operate. As for the farmers' immediate environment, we can think of the "hard" infrastructure (roads, marketplaces, telecommunication networks, etc.) and "soft" infrastructure (research and extension, financial services).

As with any entrepreneurial activity, engaging in markets involves risks and costs. The risks are particularly important for farmers who cannot even ensure their own food security. These risks can be reduced by guaranteeing that the farmers will benefit from the investments they make. Their costs can be reduced by providing attractive credit and investment facilities, or by cutting the transaction costs of marketing. The latter depends both on how the farmers organize themselves to get their products to the market (through collective action such as bulking, storage and joint selling), as well as on the extra costs for energy, transport, and formal and informal taxes.

What do we do about it?

The few examples of projects dealing with this strategic area mostly helped in linking farmers (and their organizations) to credit providers. It is, admittedly, a narrow interpretation of the strategic area.

Access to finance

Many AGRA grantees help farmers to get loans through training, helping them prepare business plans, and assisting them to submit these plans to a financial institution. A first step is often to help them get their organizations registered and giving them basic financial management skills. The **RDO** case in Rwanda (Case 7) is an example of this. RDO helped the farmers to start monitoring their own expenses and income, and to open individual bank accounts to facilitate savings, loans and payments.

In Burkina Faso, **FEPA/B** (Case 10) deposited a guarantee fund with a network of local credit cooperatives to make it possible for local women's groups to get credit for marketing their agricultural products. More important, they linked the groups with microfinance institutions and the World Food Programme's grain purchasing unit. This allowed the women to underpin their demand for credit with a guaranteed market outlet. The women also had to learn how to manage their money so they could pay pack their loans. That developed their business sense and made them trustworthy clients for financial institutions.

Farmers in Kasese using a mobile maize sheller.

Photo: Uganda Development Trust

Credit for marketing alone may not be enough: loans may also be needed to boost production and improve processing. In the **TechnoServe** project in Kenya, K-REP (Case 3) provided soft loans to banana growers to buy cattle (manure), to buy pumps for irrigation and inputs such as fertilizer.

Big cooperatives, such as KACOFA in Uganda, ask for assistance in developing investment plans for submission to a bank (Case 8). **UDET** helped KACOFA to get an investment loan from Stanbic Bank, which benefits from a guarantee fund from AGRA. This loan enabled KACOFA to improve the quantity and quality of its products and to attract new buyers.

Other possibilities are to link farmers' organizations to banks that provide soft loans with lower interest rates, or to inform farmers about favourable loan conditions offered by governments and donors.

Farmers' organizations and policy advocacy

As mentioned above under the Theme 1 (*Farmers' organizations*), groups can be a conduit for their members to express their concerns collectively to policymakers. Though many of the cases described in this book show that this occurs, little is known about how effective it is.

The only direct reference in the cases is that of **Technoserve Kenya** (Case 3). The Banana Growers Association of Kenya aims to transform the Kenyan banana industry and improve the livelihoods of banana farmers by influencing policy as well as through providing access to modern technology.

In the case of the **Farmers Union of Malawi** (Case 1), the union – and the member associations – reviewed their governance and operating procedures. One of the objectives of this was to better link members and the union, so as to ensure a bi-directional flow of information between them. That put the union in a better position to represent its members at higher-level forums and discussions.

What should we do differently?

Strengthen work on influencing policy

The policy and institutional environment is a major factor influencing how farmers can access markets. AGRA grantees should form alliances with other development organizations to increase the government's awareness the problems that farmers and agribusiness encounter, and to lobby for change.

For advocacy purposes, local farmers' organizations should be linked to existing national organizations (farmers' unions) that deal with advocacy issues. New organizations to tackle advocacy should only be created if a sustainable demand exists from the farmers, and if no other suitable organization already exists.

There is a risk of the national-level umbrella unions becoming detached from the field and representing only the bigger organizations of farmers. To avoid this, local organizations should feed the national-level unions with information and evidence from the field. As Case 1 (**FUM** in Malawi) shows, there is a need to work with both higher and lower levels of farmer representation, and to build trust between them. Just as important is the transparent flow of information from the national union to the lower-level associations. If the local associations know what the union does, and how it uses information, they may be more enthusiastic to provide such information. National-level organizations should make the farmers aware of the policies that influence them, and, where needed, organize them to press for the policies to be changed.

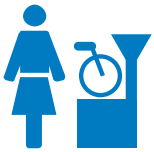
Access to finance

Getting affordable financial services is probably the biggest challenge that farmers and small agribusinesses face. The financial products that banks offer are seldom suited to smallholders' needs. An option would be to lobby donors and governments to guarantee to cover some of the risks that banks take when giving loans to smallholders. Another option would be to help banks get a better understanding of the way farms and agribusiness are run, the opportunities they present and their needs for financial services.

Promoting local products

Finally, improving access to markets is not only about removing barriers, but also developing markets. Farmers, agribusiness and AGRA grantees can lobby for example, to set standards for using local products in processed food; or to use locally produced food in schools and hospitals.

Theme 5



Preventing postharvest losses and adding value

Why is it important?

Reducing postharvest losses is "low-hanging fruit": compared to many other problems in rural development, it seems easy to do and to bring large benefits to smallholders. Postharvest losses are a common problem for many smallholder farmers. Reducing such losses is technically easy to do through better drying, threshing and storage techniques. By doing so, farmers can increase the amount of food they have for their families, improve the nutritional value of the food, and earn more by selling the surplus. Better postharvest handling is also good for buyers: they get a better-quality product, and they save because they do not have to clean, dry and sort it again. Because of this, farmers can charge a higher price, and they can build a reputation for supplying quality product.

Threshing techniques are a common problem. In many countries farmers have no other option but to thresh their grain on bare soil. They beat the grain with sticks or drive a vehicle over it to separate out the grain, as in the cases from Burkina Faso (Case 10), Ghana (Case 6) and Mozambique (Case 9). Such methods result in high losses: many grains are broken, and soil and stones get mixed in, so the grain has to be cleaned.

Storing grain for sale on individual farms is not practical because it is difficult to keep small quantities of produce dry and free of pests and mould. Individual farmers cannot afford to buy equipment such as threshers, dryers, pallets, scales and fumigants. Centralized storage facilities enjoy economies of scale: they can be professionally managed and are large enough to justify purchasing these items. Nevertheless, existing storage facilities often need to be upgraded so they protect their contents: roofs need to be repaired, concrete floors put in, and walls made rodent-proof. In many places, storehouses have to be built from scratch.

What do we do about it?

Equipment, institutions, training

The AGRA grantees tackle these problems in three ways:

- By investing in threshing equipment (either mechanical threshers or simple hand tools) and tarpaulins to keep the grain off the ground.
- By designing institutional and organizational arrangements to ensure that the equipment is used efficiently and in a sustainable way (see Theme 1 on *Farmers' organizations*).
- By training farmers in postharvest handling techniques such as drying, cleaning, sorting and bagging. Collection and storage centres also provide a focus for farmers to learn how to use appropriate postharvest techniques. They enable farmers to bulk their produce, so

Winnowing machine operators in Burkina Faso.

Photo: Fédération des Professionnels Agricoles du Burkina

taking advantage of the better prices commanded by good-quality, graded, bulk produce (see Theme 2 on *Bulking and collective marketing*).

Here are some examples of how the grantees have done these:

In Burkina Faso, **FEPA/B** provided a farmers' organizataion with threshers (Case 10). The organization charges users fees so it can repair the threshers and buy replacements. A management committee sets rules and fees for using the threshers. The operators and mechanics are members of this committee, and have been trained to run and repair them. The farmers have been trained in harvesting, threshing and bagging grains, and in maintaining the quality of the output.

In Ghana, **IFDC** collaborated with a private company, the Savanna Farmers Marketing Company, to improve postharvest handling at 17 collection centres (Case 6). These centres were provided with concrete floors and equipment for threshing, cleaning, bagging and storage. The threshers are managed by farmers' organizations and are also taken to farms where farmers can use them for a fee. These fees are supposed to cover the maintenance and reparation of the machines. IFDC and the company trained farmers in using the equipment.

ADEM in Mozambique also considered the costs of buying, maintaining and repairing threshing machines (Case 9). It, too, decided that threshing should be a service for which farmers pay a fee. ADEM, together with farmer leaders, identified and selected individuals with the adequate business skills and oxcarts to transport the threshers to where they were needed.

In Ghana, **ASI** worked with two companies (the Savanna Farmers Marketing Company and the Gundaa Produce Company) to bulk agricultural products (Case 11). Noticing the scale and impact of postharvest losses, ASI aimed to reach as many farmers as possible with appropriate postharvest handling techniques. It trained key individuals, who then passed on their knowledge to farmers. These key individuals or organizations included staff of Savanna and Gundaa, large-scale farmers who provided services to their neighbours, and villagers who bought grains in bulk from other farmers. ASI then selected 18 of them to manage newly built warehouses to store bulked produce. The managers contributed to the construction costs in cash and kind.

Sustainability

Ensuring that the threshing services are sustainable is a key challenge. The projects have used the same models as used for collective marketing facilities (warehouses, scales, etc.) (see Theme 2, *Bulking and collective marketing*):

- The farmers' organization manages the thresher and charges members a fee for using it.
- The thresher is part of a service centre, managed by a cooperative, which runs it as a business.
- The thresher is entrusted to an individual who has to turn it into a profitable business.

The thresher may be taken to individual farms to thresh the grain there, or it may be stationed at a central location where farmers bring their grain for processing.

There is considerable demand for threshing, and organizing the service does not appear to be a problem. But the organization has to ensure that the people who run the equipment are suitably organized and motivated to keep the service going on a sustainable basis.

Transport

Threshers are big, heavy pieces of equipment. Moving them around is difficult, especially where roads are poor or non-existent. One option is for the owner to provide transport – an oxcart or a motorized tricycle. Another is for the project to provide transport – perhaps on credit – along with the thresher.

Maintenance

Threshers have to be properly maintained if they are to work properly. Sand and stones can wear parts quickly, and rough handling and transport are hazards for even the sturdiest equipment. The operators must be trained how to maintain and repair it, and a supply of spare parts must be at hand. If an expensive spare part must be ordered from abroad, a broken thresher is unlikely to see service again. That is a strong argument for equipment such as threshers to be manufactured locally, or to have a network of dealers who can repair them promptly and cheaply. Local metalworkers may have the skills needed to repair bigger breakdowns, and even to make copies of the equipment.

What should we do differently?

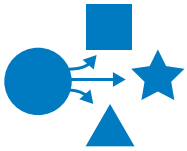
Threshing is just one of a sequence of postharvest handling that includes cleaning, drying, bagging and storage. Improving threshing is not enough if the other steps in this sequence are ignored.

Much of a family's harvest is stored at home for domestic consumption and strategic reserves. But it is often stored in poor conditions, resulting in losses in quantity, quality and nutritional value. It is therefore worthwhile to train farmers how to build and use low-cost household storage facilities for grain for their own consumption.

Efforts to reduce postharvest losses start at the beginning of the planting season: with planting quality seeds of appropriate varieties, and using the right planting, fertilization, irrigation, weeding and pest-control techniques. Access to quality seed of appropriate varieties is particularly important. Projects should address these issues, or coordinate with bodies that do so.

Threshing services are often combined with other group activities such as bulking and collective marketing. These activities also require considerable investments in infrastructure, such as new warehouses and equipment. The managers of this infrastructure have to price their services to cover the costs of investment, maintenance, repair and replacement. They need to ensure they have the funds and skills required to manage the equipment efficiently and effectively. Projects need to consider these needs beforehand, and work purposefully to equip managers of infrastructure accordingly.

Theme 6



Alternative uses

Why is it important?

In cassava, in particular, postharvest losses are a big problem, as the roots lose quality very quickly once they are out of the ground. Plus, fresh roots of bitter cassava varieties contain a lot of cyanide, which has to be removed before they can be consumed. By turning the roots into starch or dried chips, it is possible to make a product that can be stored longer and has higher value.

While this section focuses on cassava – as a result of the choice of cases – processing and developing alternative uses for other crops are good ways for reducing postharvest losses, increasing the value, and creating new demand. Processing also gives farmers a larger variety of products to sell. That opens up new markets for them and diversifies their risks. Milling converts cereals such as maize, millet and sorghum into flour that finds a better price than the unprocessed grain. Blending soy into cereal flour improves the flour's nutritional value. This is important both for households and for organizations concerned with school-feeding programmes, for example. This is dealt with by the **Cereal Growers Association** in Kenya (Case 4), but not described further in this book.

What do we do about it?

Processing by farmers

Cassava can be processed in two main ways. One is to peel the roots, slice them into chips, and dry them. This stops the spoilage process. **Farm Concern** took this approach in Kenya (Case 12).

Making and drying chips is easy: it can be done by hand. But this is labour-intensive, so Farm Concern introduced mechanical chippers for the farmers to use. The farmers rent the equipment from their organization, make the chip, dry them in the sun, and sell them directly to industrial users. This reduces wastage and cuts out traders, enabling the farmers to earn more from the product.

Processing by small and medium enterprises

An alternative is to grind the peeled roots and wash the cyanide away with water. The result is pure starch, which has many uses as food and in industry. This was the focus of the **TAPP** project in Ghana (Case 13).

Making starch requires more sophisticated equipment and a lot of water, so may be more challenging for farmers' organizations. Instead, TAPP works with companies that do processing as their main line of business. It helps them overcome technical problems and find new outlets for their processed starch. TAPP does this because it recognizes that a strong local industry will act as a reliable buyer of raw materials. That will benefit the farmers who grow the cassava. TAPP, like Farm Concern in Kenya, also tries to overcome bottlenecks at various other points in the value chain, for example by ensuring that farmers have a smooth supply of cassava planting materials.

What should we do differently?

Ensuring quality

Quality control of cassava remains a challenge. It starts with ensuring quality planting materials. A suggestion here is to link the work done by AGRA's seeds programme to the cassava projects in the Market Access Programme. Such links are not yet in place.

Improved agronomic practices are also important for a good-quality product. AGRA could pay more attention to these issues by supporting grantees to inform farmers about market demands and helping them to implement practices that meet such demands. It could therefore feed grantees with specific studies that will highlight opportunities, or link stakeholders who work on both supply and demand side of the cassava value chain.

Finally, the work does not end when the farmers produce cassava chips. The chips have to be handled and stored well so they keep their quality. The farmer's living room is probably not the best place for this. Storage of processed cassava is an important area to work on.

Who should process?

Farmers can handle simple processing equipment (such as chippers). But for more sophisticated, expensive equipment, it is more sustainable for the private sector to own and run it (as is indeed the case with the starch-making equipment in Malawi). The point of intervention (whether a project works with individual farmers, farmers' organizations or enterprises) will thus depend on the most appropriate product for the market (fresh roots, chips or starch) and the nature of the technology needed to produce it. In many cases, it may be better for farmers not to do the processing themselves, but to concentrate on supplying quality raw material to a processor.

A recommendation for AGRA and the grantees is to improve collaboration with local private service providers.

Fresh tubers

The bulk of the cassava business is still the fresh market, which is particularly important for food security and the local economy. So the AGRA grantees felt they need to look for ways to add value without making chips or other products, while minimizing spoilage. To do this it is important to establish a dialogue with potential buyers early in the process to ensure that the products will attract a market.

Government support

Cassava has numerous potential uses, but suffers from a lack of extension support, inadequate supply of planting materials, and a poor public image. Government support is needed to overcome these problems. Examples include support for the production of high-quality planting materials, training for farmers on production and processing, campaigns to promote consumer awareness and safety, and help to create a market for cassava-derived products. The last might include, for example in policies, a requirement that bread contains a certain percentage of cassava flour. AGRA and its grantees' efforts to influence government policies and actions could be strengthened.

9
Conclusions

Farmers celebrating the handing over of cassava chippers.
Photo: Farm Concern International

In the *Introduction* we set ourselves the task of deriving lessons from the 13 cases described in Chapters 2–7, answering two main questions:

- To what extent are the assumptions of the programme's theory of change still valid?
- Which adjustments need to be made in AGRA's strategy?

In Chapter 8 we looked at a number of challenges and suggestions for change for each of AGRA's strategic intervention areas. This final chapter looks at the general lessons derived from the cases and our analysis, and proposes a number of actions as follow-up.

BACK TO THE THEORY OF CHANGE

The Market Access Programme's theory of change (see Figure 1. The AGRA Market Access Programme's theory of change) builds on the assumption that strong farmer organizations, in an enabling environment, are better able to access markets and strengthen their position in value chains, and thereby improve smallholders' livelihoods and food security.

The 13 projects operate under this logic. In general, they have shown it to be correct by booking a large number of successes over the last 3 years (see Table 2). Though the relatively short duration of the projects does not allow the achievements and impacts to be assessed fully, the evidence shows that with stronger organizations, the farmers bulked, processed and sold much larger volumes of produce, for higher prices. Though a few projects have quantitative data on increased incomes, a number of them rely on anecdotal evidence to conclude that farmers are better off after the interventions.

Projects have also learned as they went. When looking back and discussing among themselves, the grantees came up with a long list of things they – and AGRA – could and should do differently. These have been discussed in detail in the previous chapters, and are summarized in Table 3. A number of those issues refer to more than one strategic area.

As expected when compiling lessons from projects that are very recent, a number of issues arise. They are either questions referring to the overall intervention logic of AGRA and to the operationalization of such logic, or common challenges faced by the projects described here.

The most prominent and common issues are described below. They are divided into technical and strategic issues.

Table 2. Key achievements of and challenges faced by the projects described in this book

Case, AGRA grantee country, start of project	Achievements
Case 1 **Farmers Union of Malawi (FUM)** June 2011	Ten warehouses rehabilitated and equipped, serving ca. 9,000 farmers 1,500 farmers trained (directly and indirectly) on negotiation, record keeping, etc. Associations bulked and sold over 1,000 tons of soybeans, groundnuts, beans and maize. Prices paid by bulk buyers were higher than those offered by informal traders; for maize, 18–23% higher Grain and Legume Association secured a $115,000 loan from a commercial bank to benefit 2,000 farmers (two-fifths of them women) Ca. 7,150 smallholders (nearly half women) have bulked and sold 4,000 tons of soybeans, groundnuts, beans and maize to various large companies
Case 2 **MICAIA Foundation** Mozambique June 2011	Five associations trained and supported to strengthen their internal organizations Their memberships have risen from 1,400 to more than 5,500 members in the first year of the project Associations sold 370 tons of maize, 72 tons of sunflower and 300 tons of soybean World Food Programme bought maize for 25% above the regular price. The soybean price of $0.70 per kilogram was 33% above the price paid to farmers selling individually
Case 3 **TechnoServe** Kenya October 2008	Set up six marketing centres serving more than 15,000 farmers, organized into almost 400 groups Prices have risen to around $0.15 a kilogram – with the typical farmer selling 420 kg a month and earning $600 a year in 2010. By 2012 sales had risen to about 700 kg a month, or $1,000 a year Sales through marketing centres total $1.25 million Formation of the Banana Growers Association of Kenya to represent all smallholder banana farmers in Kenya
Case 4 **Cereal Growers Association (CGA)** Kenya July 2009	17,656 smallholder farmers mobilized into 196 associations 25,659 tons jointly sold Smallholder farmers linked to 60 grassroots storage facilities 281 farmer-training sessions; 1,098 trainers and 16,522 farmers trained
Case 5 **Rural Urban Development Initiatives (RUDI)** Tanzania December 2012	Registered 6 marketing companies Registered 6 warehouse service partnerships, which sold a total of 180 tons of maize to the World Food Programme for $7,050 Started crop credits through savings and credit organizations Trained 1,800 smallholder farmers in postharvest management, collective selling and negotiation skills

Case, AGRA grantee country, start of project	Achievements
Case 6 **International Fertilizer Development Center (IFDC)** Ghana December 2009	Platform launched in October 2012 Piloted by 17 partners who collected data to feed into the system, and provided feedback to make the software more user-friendly The system now lists over 42,000 farmers, 1,400 farmer-based organizations, 60 small and medium enterprises and aggregators, 87 marketing agents, 2,500 input dealers, 100 warehouses and 42 haulage companies Eight aggregators are using the platform to manage their operations Trained 1,575 farmers on improved postharvest management Nearly 14,000 farmers benefit from equipment provided by the project Postharvest losses have fallen by 8–10%
Case 7 **Rwanda Development Organization (RDO)** December 2011	15,605 farmers trained in integrated soil fertility management 16,621 farmers trained in postharvest handling and quality management 240 lead farmers trained in business skills 220 cooperative leaders and managers trained in business planning and financial management 240 cooperative members trained in produce marketing and use of information technology tools to access market information (e-soko) Farmers from 12 cooperatives (with 1,800 members) borrowed $400,000 in the last six months of 2012 Set up 12 aggregation centres In the first year of the project (2012), these centres bulked and sold over 9,200 tons of maize and 660 tons of beans valued at a total value of $3,930,000 In 2012, grain sold in bulk fetched between 11 and 26% more than the same grain sold by individual farmers at the farm gate. By selling to the World Food Programme, farmers earned 27% more than by selling to local traders.
Case 8 **Uganda Development Trust (UDET)** April 2011	42 business plans developed or 35 enterprises $9,574,684 worth of loans, received from commercial banks 8 small enterprises used business plan to leverage funds worth $2,960,480 from donors for warehouse and office construction, weighbridge, pre-cleaner, training of farmers, and setting up demonstration farms Over 110,000 farmers throughout Uganda have been guaranteed sustainable markets. They have sold nearly 120,000 tons of produce valued at nearly $80 million Over 1,000 casual jobs created per season Small and medium enterprise reporting has improved. 70% now submit timely reports 7 small enterprises have acquired new farm machinery and processing equipment 70% increment in farm production, timely harvest and better postharvest handling due to acquisition of machinery Volume of produce sold by enterprises increased by 25%

Case, AGRA grantee country, start of project	Achievements
Case 9 **Agência de Desenvolvimento Económico da Província de Manica (ADEM)** Mozambique November 2011	84 farmer trainers trained on group governance, management and postharvest management 13,089 farmers trained on group governance and management and postharvest management 8 aggregation centres servicing their members and 11 household storages established and being used by farmers 30,116 farmers sold 8,164 tons of maize, 350 tons of beans and 825 tons of soya, earning a total of $2,880,645
Case 10 **Fédération des professionnels agricoles du Burkina (FEPA/B)** Burkina Faso January 2011	15,787 producers sensitized and trained on group marketing Weight of cowpea and cereals sold rose from 805 tons in 2010 to 3,821 tons in 2012 Seven unions obtained production and marketing loans worth FCFA 63.4 million ($129,387) in 2011 In 2012, eight unions received loans worth FCFA 190.4 million ($388,571). Four obtained the loans without any support 6,066 producers in 2012 (compared to 487 in 2011) now sell cereals and cowpea through unions
Case 11 **Agribusiness Systems International (ASI)** January 2010	18 community warehouses completed 20,000 farmers now have access to a warehouse In January 2013, the warehouses held 1,560 tons of bulked grain 12,000+ smallholder farmers trained in postharvest handling and grain management 2 large warehouses inspected and certified by the Ghana Grains Council
Case 12 **Farm Concern International** Kenya, Tanzania, Uganda February 2010	214 commercial villages supported by the project traded $27 million worth of cassava (almost all fresh roots), mainly during the project's final year. The rest included $700,000 worth of chips sold to industrial buyers, $40,000 for cuttings, and $4,000 for value-added products 25 million cassava cuttings planted, increasing the area under the crop to 26,000 ha Production per unit area increased from 12 to 22 tons per hectare 53 savings schemes had saved a total of $45,000
Case 13 **Trustees of Agricultural Promotion Programme (TAPP)** Malawi June 2011	6 cassava processors trained and supported. These processors buy cassava from 14,000 producers 4 farmer cooperatives were re-organized and bulk cassava for sale to the processing plants 176 centres established to multiply improved varieties for 8,000 neighbouring farmers 7,600 farmers trained in postharvest management Over 14,000 farmers trained on improved production practices and pest and disease management 69 government extension officers trained to run nearly 800 demonstration plots

Table 3. Summary of suggestions and recommendations on the six strategic areas

Strategic area	Suggestions to AGRA and grantees
Theme 1 **Farmers' organizations** 	Work with existing farmers groups – as a principle (and where they exist). Understand the local history of these groups before engaging with them. Consider also working with informal farmer organizations (i.e., do not put too much emphasis on formalization where not needed). Before starting a project, carefully weigh (together with local partners) what the farmer organization can do in terms of processing, storage, service provision – and what would be better outsourced to (local) private sector providers. Work with both higher and lower levels of farmer representation and build trust between them. Ensure the transparent flow of information from the national union to the lower-level associations. Put more attention on building the capacity of farmers to mobilize and manage funds (from donors/government, but most importantly, from the market). When supporting farmers' organizations, respect the speed of development. Pushing too fast can be counterproductive. This demands a flexible management style by grantees and donors.
Theme 2 **Bulking and collective marketing** 	Support managers of collective marketing systems to develop the skills needed to analyse the costs and benefits of their operations and improve their sustainability. When choosing private individuals to own bulking facilities, consider subsidizing – at an early stage – the services this individual provides for smallholders who are not able to pay the full cost. Consider stimulating traders and processing companies to provide bulking services to farmers, embedded in the price of their transactions. Support farmer organizations to negotiate flexible contracts, by setting minimum prices that can be adjusted depending on the market movements at the time of delivery. Educate and build trust among buyers as well as among farmers' organizations – show to them that by purchasing in bulk from a farmers' organization, they will obtain a product that is worth more, and costs less to handle. Explore value chain financing arrangements such as inventory credit and warehouse receipt systems.
Theme 3 **Market information systems** 	Assess users' needs, skills (literacy level) and communication infrastructure before the design of a market information system project. Consider using different means to reach different farmers. Market information systems do not have to mean an electronic platform. They can make use of newspapers, magazines, brochures and noticeboards. Look at long term sustainability right at the start of a market information system effort – who will pay for data collection and data use in the future? How? Avoid replication: push for collaboration between existing (and planned) market information systems.

Strategic area	Suggestions to AGRA and grantees
Theme 4 **Enabling environment** 	Try to influence policy more. AGRA grantees should form alliances with other development organizations to increase the government's awareness of the problems that farmers and agribusiness encounter, and to lobby for change. Create new organizations to tackle advocacy only if a demand exists from the farmers and no such organization already exists. Lobby donors and governments to guarantee to cover some of the risks that banks take when giving loans to smallholders. Support local/national organizations to help banks understand the way farms and agribusiness are run, the opportunities they present and their needs for financial services.
Theme 5 **Preventing post-harvest losses and adding value** 	Give preference to local manufacturers when buying equipment. Invest in low-cost household storage facilities for grain for farmers' own consumption. Ensure infrastructure managers have the funds and skills needed to manage the equipment efficiently and effectively. Address issues more commonly related to production (e.g., quality of seeds, planting, fertilization and pest-control techniques) – or coordinate with bodies that are better placed to do so.
Theme 6 **Alternative uses** 	Link the work done by AGRA's seeds programme to the cassava projects in the Market Access Programme, so as to help farmers get clean, good-quality planting material. Strengthen the work on storage of processed cassava. Feed grantees with specific studies, information and contacts that highlight opportunities on alternative products. Improve collaboration with (local) private service providers, as an alternative to focusing on having farmers covering other activities in the value chain. Look for alternative uses also for the fresh cassava products, particularly important for food security.

KEY TECHNICAL ISSUES REMAINING

Bulking and joint selling

These are common to all projects as a first step to reducing transaction costs and becoming a preferred supplier for buyers, so leading to better prices. But for various reasons, the projects lack sufficient and reliable data to check this assumption. Thorough cost-benefit analyses are needed, with the active participation of farmers, to make them aware of the hidden costs and to identify opportunities for more cost-efficient operations.

Business model of farmers' organizations

A basic question – with no single answer – is whether farmers' organizations should concentrate on production, or diversify into businesses such as managing warehouses, marketing and processing. What services are better offered by the organization itself, and which ones are better delivered by third parties? In general, we feel AGRA grantees should do more to work with existing local private-sector service providers. But such decisions need to take into account, for each type of service, the quality, skills and resources needed to enter the business.

Formalization of farmers' organizations

Organizing farmers is the first pillar of AGRA's strategy. This can be done in many different ways: from setting up multi-layered farmer unions to strengthening local, informal, community-based organizations. All the cases in this book opted to work with formal organizations; only a few have worked with multi-tiered organizations.

A few projects worked with both formal organizations and informal groups within them – such as the farmers' clubs supported by MICAIA (Case 2).

Formalization is important because it enables the farmers' organizations to negotiate contracts with other value-chain actors, sell in bulk to larger traders, and access credit. But it may also mean added bureaucracy (along with higher overhead and slowness in responding to opportunities). It may sideline members who do not belong to the group's inner core or who lack the time or skills to participate in management. Balancing structure and informality is a challenge. Different options could be experimented with further.

Governance and internal management

An issue related to formalization is that of governance. Good governance of farmer organizations – here understood as transparent and inclusive decision-making processes and accountability to members – remains a challenge. Though many AGRA grantees set themselves to work on governance issues, it remains unclear how successful they have been. Good governance is essential if farmers are to feel part of – and trust – their organizations. It is a fundamental pillar of sustainability and inclusiveness (see below).

Arguably, the rising membership of many of the organizations reflects better governance, but there is a risk that only more outspoken (generally richer and higher-status) farmers join and lead the organizations. We feel this area deserves more attention from grantees and AGRA alike.

KEY STRATEGIC ISSUES REMAINING

Impact

As mentioned above, though there is evidence that the projects are supporting farmers to sell more and at a higher price, there is little evidence as yet of a difference in terms of farmers' livelihoods and incomes. This is understandable considering that the projects documented here are very recent.

In the longer term, the general assumption that organization of farmers, bulking and value-addition – and the consequent increased market access – leads to better lives of farmers should be checked.

Replicability to achieve scale

The projects described here have reached an impressive number of farmers. Nevertheless, the numbers are still only a small part of the total farming population. It is unlikely that similar amounts of donor money will be available to replicate the process with the rest of the farmers. How, then, can the benefits of the projects be spread to others?

AGRA sees its role as funding "innovative" projects that can serve as inspiration and learning ground for further action. The projects implicitly or explicitly hoped that the organizations they worked with would act as examples for similar groups. These would then somehow copy their approaches (though without all the funding and technical expertise that the project organizations had benefited from).

Most of the projects have so far paid little attention to replication or scaling up beyond their immediate clientele. The few years they have had so far have been spent, understandably, on implementing the project with their initial target group.

Some projects indeed have tried to encourage such replication, for example through cross-visits and demonstrations. Encouraging examples include the thresher manufacturer in Burkina Faso (Case 10), who can now make and sell equipment to other groups, and the mFarms market information system in Ghana (Case 6), which is being adopted in several other countries. It is too early to tell how successful these efforts have been. Both are good examples of how grants can be used to create a market (demand) for services (supply).

Related to the question of replicability is AGRA's policy of working in breadbasket areas. All the projects described in this book are located in high-potential areas with adequate rainfall, decent soils and reasonable access to markets. None is in a marginal area. There is therefore little evidence that the approaches tested here would work if scaled up elsewhere.

In addition, in order to achieve a big impact quickly, projects naturally selected those farmers' organizations and areas where this success was more likely. There was no time to start from scratch, building farmers groups from the ground up. Instead, projects worked with organizations that already existed, and that were reasonably well managed. This sheds doubts on whether the approach would work with less-organized farmers.

The suggestion to AGRA is to launch a number of "experimental projects" in marginal areas – to check and see how what has been done elsewhere (in breadbasket areas) could be adapted. The idea is not to simply transpose what has been done elsewhere, but to understand what needs to be done differently, and try it out. Proper documentation and monitoring of these experimental projects becomes, of course, of fundamental importance to allow such learning to take place.

On another line, the fact that all the projects draw on partnerships – that is, the grantee is not working alone – is a good starting point for making them replicable. Involving other organizations, including the government, from the start is important to ensure their ownership, spread an understanding of the approach, and to train their staff. These, in turn, make it easier for partner organizations to work on similar initiatives elsewhere later.

Both replicability and efficiency could be improved by linking the different AGRA programmes and strategies (soils, seeds etc.) more closely. Some efforts to do this are already in place. In other areas, such as in credit provision and seed supply, the grantees have felt the lack of such links.

Inclusiveness and targeting

A frequent challenge of working with farmers' groups is that a local elite co-opts the benefits (see also the discussion on ***Governance*** in the previous section). To what extent did the projects purposefully look at how to engage the poorest and marginalized farmers (including women)? What efforts were made to ensure that the farmers' organizations allow these groups to express their opinions and to benefit from AGRA's investments?

Take bulking as an example. As with many development initiatives, bulking risks excluding certain types of people. It obviously excludes anyone who does not have enough produce to sell: indeed, they may end up worse off if they have to buy their staple food and the local price goes up. Similarly, it excludes farmers with only a little to sell: they are unlikely to see the benefit of taking one or two sacks to the warehouse, and they probably need cash immediately. So if a farmers' organization sets up a bulking scheme, the larger farmers are more likely to benefit than the smaller ones.

Similarly, bulking may tend to exclude women rather than men. In many African societies, the responsibility for growing the main staple crop often falls to the men (even though the women may do most of the actual work). The women are generally responsible for non-staples such as vegetables. They may have their own plots of maize, but they cannot afford the fertilizer and other inputs needed to get a good yield. So it may be the men who take the produce to the warehouse, and it is the men who get paid.

The Market Access Programme pays particular attention to gender issues. All projects look at the gender implications of the work done and ways to deal with (gender-related) inequalities in the household and community. Specifically documenting these efforts will be of great interest to practitioners. Less systematic attention is paid to poverty, age and ethnicity-related inequalities.

Sustainability

Finally, we look at the likelihood that the initiatives will continue after the funding ends. Our interest is not in whether the same grantees will be able to continue working with the same farmers or communities. Rather, we are interested in whether the beneficiaries will be able to keep the infrastructure, knowledge and organizational set-up in place without support from the project.

A number of issues have direct implications for this.

Contributions by beneficiaries. Development practitioners generally agree that providing beneficiaries with free stuff is a bad idea. The recipients do not feel they own the equipment and facilities, and they think it is someone else's job to maintain them. As soon as a machine breaks down or a roof starts to leak, the asset falls into disuse. Dependency syndrome results: people

are unwilling to invest their own money if they think that a donor will come along to give them a replacement.

So most projects insist that the beneficiaries pay at least part of the cost of assets that they receive. But the range is great: the contributions vary from zero to 100%. Contributions may be made in cash, in the form of land, materials (such as sand and stone for building), or labour. Some projects provide credit that the owner can repay over a period of time.

Some of the assets provided by the projects are quite expensive: warehouses and threshing equipment, for example. Even if it is unrealistic to expect beneficiaries to pay the full cost, they should be required to cover part, plus auxiliary expenses (such as the cost of transporting a thresher to the field). This should be made clear at the outset as a condition for receiving the asset. Initial analysis – in collaboration with farmers – should be made of the future maintenance costs. A joint plan on how to raise the resources (from users) and put them to good use should also be made, and farmers coached in implementing it.

Farmers' skills in assessing investments. Participation in decision making is also essential for ownership. It is necessary to strengthen the farmers' ability to assess the benefits and costs of investments. This would allow them to judge the potential impact of proposed interventions, and predict the maintenance and replacement costs. Such information will make them better able to contribute to decisions on where and how to invest.

Reliance on a single buyer. In several of the cases in this book, farmer organizations rely on a small number of buyers – though this is not a deliberate strategy of the programme. In the beginning, few buyers are interested to enter in a structural relationship with organized farmers. Of these buyers, the World Food Programme is the most important: five of the 13 organizations described in this book sell to it.

The World Food Programme provides a valuable opportunity for farmers to learn how to bulk their crops and meet strict requirements. But there is an obvious danger in overreliance on a single large buyer, especially one that offers above-market prices: if the World Food Programme does not choose to buy in a particular season, the farmers may be left without a customer, and may be forced to accept the much lower prices offered by private-sector buyers.

In addition, the World Food Programme tends to have a "softer" approach to smallholders than do other buyers. It also offers training and other assistance. While this is a huge opportunity for farmers, they may not realize that private-sector buyers are unlikely to be as accommodating. Such buyers will probably demand more, and may contribute little or nothing to supporting the farmers' organizations.

A related risk is the reliance on a buyer that itself is funded by foreign aid. If we are trying to build sustainable marketing systems, it is also important to support the development of private-sector value chains. One would hope that farmers' organizations can learn the ropes of bulking from working with the World Food Programme, but then move on to also serve more competitive but sustainable markets.

Most projects in this book are aware of the risks of relying on one buyer, and are actively searching for alternatives – either for the same product, or for an alternative product for the same crop (see Theme 6 on ***Alternative uses***). These are important experiences since they help to understand what buyers are looking for and under what conditions they are willing to engage in structured relationships with farmers.

Partnerships. A number of services now provided by AGRA grantees will remain important after their projects end. A group of farmers may no longer need help in maintaining a warehouse, but they may still require coaching and training on organizational management, for example. Boosting productivity, which is not covered by the Market Access Programme, remains important.

For all these, establishing partnerships with public, other non-profit and private service providers is key. As mentioned above (in the section on ***Replicability***), all projects described in this book work with local partners, including government. This is certainly a good first step towards ensuring that someone carries on when the AGRA grantees leave the scene.

But it is not enough just to have partners. They need to understand the approach and – just like farmers – feel ownership for the work being done, and be able and willing to take over parts of it without donor funding. In the case of private partners, of course, this works only if farmers raise funds to pay for their services.

TOWARDS A KNOWLEDGE AGENDA

The "remaining issues" raised above need to be looked at and considered when appraising new projects. The AGRA-supported projects constitute excellent opportunities to shed light on them. They are a rich experimental field from where credible evidence – based on practice – can be derived to inform the policies of AGRA and other donors.

But how? The intention is not to generate an academic study, nor to give grantees a task that overwhelms them and leaves less time and resources for project implementation. We believe these questions can be tackled in two ways (which are not mutually exclusive):

- **Grantee-grantee learning: supporting learning and exchange among grantees.** This can be done through supporting project staff to visit other projects, or by asking a particularly successful project in one strategic area to coach and provide ideas to others.
- **Collaboration with knowledge institutes in Africa and elsewhere.** In such partnerships, the knowledge institutes contribute a (hands-on) methodology, data-collection techniques and expertise focusing on existing knowledge gaps. The grantees offer their hands-on experience and staff time for joint reflection. These "studies" do not have to be fully scientific, but should follow a methodology rigorous enough to generate credible results to AGRA and its grantees.

The grantees who contributed to this book have suggested that more time be made during AGRA technical meetings for reflection and sharing. It is at such meetings that the grantees (and their partners) can jointly reflect on their assumptions, and continue challenging their own theories of change. The world changes quickly; so do farmers. AGRA needs to follow the pace. We hope the process that gave origin to this book – and the book itself – are a helpful milestone to ensuring this continues.

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