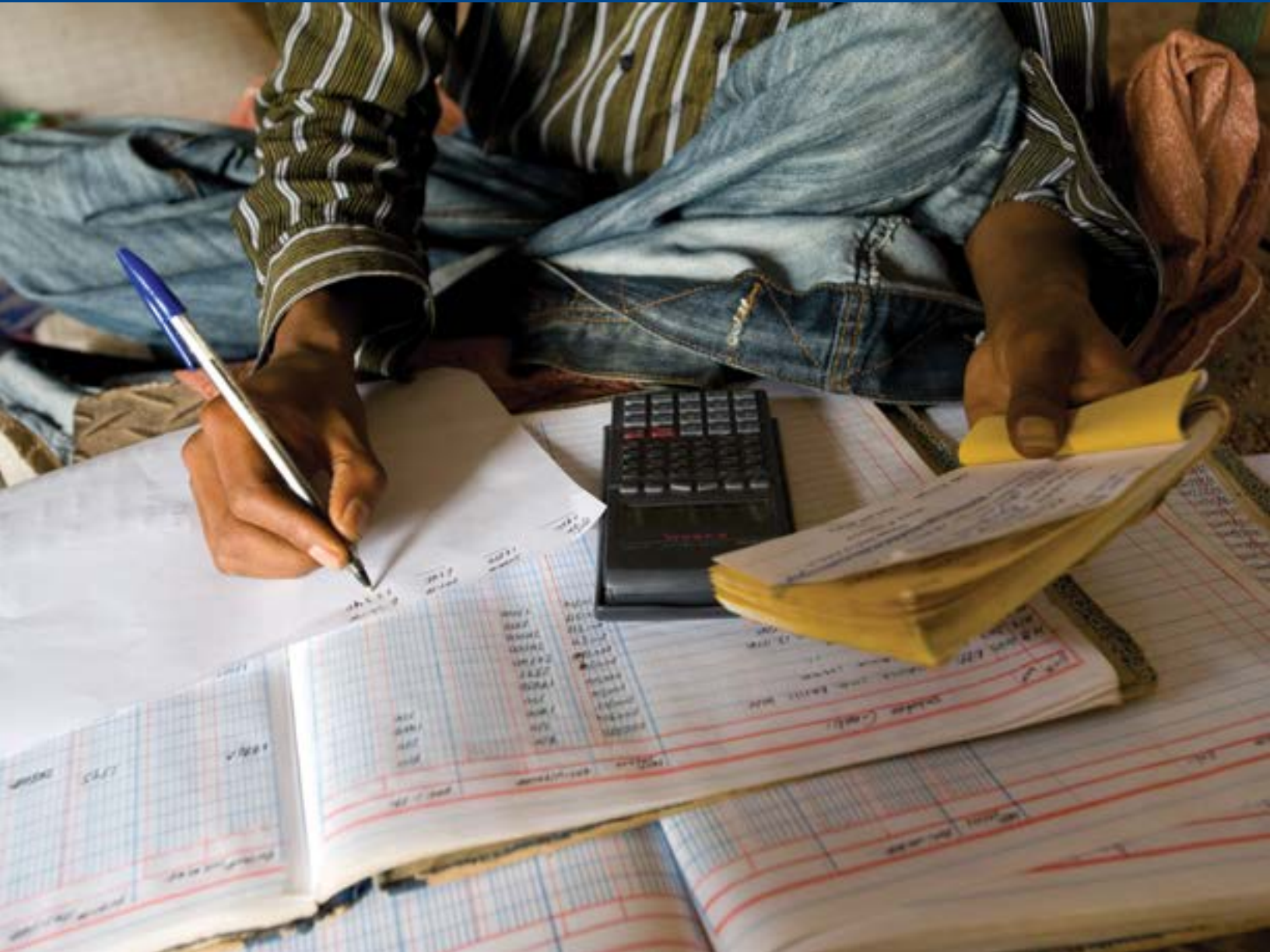


A Guide to Strengthening Business Development Services in Rural Areas



Rupert Best, Shaun Ferris and Chris Wheatley, editors



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FROM THE AMERICAN PEOPLE



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Illustrations: Jorge Enrique Gutiérrez

Printed in the United States of America.

ISBN-10: 1-61492-157-1

ISBN-13: 978-1-61492-157-8

Download this publication and related material at <http://www.crs.org/our-work-overseas/research-publications/>

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Abbreviations

ACORDAR	Alliance to Create Rural Business Opportunities through Agro-Enterprise Relationships	GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
ACOS	Agricultural Commodity Supplies	IDEA	Uganda Investment in Developing Export Agriculture project
AMA	Agribusiness Management Associates	KDSCP	Kenya Dairy Sector Competitiveness Program
BDS	business development services	MFI	microfinance institution
CIAT	International Center for Tropical Agriculture	MIS	Market information systems
CIPASLA	Inter-institutional Consortium for Sustainable Agriculture	MT	metric ton
CLODEST	Comité Local para el Desarrollo Sostenible de la Cuenca del Río Tascalapa	NAADS	National Agricultural Advisory Service
CLUSA	Cooperative League of the USA	NARO	National Agricultural Research Organization
CRS	Catholic Relief Services	NGO	nongovernmental organization
DOST	Department of Science and Technology	NZAID	New Zealand Aid Programme
DSD	direct seed distribution	QMS	quality management system
FAO	Food and Agriculture Organization of the United Nations	RATIN	Regional Agricultural Trade Intelligence Network
FASSLA	Local Agro-Enterprise Support Services Fund	SIGA	SILC Group Association
FRR	Fineline Rural Reach Ltd.	SILC	Savings and Internal Lending Communities
GDP	gross domestic product	UCAA	Uganda Change Agent Association
		UNADA	Uganda National Agro-Input Dealers Association

Preface

This guide is focused on how business development services can increase the sustainability of smallholder agro-enterprises in rural communities. By exploring theoretical frameworks and highlighting practical applications, the guide demonstrates how a variety of support services not only improve the performance of individual producer organizations and agro-enterprises, but how they also strengthen entire agricultural sub-sectors and market chains and fuel new employment opportunities in rural areas.

The guide explains the evolution of concepts and approaches to providing support for businesses in rural areas. It outlines methods for identifying existing rural business services, recognizing gaps and unmet needs, and strengthening service provision. In addition to the theory of business development services, Part 2 of the guide includes 15 case studies of real-life interventions to improve business service delivery.

The aim of this guide is to equip new and existing service providers with a set of methods and tools to help smallholder producers engage more effectively in local, regional and global markets. By doing so, smallholder farmers may enhance their capacity to innovate and compete, increase their household income and ultimately improve their livelihoods.

This guide is part of a series of agro-enterprise publications developed in a long collaboration between Catholic Relief Services and the Rural Agro-enterprise Development project of the International Center for Tropical Agriculture and their partners. The series is grounded on the area-based (territorial) approach to rural agro-enterprise development, which supports local communities to engage with competitive market chains that are equitable, pro-gender

and participatory. Its preparation has been a collaborative effort based on experiences and lessons learned from designing and implementing agro-enterprise and marketing projects in Latin America, Africa and Asia.

Titles in the agro-enterprise “good practice guide” series include:

- A Participatory Guide to Developing Partnerships, Area Resource Assessment and Planning Together
- Identifying Market Opportunities for Rural Smallholder Producers
- A Guide to Participatory Market Chain Analysis for Smallholder Producers
- A Guide to Strengthening Business Development Services in Rural Areas

Supplemental guides

- A Market Facilitator’s Guide to Participatory Agro-enterprise Development
- Advice Manual for the Organisation of Collective Marketing Activities by Small-Scale Farmers
- A Guide to Rapid Market Appraisal for Agricultural Products

These guides can be downloaded from <http://www.crs.org/our-work-overseas/research-publications/>.

The guides are intended for use by the staff of development organizations that wish to adopt a market-and enterprise-oriented approach to rural and agricultural development. They can serve as a basis for training field agents and developing staff capacity to facilitate enterprise development efforts involving rural communities and local service providers.

Acknowledgements

Catholic Relief Services and the International Center for Tropical Agriculture would like to thank the many partner institutions, farmer groups, traders and particularly the market facilitators that have worked with CIAT and CRS teams since 1998 and contributed to the development of this guide.

Particular thanks go to agencies and authors who developed the case studies to share their experiences working with business development services to support, accelerate and sustain competitive rural agro-enterprises.

We also give special thanks to the Canadian International Development Agency, the Belgian Directorate-Generale for Development Cooperation, the U.S. Agency for International Development and the U.K. Department for International Development for their logistic and financial support over many years, which has enabled partners to learn, discover and create this body of knowledge.

Technical and language editing of this document was done by Chris Wheatley and Matthew Foerster.

A special word of thanks goes to Jorge Enrique Gutiérrez for his pencil drawings.

Introduction

Improving smallholder agriculture is a critical strategy for addressing rural poverty in developing countries. More recently, it is seen as a relatively untapped source of potential production for the global food system—a system that must grow by at least 70 percent within the next 35 years to meet increasing demand while also adapting to the effects of climate change and the decreasing availability of resources.

Working with rural communities to design and implement new income-generating agricultural enterprises is complex; it takes time and dedication to be successful and sustainable. For development organizations, the agro-enterprise approach offers a method to address rural poverty and an opportunity to stimulate demand for technical and social innovations. It also helps identify areas that require support from research, finance and local policy. The agro-enterprise approach can provide a win-win situation for development organizations in achieving their goals to improve rural livelihoods.

Purpose of the guide

Traditionally, agricultural support to smallholder farming has focused on increasing production. This approach works well if the primary concern is food security and if a ready buyer is available to purchase any surpluses. Unfortunately, increasing supply often works for a limited period only, with local markets becoming quickly oversupplied as production increases. Following the laws of supply and demand, rapid oversupply in the market leads to rapidly falling prices and, in the long run, reduced income for farmers.

In other words, instead of producing what the market wants, farmers and their facilitators often expend energy on finding markets for what is already produced. Commercial viability and marketability become afterthoughts. This lack of attention frequently results in farmers ending up with unwanted produce that they are forced to sell at very low prices.

However, in the past decade there has been greater focus on a value chain approach that helps integrate farmers into the marketplace by

taking a more systems-based perspective. While this approach has been more successful than methods that focus only on production, there are still concerns and questions about the resilience of a new agro-enterprise once a project ends. In many cases, facilitators support farmers and producer organizations by offering free services or services at heavily subsidized rates. The problem with this approach is that when a project ends and withdraws external financial support, the agro-enterprises are either unable to access essential services or unable to pay for them.

Despite the sophistication of the modern food system and global marketplace, a billion people in poor rural communities regularly face the threat of hunger. In many cases, rural families struggle to meet their basic needs and must make choices whether to buy food and medicine or educate their children. To address these and other real and immediate problems of poverty, virtually all rural development projects now include a strong emphasis on helping rural families raise their incomes.

Any income-generating activity, however small, should be considered a business, and there are principles that can be followed to identify a marketable opportunity and work toward establishing this venture. This guide does not provide ideas on the core business approach, as those aspects were covered in previous guides. This guide focuses on the variety of business development services that foster agricultural entrepreneurship among smallholder farmers in developing countries and help make competitive agro-enterprises more sustainable.

This guide seeks to help rural development organizations promote and adopt market-oriented approaches to agricultural development. It focuses on providing rural business development services that agro-enterprises need to increase and maintain their competitiveness and achieve sustainable growth.

Who should use the guide

This guide, along with the broader set of agro-enterprise guides, is intended for use by any institution interested in building staff capacity

to facilitate rural agro-enterprise development. The set of guides focuses on how market facilitators can help local development agents, farmer groups, traders and support services work together to:

- Organize partners to work together within a defined area or territory.
- Assess market opportunities and select appropriate enterprises for development.
- Analyze entire value chains, and identify interventions and business planning methods to improve competitiveness.
- Strengthen critical support services needed for enterprises to increase sales, reduce costs, manage risks and diversify production.

How to use the guide

While this guide has been written as a stand-alone document, it is recommended that market facilitators read the preceding guides in their entirety to absorb the ideas and concepts prior to planning and initiating field interventions. Our experience has shown that best results are attained when agro-enterprise development processes are not implemented in a mechanical manner; rather, the principles are interpreted and adapted to local conditions based on the prevailing market environment, available resources, anticipated scale and time frame of the intervention.

What this guide includes

The guide is divided into two parts.

Part 1 is made up of three chapters that take the reader from the theory and concepts surrounding the provision of business development services in rural areas to the practical implementation of interventions to strengthen or create services that support smallholder farmers and link them to markets.

- **Chapter 1** looks at how approaches to rural development and agriculture have changed over the past 30 years.
- **Chapter 2** explains what business development services are, why they are important, who provides them and how they are delivered.
- **Chapter 3** guides the reader through the three-stage business support service improvement process, including methods for:
 - Conducting diagnostic studies to understand the current situation of service supply and demand.
 - Strengthening existing services or creating new services.
 - Monitoring and evaluating the new or improved services.

Part 2 presents 15 case studies in which services have been created or strengthened in rural areas in response to the needs of smallholder farmers and their organizations. Drawn from projects around the world, these case studies:

- Explain what approach or service is featured in the case study, why it is important, and what is innovative about the project or what makes it different from other approaches.
- Describe what was done, how it was done, by whom it was done and where it was done, and how much it costs to deliver the services provided.
- Outline the outcomes of the intervention and the challenges faced, provide information on what worked well and why, and describe the constraints and/or challenges encountered and how they were addressed.
- Highlight best practices and insights for future interventions, with particular emphasis on the potential for adaptation, replication and scale-up, and the likelihood of long-term success and sustainability of the service provided.

Part 1: A Guide to Strengthening Business Development Services in Rural Areas

Chapter 1. Theory and Practice of Business Development Services

Rupert Best and Shaun Ferris

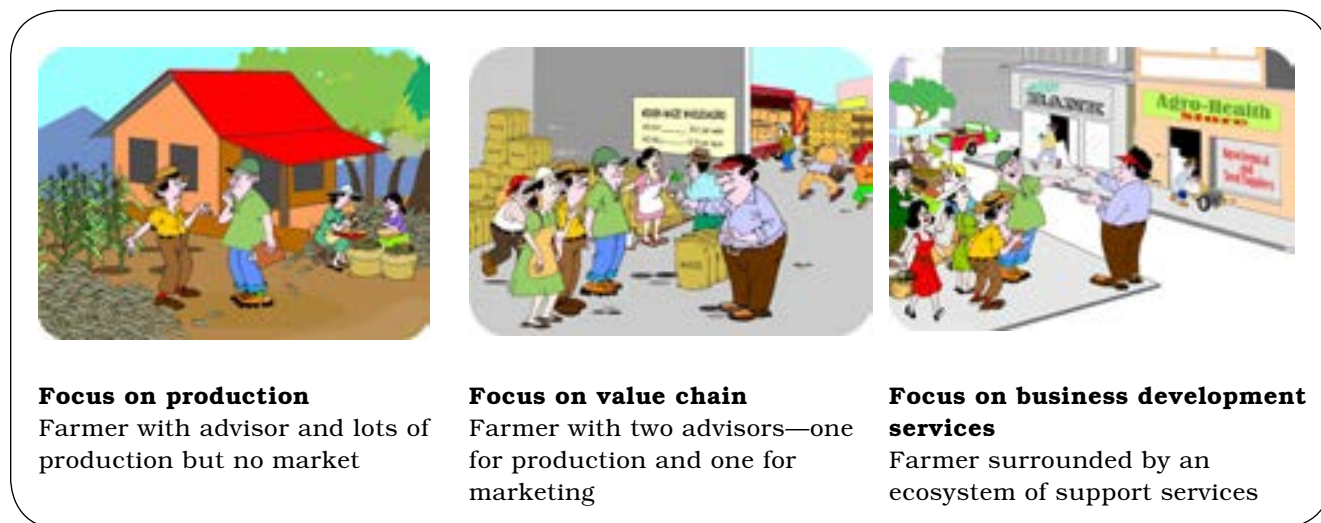


Figure 1. An abbreviated evolution of agricultural development strategies.

Trends in agricultural development

Over the past 40 years there have been a number of well-intentioned interventions to support the growth and development of rural communities. Subject to equal parts criticism and praise, these approaches have shifted over time and evolved with broader changes in economic, political, social and technological landscapes.

Today, most development organizations agree on the powerful role that markets can play in alleviating poverty, and nowhere is this more apparent than in the agriculture sector. For the estimated 1.4 billion rural people worldwide who live on less than US\$1.25 per day, there is a broad consensus that an improved agriculture sector remains the best opportunity to lift them out of poverty. The 2008 World Development Report observed that GDP growth originating in agriculture is about four times more effective in reducing poverty than GDP growth in other sectors (World Bank, 2007). At a macro level, agriculture contributes significantly to GDP, provides valuable foreign exchange earnings and often accounts for a majority of employment opportunities, especially for women, in many parts of the developing world.

For this reason, *economic development* is often synonymous with *agricultural development*. The following section briefly summarizes four periods of agricultural development.

The Green Revolution: From hunger to poverty reduction

In the colonial period, investments in the agricultural sectors of developing countries focused on export commodities. Limited attention was given to upgrading the production of staple food crops for domestic consumption or to improving the livelihoods of indigenous smallholder farmers. However, rapid population growth in the post-World War II period put increasing pressure on the local food systems.

In the 1960s, concerted international action was required to confront the threat of major famines and address chronic food insecurity, particularly in Asia, where population size had outstripped the traditional food supply systems. Large-scale public investment in infrastructure plus support for new production technologies contributed to unprecedented increases in worldwide agricultural production. Discoveries of

high-yielding varieties of staple crops, expansion of irrigation technologies, modernization of farm management practices, and the availability of synthetic fertilizers and pesticides collectively led to what is commonly known as the Green Revolution. The success of the Green Revolution in Asia led to a world view that food security solutions were available and only required replication in other locations such as Africa to achieve global food security.

Integrated rural development programs

Taming hunger proved to be a continuing challenge. In the 1970s, priorities shifted away from Asia as the global development community focused its efforts on hunger and social challenges presented by rural poverty in Africa and parts of Latin America. Championed by the World Bank and other multilateral donor agencies, many countries initiated Integrated Rural Development programs. These programs aimed to deliver multisector support, with the provision of inputs, credit and rural infrastructure to increase both the production and profitability of the agriculture sector. Given the lack of social services in many target areas, Integrated Rural Development programs included improvements in public services, such as education and health. The performance and outcomes of the programs were mixed, and the approach was criticized for being too complex, top-down and lacking community ownership.

Market reforms and the rise of structural adjustment programs

In the mid-1980s, disillusionment with Integrated Rural Development programs coincided with the rise of structural adjustment programs, which radically changed the conditions for countries receiving loans from the World Bank and the International Monetary Fund. These reforms were quickly followed by the dissolution of global commodity agreements and increased market liberalization ushered in by the increasingly active World Trade Organization. Collectively, these policies had the following effects:

- Developing countries were forced to open their markets to import agricultural products that could be produced more inexpensively elsewhere. This sparked direct competition with domestically produced crop and livestock products and jeopardized the livelihoods of millions of producers.

- The removal of subsidies on agricultural inputs, such as fertilizer, agrochemicals and seed, effectively eliminated access to these inputs for the smallholder community.
- The closure of state-run marketing boards, which purchased agricultural products on a national level at controlled prices, severely reduced market access for millions of smallholder farmers.
- The privatization or scaling back of publicly funded agricultural research and extension services effectively removed access to technology and training for smallholder farmers in poor countries, which led to massive knowledge gaps in farming practices that persist decades later.
- Countries were no longer able to sell their traditionally produced export goods based on an agreed global quota system and had to compete in the global marketplace to sell their products.

Within a relatively short time frame, smallholder farmers across the developing world and particularly in Africa faced a completely new liberalized marketplace with virtually no support measures. Services for smallholder agriculture declined and the private sector was unable to fill the gaps left by the retrenchment of the public sector. Agriculture lost favor for donors at the end of the twentieth century and rates of poverty increased, as did overall land degradation in countries that were highly dependent on rain-fed, low-input agriculture. The smallholder farmers and local trading networks were essentially left to fend for themselves and many millions of people living in rural areas have spent the past 20 to 30 years trying to rebuild their production and marketing systems.

Where we are today: Market-based approaches for agricultural development

Today, with a growing global population and a focus on the rural poor, smallholder farmers are back in the spotlight, and investment in agriculture has regained its position as a powerful force for economic growth and poverty reduction. The 2007–2008 and 2011 food price crises played a major role in putting agriculture firmly back on the development agenda. Because most smallholder farmers are actually net food *buyers*—with some households spending more than 60 percent of their income on food—these price shocks highlighted the fact that food *affordability* is just as important as food *availability*.

Developing-country governments have also started to make agriculture a higher priority. Organizations such as the New Partnership for Africa's Development, Alliance for a Green Revolution in Africa, the World Economic Forum's New Vision for Agriculture, and Grow Africa initiatives have invested in smallholder production. New institutional funders, such as the Bill & Melinda Gates Foundation, Ford Foundation and the Rockefeller Foundation, have contributed millions to researching agricultural technology and developing and strengthening markets.

New approaches to agricultural development have also more fully engaged the private sector. For example, food companies such as Mars, Nestlé, Ben & Jerry's and Unilever are making strategic investments in obtaining goods from smallholders to ensure a sustainable and diverse supply. After years of neglect, commercial banks in developing countries are beginning to lend to agricultural enterprises. Throughout sub-Saharan Africa, venture capital and private equity firms are also seeing agriculture as an increasingly important sector for investment. Similarly, commodity traders and commercial buyers have shown a growing interest in providing direct support and credit to producer groups using methods such as contract farming and establishing out-grower

schemes. Most recently, impact investors are exploring ways to co-invest in the agricultural sector as a means to support social change and generate a return, albeit lower than a commercial return on investment.

Building on this momentum, several frameworks for market-based approaches to rural development have emerged over the past few years, including the following:

- **The sustainable rural livelihoods approach.** One of the most influential frameworks used for rural development has been the sustainable rural livelihoods approach created and promoted by the U.K. Department for International Development. Marking a clear departure from the top-down nature of previous development strategies, the aim of the approach is to be responsive to people's own interpretation of and priorities for their livelihoods. The approach explicitly incorporates environmental conservation as an integral part of achieving a sustainable livelihood. Several organizations developed strategies based on this work, including the Integral Human Development conceptual framework designed by CRS in 2003.
- **Territorial approach to rural agro-enterprise development.** Increasing concern for the environment has prompted international

Box 1.

What do we mean by market chains, actors and value chains?

Market chain: A set of linkages between actors with no binding or sought-after formal or informal relationships, except when goods, services and financial agreements are purchased or sold. Market chains are also referred to as supply chains.

Actors: The various individuals, companies, organizations and associations within a market chain or value chain that are involved in producing, transporting, processing, trading or consuming a particular product. Depending on their position along the chain, other "upstream" and "downstream" actors seek to capture market share, increase profit margins and deliver maximum value for the least possible cost.

Value chain: A specific type of supply chain in which actors support each other so they can increase their overall efficiency and competitiveness. Value chain actors invest time, effort and financial resources, and build relationships of trust with other actors to reach a common goal of satisfying consumer needs and increasing profits.

Value chain approach: A set of market-oriented principles and tools designed to address the major constraints and opportunities faced by farmers, local collectors, processors, wholesalers, retailers and other businesses at multiple levels and points along a given value chain.

organizations and development finance institutions to realign their portfolios to support methods that combine productivity gains, social support and natural resource management when investing in farmer livelihoods. For instance, the International Center for Agricultural Research developed the territorial approach to rural agro-enterprise development, the components of which are presented in the guides that precede this one. This approach advocates local development institutions and private services within a defined geographic area to help farmers establish and build agro-enterprises that are economically viable and environmentally sound. The three essential criteria for selecting

an enterprise using this approach include an accessible market, potential for profit and the ability of smallholder farmers to produce a product without damaging the environment.

- **The value chain approach.** Value chain approaches aim to link informal small-scale producers to more formal markets at the local, regional and export market levels. The value chain approach takes a systems perspective with each project focusing on a single product or sub-sector. For the world's estimated 500 million smallholder farmers, participation in formal agricultural value chains brings opportunities for increased income. However, connecting small-scale producers to more formal and global markets is not simple. Formal

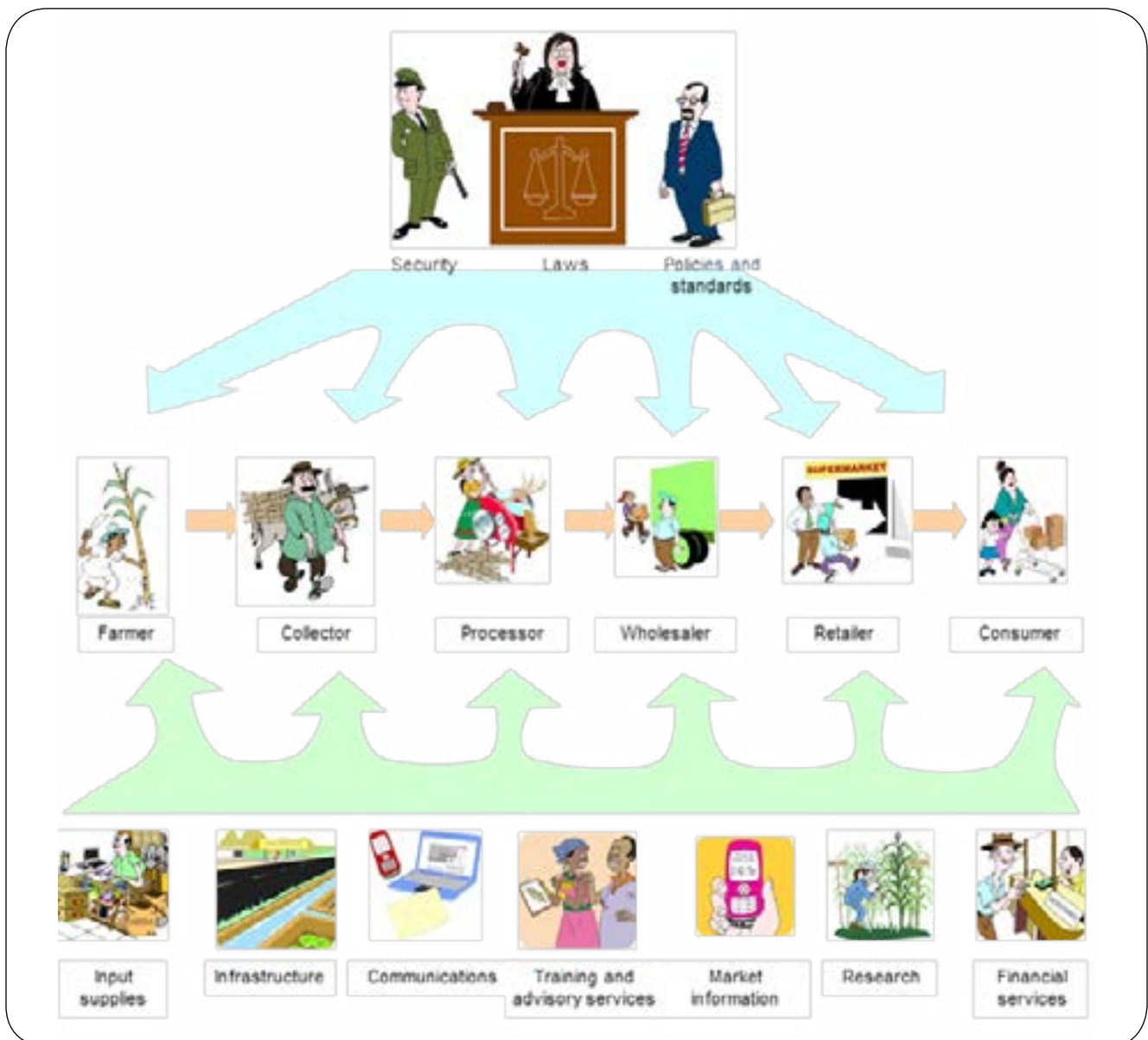


Figure 2. The three market dimensions of a value chain.

markets have increasingly strict requirements—including quality, food safety, consistency and traceability—and often demand third-party certified standards that require regular communication and coordination along the value chain.

As depicted in Figure 2, value chain approaches to development feature three distinct dimensions that must be understood and analyzed when working with smallholder farmers in developing countries:

- **Core market chain activities** include the principle actors, such as farmers, processors and traders, who perform the functions required to produce and market an agricultural product. After production, each actor physically sells or buys the product, and the functions they perform are considered a business enterprise. In this first dimension, the number of actors can range from 2 or 3 to 10 or 15 separate entities spanning multiple transactions. A value chain can be local—when farmers sell to nearby traders and retailers—but with modern market chain management, many value chains span countries and continents.
- **Key business development services** support the core market chain actors and the commercial functions they carry out. The types of services that a business needs include market access support (e.g., identification of markets, facilitation of relationships, contract negotiation), infrastructure (e.g., transport, communication, warehousing), training, technology, input supplies and finance. For example, producer groups may need advice and assistance in becoming organic or Fair Trade certified, they may require working capital at the start of the harvest season to pay farmers in advance, or they may need to build silos for storage or facilities for processing and packaging. Business development services are essential for helping the core chain actors build and grow their businesses and are often critical in driving competitiveness and sustainability of actors within value chains.
- **Key institutions and rules of the game** are the formal and informal policies, standards and regulations that govern how the core actors and business service providers conduct their businesses and deliver their products or services. Often, these rules are applied through public sector agencies, such as ministries of finance, ministries of agriculture, tax authorities or customs officials. This enabling environment, the

importance of which is frequently overlooked, plays a critical role in the functioning of markets and the ability of agro-enterprises to successfully participate in them.

The progressive ability of farmers to strengthen their linkages to markets and participate in more formal value chains depends on a variety of ever-changing factors, including:

- The skills, resources and assets to produce agricultural crops and livestock that meet certain quality requirements, or specifications and volume demands in a profitable and environmentally sustainable way.
- Access to services that support their growth and the growth of other enterprises along the chain.
- Continual reinforcement of trust, communication and commitment between the farmers and other actors along the chain, often referred to as trading relationships.
- Modification or removal of onerous policies, tariff and non-tariff barriers, and other obstacles that impede commercial transactions.

With the adoption of value chain approaches has come the need to upgrade the capacities of development organizations, by retraining or employing new staff with business and financial skills. One of the most significant outcomes of incorporating a value chain approach in agricultural development programs is the acceptance of business terminology and practices.

Making markets work for the poor

As previously outlined, value chains can be divided into three main dimensions: core activities, support services and regulation. Rooted in the fact that market systems exist even in the poorest, most challenging environments, Making Markets Work for the Poor (M4P) is a facilitative approach to poverty reduction. It seeks to understand exactly which dimensions are failing to benefit the poor and identifies actions that can strengthen the pro-poor functioning of markets (U.K. Department for International Development, 2000). M4P considers these questions both overall and in relation to specific markets for finance, labor, land and raw materials, including food. The M4P approach places particular attention on the need to strengthen support services to build more durable market linkages for smallholder farmers. It differentiates itself from other approaches in its concern with large-scale and sustainable change. From the outset of any M4P intervention, two critical questions are posed:

- How will the resources invested promote large-scale change? Large-scale change refers to change beyond a discrete number of partners and actors in a value chain project.
- How will goods and services continue to be offered and consumed beyond the period of an intervention? This question aims to focus greater attention on the sustainability of an investment project or program and on the long-term market access of smallholders after a project ends.

New business models for building sustainable trading relationships

As formal markets expand through globalization and major companies extend their sourcing reach into local farming communities, there has been a rise in opportunities for smallholders to become suppliers of large corporate buyers. This association can be through direct sales or through aggregators or intermediaries who sell into the formal system. In the context of increasingly globalized markets, smallholder coffee farmers in Rwanda or cocoa cooperatives in Ghana, for example, can now access and compete on an entirely new level.

Global brands such as Unilever, Danone and Nestlé and global trading companies are exploring ways to develop market chain partnerships that integrate smallholders into their global supply chains. While the motivation differs from company to company and is often product specific, in general the business case is a combination of firms that want to (1) create story-based products to reach the growing “ethical consumer market,” (2) seek ways to gain greater legitimacy in domestic markets in developing countries and (3) develop new and diverse sources of supply to reduce buying risks and secure future growth in supply.

Challenges with supply availability, consistency and quality when working with smallholder farmers increase the importance of partnership and co-investment to ensure that the trade is well structured and that producers are capable of reaching market specifications. When successful, such partnerships can reduce risks for all parties and gradually build mutual trust. This process of inclusive, chain-wide dialogue is increasingly visible in the growing number of sustainability certification programs, such as Rainforest Alliance, Fair Trade and UTZ.

The Sustainable Food Lab, through its New Business Models for Sustainable Trading

Relationships project, and Oxfam have identified several principles that underpin sustainable trading relationships and ensure value creation for both corporations and smallholder farmers (Annex 1):

- Chain-wide collaboration
- Market linkages
- Chain governance
- Equitable access to services
- Inclusive innovation
- Measurement of outcomes

A third-party facilitator who understands the separate worlds of commerce and development can play an essential role in supporting the creation of new and sustainable trading relationships. This type of facilitation aims to bring value chain actors together, offering safe spaces where partners can learn about each other’s challenges, share experiences and consider new ways of improving their individual businesses while supporting overall chain-wide efficiency.

Creating a bridge between the worlds of informal and modern trading offers smallholder farmers the potential for more stable and profitable income. However, smallholders will only be successful in these markets if they can consistently meet the higher-quality requirements, volumes and competitive nature of the formal marketplace. Case studies by Bright et al., (2010) have shown that three kinds of investments increase the chances of reaching poorer producers and improving the possibility of creating durable and beneficial trade:

- Adapting the trading relationships through the supply chain to fit the unique needs of small-scale producers
- Public co-investment in infrastructure and the management capacity of producer organizations as well as introducing technology options to enable farmers to meet ever more stringent market requirements and food safety regulations
- Changing, where necessary, the procurement policies, communications, strategy and culture of the lead firm to support the new trading relationships and maximize value

Farmer segmentation

The term *rural development* spans a wide range of programming, from emergency response to commercialization support for farming communities, and the needs of the world’s estimated 450 million smallholder farmers are

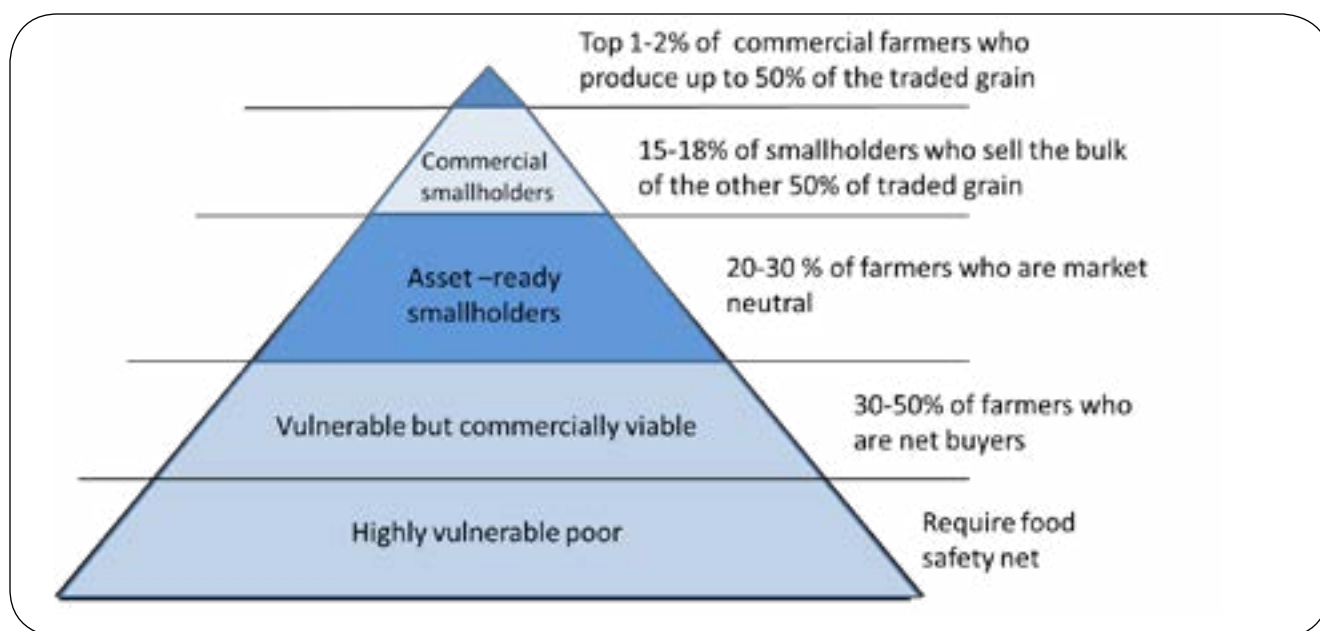


Figure 3. Farmer segments.

Source: Jayne, T. S., Mason, N. M., Myers, R. J., Ferris, J. N., Mather, D. Beaver, M., ... Boughton, D. (2010) *Patterns and trends in food staples markets in eastern and southern Africa*. MSU International Development Working Paper No. 104. East Lansing: Michigan State University.

diverse. Although defining and differentiating smallholders is challenging, there has been increasing interest in moving beyond general poverty thresholds to more accurately classifying smallholders and delivering more tailored interventions.

When seeking to capture the diversity of smallholder farmers through segmentation exercises, there is no one-size-fits-all approach. In general, smallholder farmers can be categorized on the basis of (1) the agro-ecological zones in which they operate, (2) wealth category, (3) landholding, (4) type and composition of their farm portfolio or (5) annual revenue generated from farming activities.

Similarly, the Consultative Group to Assist the Poor offers three distinct segments of households dependent on agriculture based on their level of commercialization: non-commercial smallholders, commercial smallholders in loosely organized value chains and commercial smallholders in tightly organized value chains (Christen & Anderson, 2013).

Figure 3 shows a segmentation of maize farmers based on studies of farmers in eastern and southern Africa. According to this analysis, there is an extreme range of commercial activity, with only 1 to 2 percent of farmers producing more than 50 percent of the traded maize, and

30 to 50 percent of farmers as net buyers. For development programming to be effective in terms of return on investment, it is important to offer different types of support to the different segments of farmers to increase productivity and improve profitability. They also need different types of business development services.

Conclusions from these trends

What are the key lessons we can take away from previous rural and agricultural development programs, the Green Revolution's attention to production, and today's focus on markets, finance and value chains?

Market access and economic growth are essential to eliminating poverty

- Smallholder farmers and other rural community members can contribute to economic growth by producing goods and services, employing labor and as consumers of other goods and services.
- Agriculture is an engine for rural growth, and investment in agriculture has strong multiplier effects. However, if market access is limited, the rural poor are unable to contribute to economic growth, which leads to rural stagnation.
- Effective government roles are to foster a policy and regulatory environment that supports agro-enterprise, provide basic research and

extension services to raise productivity, and provide basic infrastructure that will increase smallholders' access to markets.

Improving market access for smallholders can be achieved through two approaches: area based and commodity based

- Improving the livelihood of specific communities requires approaches that use and build on the physical and economic resources that are found within a defined geographic area or territory.
- Value chain approaches are commodity specific and not necessarily limited to any particular area or region.
- These approaches are complementary and overlapping. Ideally, area-based programs should provide the enabling environment and promote appropriate services that make it possible for smallholder farmers to engage with one or more value chains.

Farmer segmentation and market access

- Not all farmers are the same; farmers can be segmented by their assets, land area, location (including access to water and distance from roads, markets), level of organization and level of agricultural commercialization.
- By recognizing smallholder farmer segments and understanding their needs, rural investment programs can help link farmers to appropriate types of markets or service providers. For example, in Colombia and Honduras, we learned that the greatest unmet demand among farmers was training in post-harvest management (Case Study 1.1). In other countries, we found that connecting poor women farmers to markets was significantly improved when the first step in the development process was to gain financial and management skills within a savings groups before selecting a product and working on value chain support.

Smallholders need business skills to engage with markets

- Smallholders must be able to identify enterprise opportunities, access and manage

financial resources, control costs, negotiate sales with buyers and achieve profitably.

- Organizations that foster market-based interventions can positively influence successful enterprise development. However, to be their own effective change agents in market development, smallholder farmers must understand finance, how markets work, where enterprise opportunities exist, how businesses are started and how they grow, and the risks involved in such investments. For these reasons, training is key.

Sustainability is fostered through stronger business development services

- Business development services enable farmers to access the necessary support to grow their agro-enterprises when project-based investment is withdrawn or scaled back.
- This guide is part of a series aimed to help staff within organizations that seek to link smallholder farmers to markets. This particular guide focuses on understanding how business development services can assist individual farmers as well as small- and medium-sized enterprises to operate more efficiently. This guide will also support project managers and field agents in designing activities to identify and strengthen business development services.
- The fundamental point of this publication is to underline the idea of *business sustainability*. A major outcome of many agricultural projects is that project staff provide farmers with free or low-cost services that help to foster a farm enterprise. While this approach may boost production and income in the short term, withdrawal of support services generally leads to failure of the enterprise in the long term.
- For smallholder farmers to build more resilient farming enterprises, it is necessary to not only identify and support the development of agricultural business opportunities, but also to foster the support services that enable them to flourish.

Chapter 2. What Are Business Development Services?

Rupert Best and Shaun Ferris

Business development services refer to all financial and non-financial support that an individual farmer or a small- or medium-sized agricultural enterprise needs to:

- Innovate, produce and market a particular product.
- Increase access to markets, revenue, profitability and productivity.
- Forecast, manage and mitigate risks.
- Add value to or diversify production.

Box 2.

Categories of business development services.

Service Category	Description
Technology and product development	Technology and product development services support research and identify new and innovative ways to produce, process and market agricultural products. This includes new mobile information systems and improved, drought-resistant seed, for example.
Training and technical assistance	Training and technical assistance services develop the capacity of farmers and enterprises to better plan and manage their operations and improve their technical expertise—from accounting to agronomy. Providers develop and offer sustainable training and technical assistance that producers are willing to pay for, and they foster linkages between other service providers and enterprises.
Input supply	Input supply services help farmers improve their access to and use of raw materials and production inputs, such as seeds, fertilizer, agro-chemicals and tools. They facilitate linkages between farmers and suppliers, and enable suppliers to both expand their outreach to farmers and develop their own capacity to offer better, less expensive inputs.
Finance	Financial service providers offer credit to smallholder farmers, producer organizations and agro-entrepreneurs, usually in the form of loans. Providers can be considered “formal” (e.g., commercial banks, microfinance institutions and social lenders) or “informal” (e.g., savings and loan cooperatives, moneylenders). Other services help producers identify and access funds, for example, helping enterprises prepare loan applications or business plans. Financial services can also include supplier or buyer credits, warehouse financing, equity financing and venture or private equity capital.
Market access	Market access services identify and establish new markets for smallholders and agro-enterprises. They facilitate the creation of linkages between all actors in a given market and enable buyers to expand their outreach to and purchases from rural producers. They also help entrepreneurs develop new value-added products and meet buyer specifications.
Infrastructure	Infrastructure services establish sustainable infrastructure and distribution networks that enable producers to increase production, sales and profitability. Examples include irrigation, refrigeration and storage, processing facilities, transport systems, loading equipment, communication centers, improved ports, and expanded road and rail routes.
Policy and advocacy	Policy and advocacy service providers conduct research and analysis to improve overall terms of trade, strengthen sectoral governance and correct any power imbalances. These service providers also identify and seek to reform policies and regulations that constrain smallholder farmers and agro-enterprises, and they facilitate the organization of businesses, donors, government officials and academics around inclusive, pro-poor policies.

Services commonly provided fall into seven categories: technology and product development, training and technical assistance, input supply, finance, market access, infrastructure, and policy and advocacy (Box 2).

Adapted from: Miehlebradt, A. O. & M. McVay. (2003). Seminar Reader. Business development services: Testing the guiding principles. Turin, Italy: International Labour Organization.

Delivery models for business development services

Services can be delivered by a variety of actors across a range of formats. For instance, a transporter offers a highly specialized single service, whereas an input supplier may offer a range of services in addition to the provision of inputs, such as finance or agronomy training. Generally, we can categorize business development services as general support services and sector- or product-specific services.

General support services

These are sometimes referred to as crosscutting or non-sector specific services. For instance, if 20 farmers are part of a group or cooperative, that organization may receive training in business management, accounting and marketing. These

are general business support services that are not unique to a sub-sector or crop. Similarly, a vegetable farmer and a livestock farmer could use their mobile phones to check the prices of their products in local markets. They obviously depend on a business to provide them with comprehensive, accurate and timely market information, and that business is most likely serving several other clients, perhaps across multiple sectors and regions. In much of the development work conducted over the past 40 years, the areas of rural finance and agriculture have been undertaken separately. Financial services can also be referred to as general business development services; however, farmer segments and production activities require different financial products. The importance of more general services is that demand for them will come from many sectors and value chains, and their provision is likely to be more easily sustained than specific services, which cater to a smaller number of users.

Sector- or product-specific services

Business development service providers can also adopt a more narrow focus to address the needs of specific agricultural sub-sectors. For example, a vegetable farmer who needs seed and fertilizers may seek advice from an extension agent or an agricultural researcher with specific knowledge of

Box 3.

Types of support services provided to the agri-food sector by category.

Type	Examples of Services	
Single service providers	Fertilizer suppliers Seed merchants Millers Transport	Market information price Warehousing Infrastructure (roads, power, water) Telecommunications
General service providers	Input supply (general) Credit, savings and insurance Market research and intelligence Farmer organizing Mobile phone services Agricultural extension (general)	Market research Business management Legal services Food safety, quality and compliance Sustainability certification Post-harvest management and storage
Sector/product specific	Input supply (specific) Veterinary services Agricultural extension (specific)	

vegetables. Alternatively, a livestock farmer who has no interest in irrigation technology or seed will be interested in accessing livestock medicines and may seek advice from a vet or an expert in animal husbandry.

Who provides business development services

Public sector agencies

Public policies related to agricultural production and trade play a fundamental role in ensuring inclusive, sustainable development of small-scale farming, particularly with regard to women. Public sector agencies, such as ministries of agriculture and other entities, provide a range of services to smallholder farmers and to agro-enterprises, including agricultural extension and research services. Farmers have traditionally received these services free of charge. Unfortunately, lack of public finances and rapidly rising populations have severely reduced the coverage of most extension services, thereby restricting their ability to reach isolated farming communities. In the past, governments provided seed and fertilizer supplies and commodity marketing and buying boards to help boost production and offer farmers a market option. The supply services have waned and commodity boards have mostly been dissolved. Most farmers now sell as individuals through local traders to wholesale and retail markets. Most of the market locations and structures were established through infrastructure investments by government and many are too small to support current trading levels.

In a limited number of countries, there is a move to replace commodity markets with commodity exchanges, such as the Ethiopia Commodity Exchange. This type of market provides effective price discovery through its buying floor and sets basic standards to support long-distance trade for a select group of products. Most countries invest in agricultural research to produce better varieties and improve farmer practices. However, many national research agencies have suffered from protracted periods of limited financial support and there are now significant innovation gaps, particularly for orphan crops and livestock that offer limited commercial benefits. This explains why most private companies support hybrid maize, beans and vegetables, but rarely support research in improved millet and sorghum, root crops and other legumes.

Nonprofit organizations

Local and international nongovernmental organizations (NGOs) provide a wide range of services in support of farmer productivity and market linkage activities. NGOs receive funds from individuals and donors to fill the service gaps left by retrenchment of government support and market failures within the private sector. NGOs often use their funds to subsidize services or to support the development costs of a new service. In many cases, NGOs also provide free services, such as technical assistance and training, and they occasionally pre-finance certain assets. However, the coverage of NGOs is partial at best, and in many cases their work is focused on serving the poorest communities, rather than the more commercial smallholder sector. We discuss the practice of providing free or subsidized services below.

Private companies

As the public sector's ability to provide services has declined, there has been a significant increase in the provision of services by various levels of the private sector. These services include sales of equipment and infrastructure, technical assistance, agronomy training, accountancy, business planning and legal services, among several others. Private sector providers often demand a fee for their services and their sustainability depends on farmers' willingness and ability to pay.

In many circumstances, input supply companies view smallholder farmers as both suppliers of agricultural products *and* customers of business development services. Many input suppliers provide farmers with inputs on credit and at the end of the season, buy the harvests of their client farmers. In other cases, agrochemical firms and agricultural equipment distributors sell their goods, but they may also provide technical assistance and training for their clients or prospective clients on the use of their products (e.g., how to control pests and diseases and how to properly apply the correct fertilizer dosages for different crops).

Increasingly, supermarkets, agri-food processing and exporters provide technical assistance and training to farmers within specific value chains as a means to ensure the quality of the product they receive meets their specifications. These companies also frequently offer farmers and producer groups affordable financing options for short-term working capital and long-term expenditures. For example, as part of its Livelihood Charter, the global commodity-

trading firm Olam has provided zero-interest loans to farmers, plus training and input procurement. While some companies charge farmers for these advisory services, the cost of providing them is often factored into the cost of the product when purchased from a producer. When the cost of a service is included in the cost of a commercial transaction, it is known as an *embedded service*. Embedded services are described in more detail below.

Banks and other formal financial institutions

Access to finance remains a major challenge for rural communities whose livelihoods depend on agriculture. Poor financial literacy, lack of credit history and limited collateral restrict smallholder farmers' ability to access the capital they need to invest in and expand production. At the same time, commercial banks and other formal financial institutions have failed to offer adequate financial services due to perceived and real risk factors; this is especially true when considering disaggregated and geographically dispersed agricultural value chains supported by farmers who practice rain-fed production systems. Rain-fed farming is considered a high-risk enterprise, as poor rains significantly reduces yields.

Over the past several years and with support from loan guarantees or other credit enhancement mechanisms from donors and multilateral development institutions, banks have widened their reach and are beginning to expand lending to smallholder farmers—from large multinational institutions, such as Rabobank, to local domestic firms, such as Equity Bank in Kenya.

In Kenya, much of the expansion in access to rural finance was brought on by the rapid growth in mobile money through M-PESA, a mobile phone-based money transfer service that helped spread the reach of financial services and reduce transaction costs. Additionally, various social lenders and impact investors, such as Root Capital and responsAbility Investments, have developed unique models to provide finance to farmers and rural entrepreneurs using forward contracts as a form of collateral. More recently, traditional venture capital and private equity firms have sought to invest in agriculture. Of course, large multinationals are also making strategic investments and offering trade finance through their sustainable sourcing initiatives (Case Studies 4.1 and 4.2).

Local and informal service providers

In rural areas, there are many informal private sector providers of inputs, information, technical advice, training and finance. For instance, individuals or groups of farmers who are particularly skilled at producing a particular crop may also set themselves up as seed producers if demand for seed offers a business opportunity, or a cooperative may buy other inputs in bulk and sell them to their members at the wholesale price. This approach has been extended to other areas, such as for savings-led microfinance and even for general information and communications support.

The Grameen Foundation has developed a program around community development workers, who are given a smartphone and a charger and receive training on how to access specific types of information for the community. This program typically starts as a subsidized service, but then transitions into a fee-based service as the community uses the service to fulfill their information and communication needs.

CRS is pioneering a similar service for savings-led programming in which a person from the community is selected and trained as a private sector service provider to help set up savings and internal lending groups. The service provider then provides training to group members on how to organize, manage and operate the groups and supports the management committees in bookkeeping, with advice offered for a small fee.

These informal service providers play an important role in rural communities in the absence of formal fee-based services. These service providers are often most suitable when providing services to smallholder farmers in disaggregated and geographically remote value chains, as they are sometimes the only service provider in the area.

Who pays for business development services

How business development services are paid for helps explain how such services are provided. This understanding helps in decision making when attempting to fill service gaps or improve the quality of existing services. Generally, services are supported in three ways:

- **Free public services.** These services are financed by the government or through donor-financed

projects. These services are usually provided through NGOs or public sector agencies.

- **Specialized fee-based services.** These services are provided by private firms and specialized companies at a cost.
- **Embedded services.** These services are included within a commercial transaction. The individual farmer or agro-enterprise does not pay direct fees for the embedded services, but the cost of providing the services is included in the price paid for a particular product—for example, quality specifications and production tips from a buyer to a small-scale supplier. In the case of hybrid seed, farmers receive seed that has an insecticide coating; the cost of the insecticide is not charged separately but is embedded into the overall seed price. Similarly, technical assistance and services might be included for one year after the purchase of an irrigation pump. In certain financial transactions, crop insurance is embedded into the cost of a loan.

Delivering business development services

Moving from a supply- to a demand-led approach to service provision

As previously explained, governments relied on public funds to provide free or heavily subsidized services to millions of farmers in the 1970s and 1980s. However,

market reforms in the late 1980s and 1990s led to a rapid reduction of government services.

To fill this void, donors supported a series of privatization programs to catalyze the growth of the fledgling private sector. Unfortunately, in many cases the transition was too rapid and in the absence of strong local private sector partners, many donor-supported projects were forced to provide goods and services directly to clients. This went against the original intention, which was to provide goods and services through a facilitated private sector. Widespread project support was attractive to poor smallholder farmers, but it was also widely blamed for crowding out private sector provision of services (Figure 4). The transition period from government services to private sector services has proven to be very long term. Many rural communities still have few opportunities to access private services and millions of farmers have insufficient incomes to pay for them.

The challenges in service provision have led to a dilemma. Essential services are in many cases still provided publicly through a combination of donor, government and NGO financing mechanisms. Some services, such as sales of hybrid maize seed, support strong and concentrated demand; these services are supplied directly by the private sector or through subsidized private means and linkages with community volunteers. The dilemma is that

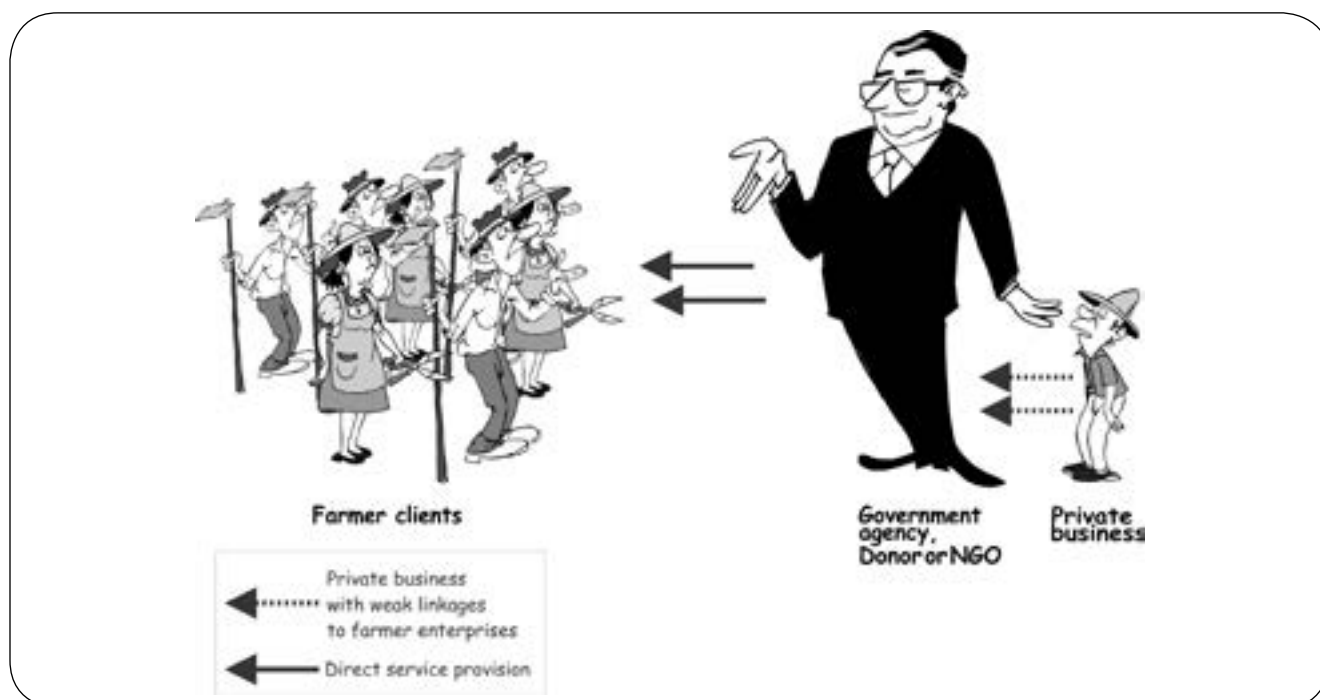


Figure 4. Strong government or public sector dominating service provision.

many services to smallholder farmers are in some way based on short-term policy subsidies or are project driven, and therefore, these interventions are short term. When a project or short-term government subsidy ends, the services are withdrawn and newly developed businesses and farming opportunities may collapse if they are not sustainable in the absence of essential services. This has led to an ongoing concern about the sustainability of short- to medium-term development projects.

The failure of the model in Figure 4 to achieve sustained growth of entrepreneurial activity has sparked some donors, government and development organizations to reconsider how to provide support to production and market development projects.

Market principles should be applied to service provision in the same way they are applied to physical products. Clients—in this case core chain actors, such as farmers, processors and traders—demand services, and project funds are used to assist local private sector service providers to meet their needs.

This market orientation means that projects are designed to develop business skills alongside the core chain actors and, at the same time, to identify, foster and strengthen business skills of those that provide support services.

The use of a systematic approach is required to investigate the need for a service and the supply and

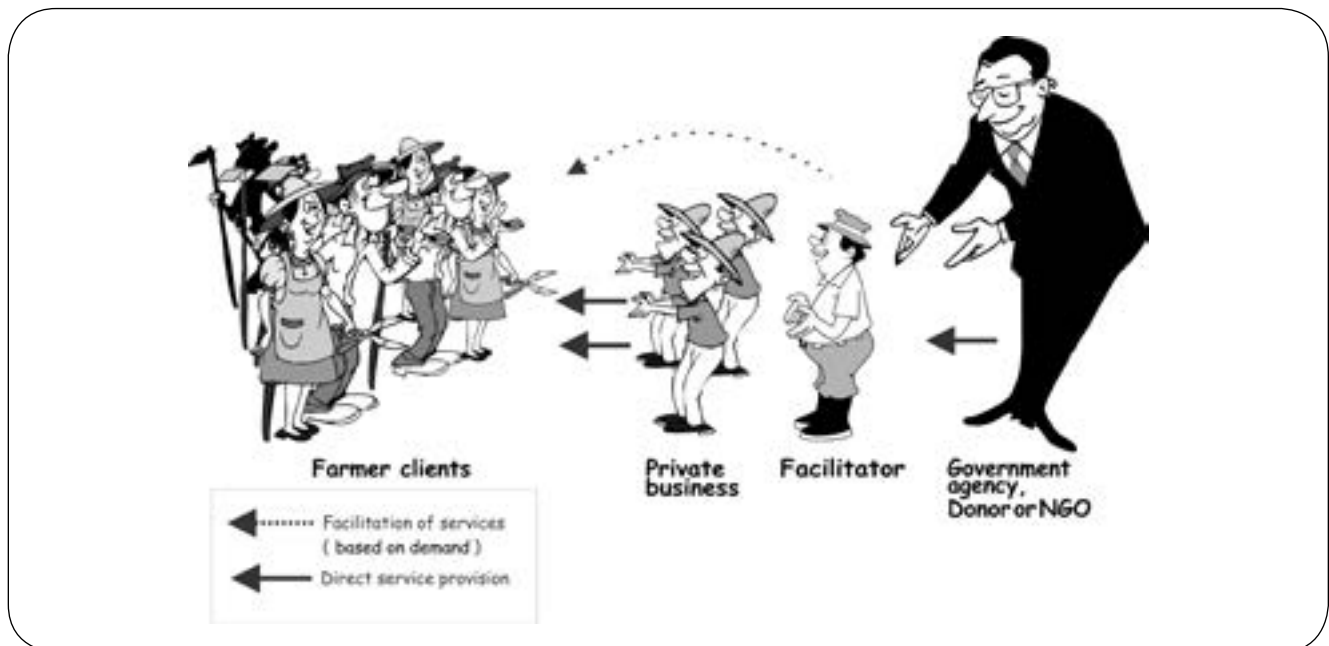


Figure 5. Public sector facilitation of private sector service provision.

The basis of market-oriented approaches, as indicated by M4P, is to shift away from directly providing publicly funded goods and services, and move toward support that facilitates a more sustainable business development environment. Market-friendly projects aim to enable private sector actors to build their capacity to provide services demanded by value chain actors and their enterprises. The important change is the role of development organizations from providing services directly to facilitating or supporting the private sector to provide the services (Figure 5).

demand opportunities for that service. Specifically, it is essential to answer the following questions:

- Which services are essential and which are desirable?
- Which services exist and which are absent?
- Are existing services effective and useful?
- Are existing services accessible and affordable to the target client?

The analysis may highlight mismatches between supply and demand and suggest whether existing or new private sector providers can resolve these differences. Mismatches might include:

- Gaps where demand exists but supply does not.
- Gaps where demand exists but supply is deficient due to:
- Quality issues in which a service exists but does not meet the needs and demand of clients, for example, training courses that are too long or theoretical.
- Coverage that is restricted geographically or by type of client.
- Coverage that can be accessed by clients but is not affordable.
- Duplication, where supply exceeds demand, perhaps due to overlap of projects providing similar services, such as farmer training.

If a service requires strengthening, the project needs to feature measures to improve the ability of providers to fill the identified gaps, or upgrade the relevance or quality of their service. For example, as part of a needs assessment conducted by AT Uganda, more than 2,000 agro-input dealers were asked to rate a number of business skills according to their perceived importance and their own level of competence. The skills ranked as most important by the largest proportion of dealers included business plan development, internal auditing, financial analysis, networking and management of farmer demonstrations. These survey results guided the design, implementation and monitoring of a project aimed at strengthening access to capital and business services for agro-dealers (Case Study 2.2).

Additionally, in areas where total gaps exist, it may be necessary to encourage new providers to enter the service market. Also, competition between providers is seen as useful in promoting efficiency and relevance, increasing coverage and reducing costs. Chapter 3 investigates more deeply how a systematic approach can be applied to identify gaps and improve the provision of business development services.

Constraints to service delivery in rural areas

A market-oriented approach to business development services works well in urban situations where participation in markets is longstanding and has received greater support. However, in rural areas a number of constraints make the introduction or improvement of business development services more complex.

On the demand side, constraints include:

- Unfamiliarity of markets and the benefits that services provide.
- Reluctance or inability of smallholders, especially the poorer members of a rural community, to pay for services, even if those services are needed for them to make more money.
- Lack of non-financial capacities to take advantage of business services, including general awareness that such services exist.
- Imbalance in power among chain actors that inhibit access to services by some actors.
- Prevalence of subsidized or free services provided by the public sector or donor-supported development projects have eliminated incentives for smallholders or producer groups to pay for services.

On the supply side, constraints include:

- High costs involved in providing services to clients that are geographically dispersed, especially the poorest communities where road and transport networks are the least developed.
- Real and perceived risks of working with smallholder farmers (e.g., limited income, minimal collateral, unpredictable and highly seasonal cash flows).
- Lack of qualified human resources to deliver expert services at an affordable cost in remote areas.
- Prevalence of subsidized or free services provided by the public sector or donor-supported development projects that crowd out the development of sustainable service markets.

One traditional challenge of rural areas has been poor communications; however, this has been overcome largely through mobile technology. Mobile phones are a vital service in transforming and facilitating access to important services, such as market information, financial services and technical extension advice (Case Study 2.3).

Implications for the design of development projects

Distortion of demand

As previously discussed, the demand and supply of services in rural areas can be highly distorted by government actions and development projects, especially those that provide free or heavily subsidized services. This is a major problem for development projects in poor areas, where the aim of the project is to provide support to communities that are living in extreme poverty or emerging from an emergency or economic shock. In such cases, the natural inclination is to give

people seed, tools and advice; provide transport; help build roads and bridges; and generally assist people to produce more and link them to markets.

Some people view the supply of free or subsidized services as filling gaps that are caused by societal or market failures. Others see it as inhibiting the growth of market-oriented services.

With limited financial resources, the public sector provides services that are usually limited in terms of timeliness, quality and coverage, especially in more remote areas. The focus of support is usually on production. Despite these drawbacks, government support to agriculture in rural areas is rarely time bound.

On the other hand, development projects are typically better resourced and offer services more aligned to poverty alleviation and livelihood goals. However, these support measures are limited to the lifetime of a project, often 2 to 5 years, and are dependent on continued donor funding. Coverage is also limited to the project area and often to specific target groups.

Designing agricultural interventions with a market-oriented approach to service provision requires that development practitioners:

- Have a clear understanding of how the market for business development services function. This requires an initial market assessment to determine if distortions in service markets can be removed or mitigated.
- Clearly separate the role of field staff who will facilitate the promotion of services and the local entrepreneurs who will provide the services.
- Develop a clear vision for how end-of-project sustainability will be achieved. What is the time frame? What are the goals and milestones leading up to the project's completion? Who will provide what type of service, how and at what price? Based on this vision, design a responsible and clearly defined exit strategy and broadly communicate it to all stakeholders.

Sustainability of demand and supply

The demand for a service only exists where there is an ability and willingness to pay for the service. Without the financial means to pay, the client has a "need" that cannot be turned into a "demand"—many rural services are likely to fit into this category. Other mechanisms are required in

such situations to provide services in a market-oriented manner.

Figure 6 shows the two types of service delivery. The bottom left corner shows a target group of people who can afford to pay for a specific service. This area of support can be extended through the development of new types of service mechanisms, through cost reduction and advertising or sensitization projects.

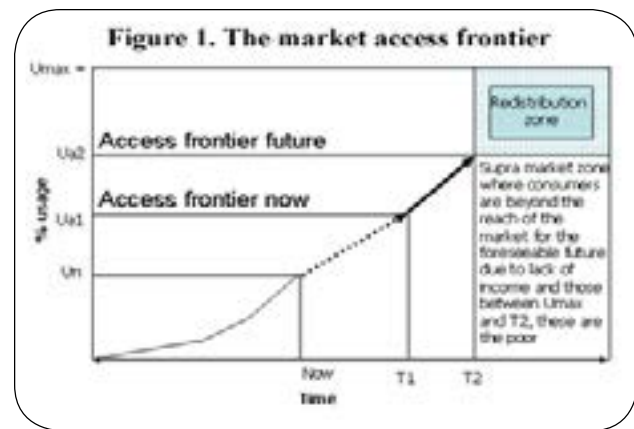


Figure 6. Market access frontier.

Source: Adapted from Porteous, D. (2005). *The access frontier as an approach and tool in making markets work for the poor*. U.K. Department for International Development.

However, as indicated in the top right corner, there will always be a subset of people who cannot afford the service; these individuals fall into a redistribution zone, where services are either not available or provided at subsidized levels or for free. The goal of projects that work according to the principles of financially sustainable development is to find ways of providing services to poor communities that encourage them to use services and prosper, and eventually gain access to the longer-term fee-based services.

In designing interventions to improve access to services, practitioners need to:

- Understand the needs of clients at the household and community levels.
- Understand the finances of clients at the household level and for specific products that the project supports. This may include key staple crops, cash crops or livestock. It is important that field staff understand and appreciate the amount and timing of cash flows associated with various products (Case 5.1).

- Make smallholder farmers aware of the importance and implications of using services to improve the profitability, sustainability and growth of their enterprises (e.g., animals will die if farmers cannot access veterinary services; yields will remain low without fertile soils).
- Identify existing services that are provided by informal service providers and for which no payment is expected. Support the means by which entrepreneurs can extend their business and social relationships (e.g., strengthen support from local traders or informal input suppliers, rather than replacing them, as trading relationships go beyond the life of a project).
- Look for opportunities to embed services in commercial transactions. This avoids the perception that a service has to be paid for directly (e.g., working with traders, wholesalers or retailers to provide technical assistance and training for farmers in meeting quality standards that buyers demand).
- Provide technical support to existing service providers to better assess the demand for services and then to modify or upgrade their offerings to meet these requirements and reduce the costs of service provision.
- Use temporary and targeted subsidies for some essential services (e.g., the provision of seed until farmers can either produce their own seed or organize to buy bulk seed at a lower cost) (Case Study 2.1).
- Co-invest with farmers and entrepreneurs so that both parties have a stake in the success of an investment, rather than looking for entitlement funding.
- Establish local networks of private sector service providers who can sell specific services on a part-time or full-time basis; examples include training in financial services, commission agents who help aggregate buying of goods from input suppliers, and local para-vets who sell basic medical needs to livestock owners.

The mobile revolution

Increasingly, millions of smallholder farmers and micro-entrepreneurs are being empowered through the convenience and affordability of mobile technology. For many, mobile phones have become essential tools that have strengthened business ties and opened up new opportunities (Ferris, 2012).

In finance, mobile technologies have reduced transaction costs and deepened the reach of banks and microfinance institutions, allowing them to more effectively serve smallholder farmers across remote areas. For instance, M-PESA has transformed Kenya's economy since launched by Safaricom in 2007 and has become the most successful mobile phone-based financial service in the world; its 23 million subscribers transfer about 25 percent of the national GDP through the system each year. The system has revolutionized the business of farming for both commercial growers and smallholder producers. For example, the Syngenta Foundation and UAP Insurance provide farmers with index-based weather and crop insurance under a program known as "Kilimo Salama," using M-PESA to collect small premiums and issue payouts.

Other private sector actors, NGOs and governments are investing in a wide range of mobile technologies to link farmers with information, services and market opportunities. This includes using mobile phones to inform farmers about best planting dates for crops in their locations, help farmers and agri-dealers detect counterfeit seed and fertilizer, map land ownership, share price and market information via SMS, and learn crop management practices by speaking with an expert agronomist at a call center.

The rapid rise and proliferation of mobile technologies has also resulted in new analytical business tools and calculators to equip farmers and producer organizations with production and sales data to help them make informed business decisions. For example, Esoko has pioneered a market information service that enables farmers with mobile phones access commodity prices in major markets in a country, make offers and bids, and ask questions to a helpline (Case Study 2.3).

Other firms are pursuing opportunities to apply data-driven solutions to agriculture, including start-up ventures such as Cropster, Frontline SMS, Farmerline, Sourcetrace, Zerion and many more. CRS worked with partners to develop a business planning tool and profitability calculator known as Farmbook. This tool enables field agents to register farmers, build business plans and evaluate the profitability of specific products.

Chapter 3. How to Improve Business Development Services for Smallholders

Christopher Wheatley

This section covers the process of designing, implementing and improving the provision of business development services. It is structured around three stages. For each of these stages, the guide provides specific methods and illustrates them with examples from the case studies in Part 2. Lessons drawn from the wider development literature are also included.

- **Priority setting and planning.** Priority setting refers to the services themselves as well as the target groups of service users and providers. This stage begins with conducting a diagnostic study to establish a baseline understanding of service supply and demand, and the context in which the services will be performed. This context may relate to a geographical area or community, or to a specific commodity or value chain.
- **Implementation.** In the implementation stage, the plans developed are carried out to meet the agreed objectives, based on the priorities, service deficiencies and opportunities identified.
- **Monitoring, evaluation and learning.** Given the balance between core chain actors and service providers, it is critical that monitoring and evaluation systems are in place to capture and track both sets of stakeholders during implementation. Feedback from performance monitoring enables the actors involved to modify and refine service delivery and to ensure sustainability during and after the project. Precise monitoring also provides accountability to stakeholders in the process, including donors, government agencies, private sector partners and nongovernmental organizations (NGOs). Lastly, documentation and dissemination is essential to scaling up successful approaches and ensuring that project learning goes beyond individual interventions.

The case studies in Part 2 have gone through the three stages, although some focus more on the implementation stage than on the planning or monitoring, evaluation and learning stages.

Priority setting and planning

Entry points for business support initiatives

The two project approaches in this guide, value chain based or area based, represent different entry points for providing business development services. While the value chain approach allows the project team to focus on specific services that support targeted products, an area-based approach is more open and flexible, with the potential to provide services across a wider range of commodities and farmer segments. The case studies in Part 2 cover both value chain and area-based approaches.

In both approaches, the first step is to gain an understanding of the current state of rural services. This step provides the basis on which interventions can then be designed, prioritized and promoted, and establishes the rationale and need for investing in services in the first place.

Which product, what service?

In some of the case studies, product selection occurred during project design. In the examples of dairy and passion fruit in Kenya, calamansi in the Philippines and navy beans in Ethiopia, products were selected during the project design phase, based on partner analysis and criteria, such as importance to smallholder incomes, market linkage prospects and value-added potential.

When using the area-based approach, some projects identified specific services based on initial needs assessments. Examples include a project that redesigned sales and distribution systems for improved seed in Burkina Faso (Case Study 2.1) and a project that organized input supply companies in Uganda (Case Study 2.2). Additionally, given the critical and constant demand for financing among smallholder farmers, financial services were also typically identified during the design phase. In Tanzania, for example, CRS looked to the project itself and introduced informal Savings and Internal Lending Communities among participating farmers (Case Study 5.1).

Other area-based projects evolved their service offerings over time. For example, in El Salvador CRS recognized the need to establish agribusiness centers in rural municipalities that were not served effectively by the public or private sector (Case Study 1.2). However, these centers did not start out with a rigid framework for what services would be offered; instead, they tested the waters, gradually adding and adjusting services to meet the needs of their customers—local smallholder farmers. Over time, the centers became rural hubs of commercial activity and served as agents for coordination among value chain actors—linking traders and representatives of commercial brands with producer associations and cooperatives.

Focusing on opportunities

The project team needs to be aware that many rural development projects are designed from a “problem-focus” orientation. But perhaps more importantly, successful projects also need to be “opportunity-focused.” Before starting an implementation plan, the project team needs to review the situation and find out if any opportunities have been missed. Markets are dynamic and teams need to be ready to take advantage of opportunities for new crops, new markets and new partners as they emerge.

The diagnostic study

In the value chain-approach, once a product has been selected, it is necessary to conduct a diagnostic study of the entire chain to identify relevant actors and understand flows of material (including inputs, raw materials, products and by-products), finance and information through the chain. Diagnostic studies should also identify problems or bottlenecks at each link in the chain. There are many guides already published that cover the value chain diagnostic process in detail.

For projects that include support for business development services from the outset, an analysis of existing services must also be included within the scope of the diagnostic study. Practitioners should document services from both the demand perspective (i.e., service users) and supply perspective (i.e., service providers) (Boxes 4 and 5).

To do this requires that surveyors ask detailed questions to actors along the value chain. This type of analysis is not as straightforward as it may first appear; surveying the availability and nature of existing services requires a nuanced approach and needs to be undertaken with care to elicit meaningful responses. Rural service

users, who are often smallholder farmers or small enterprise owners with limited formal education, may not be familiar with the concept of services and are unlikely to respond to a question such as “What business services do you use or pay for?”

This is especially true when investigating the use of informal and embedded services provided by other chain actors, such as traders and processors. The source and even existence of these services are often not immediately obvious to the users.

Assessing service supply and demand provides a picture of the existing service market. It makes sense to assess demand before supply, as one output of the demand-side exercise will be a list of the service providers who will then be surveyed for the supply-side study that follows.

Analyzing the demand for business development services

A “demand” is not the same as a “need” or “want.” Investigation of “willingness to pay,” whether in cash or in kind, helps determine overall market demand and is a common means of differentiating between wants and needs.

Experience from several cases has shown that rural households are reluctant to pay for services that are currently or have previously been offered for free, even if the services were subsidized, poor quality or limited in coverage. For example, in many value chains, agricultural extension and agronomy training may be needed, but few farmers are willing to pay as they either do not see the immediate value of these services, or more commonly, they are accustomed to receiving these services for free. Conversely, embedded services may be paid for without the client even realizing it, as it can be difficult to tease apart the various elements of a bundle of goods and services provided to a contract farmer or out-grower by a trader or buyer (Christen & Anderson, 2013).

Box 4 shows a sample checklist of questions to elicit the information needed to understand demand for services.

Additionally, care is needed to identify gaps in service provision, both in terms of absolute gaps for non-existent services and relative gaps where service quality or coverage may be deficient. Existing services may suffer from a range of deficiencies, such as:

Poor quality or irrelevance—not responding to the characteristics of the area or value chain, nor

meeting the needs of the client. This is especially problematic when considering free or highly subsidized services where the user has little say about service content or delivery and feedback loops are minimal or non-existent.

Limited coverage—available only for a restricted client base, geographic area or group of value chains due to budget limitations or other constraints.

Limited sustainability—due to poor design, misaligned incentives or time-bound, project-based funding.

Inadequate frequency—due to budgetary constraints of the service provider.

High cost—often occurs when services are provided mainly to clients operating in the

commercial agri-food sector, or to a highly dispersed rural client base.

Analyzing the supply of business development services

This second-stage exercise should be based on the results of the demand-side study to ensure that all the service providers that were identified are included. Providers comprise (1) formal institutions, such as public sector agricultural agencies, NGOs or input suppliers; (2) core value chain actors themselves who may also offer embedded services; and (3) local, informal service organizations, such as savings and loan cooperatives.

When identifying existing services, teams should include relevant aspects of their costs, sustainability, coverage and frequency of provision.

Box 4.

*Sample checklist of questions for investigating service **demand**.*

General information

- Record name and contact details of service user/client.
- Distinguish type of entity (e.g., household, farmers group, small business, cooperative).
- Describe type of business activity (e.g., primary production of crops/livestock, processing).

Service inventory

- List and define services used. (This often requires prompting to uncover the full range of services, for example, production, post-harvest, marketing, organizational and financial services).

Service description

- Describe each service identified.
- Determine who currently provides each service.
- Determine who else has provided each service in the past, or who could potentially provide it in the future.
- Identify the frequency of service.
- Identify the methods and mechanisms for service delivery (e.g., in person on farm, in person at community center or on a demonstration plot, via nearby farmers, via mobile).

- Document the geographic reach and crop coverage of the services (e.g., crop specific, across commodities/value chains).
- Document the cost of the services to the user/client.
- Identify barriers to access and understand what the user must do in order to obtain the services.
- Determine the quality of the services from the user's perspective.
- Identify problems with existing services and suggest improvements.
- Analyze the results and overall impact of service (e.g., productivity increases, quality improvements, income and welfare gains, strengthened organizational capacity, empowerment of women, conservation of natural resources).

Service gaps and deficiencies

- What services are lacking?
- What current services most need improving?
- Why are needed services not already provided, or why are current services delivered poorly?
- Do farmers demand new or improved services?
- What impact would new or improved services have?
- Who are possible providers of new services?
- What is the willingness to pay for new or improved services?

The perceptions and reality of these services can vary dramatically among users and providers.

Secondly, it is essential to understand how the services are financed—whether through fixed-rate fees and use charges, international donors or domestic government subsidies. There is also value in capturing the future plans and vision of service providers: Do they plan to offer new services? Will they make changes to existing services? Do they seek to expand coverage? What are their ideas regarding future value chain developments?

Finally, when mapping service providers, it is important to look far up the chain to identify specialized actors who may not be immediate in terms of their geographic proximity or perceived relevance to producers. This critically important group may include lawyers, accountants, equipment and input suppliers, banks and mobile service providers.

Box 5 shows the type of information that should be collected to understand the supply of services.

Box 5.

*Sample checklist of questions for investigating service **supply**.*

General information

- Record name and contact details of service provider.
- Distinguish type of entity (e.g., nongovernmental organization, private business, public sector agency, cooperative).
- Describe entity (e.g., history, length of time providing services, number of staff, infrastructure and facilities, equipment).

Service inventory

- List and define services provided. (This often requires prompting to uncover the full range of services, for example, production, post-harvest, marketing, organizational and financial services.)

Service description

- Describe each service identified.
- Determine geographic coverage.
- Document range of commodities, crops and products covered.
- Explain service delivery and key activities involved.
- Describe clients (e.g., number, farmer segments).
- Document recent scale of service provision and forecasts to determine if the organization is expanding or contracting.
- Identify the frequency of service.
- Document the cost of service to the provider and the cost to user.
- Describe their terms of payment for users (e.g., cash, discounted from product sales).

- Determine how each service provider is funded (e.g., self-funded, debt or equity investments, subsidies or donor support).
- Determine if service prices are differentiated by client group, and if there are innovations to reduce the cost of providing the service in rural areas to a dispersed client base.
- Explore their assessment of their clients' willingness to pay for the service.
- Consider the sustainability of service over time.
- Determine the importance of service viability to the provider organization. Is it a main activity or of marginal importance?
- Analyze the results and overall impact of service for users (e.g., productivity increases, quality improvements, income and welfare gains, strengthened organizational capacity, empowerment of women, conservation of natural resources).

Service improvement

- Understand how the providers measure impact and how they rate the quality of their services.
- Explore their suggestions for improving existing services and their vision for expanding coverage.
- Determine how they evaluate new service offerings or business opportunities (e.g., for whom, at what cost and how?).
- Explore their level of understanding of specific value chains and/or local economies.
- Determine the service provider's need for capacity building. What skills, knowledge and experience is lacking?
- Understand their plans and vision for the future.

Methodology for undertaking a business service demand and supply study

Service supply and demand is usually investigated either as one part of a value chain analysis exercise, or as a stand-alone survey in a given geographic area that is not commodity specific. Other times, the type of service is already defined so the diagnostic and planning stage can focus on this type of service only.

Service studies can be carried out using formal survey instruments, such as questionnaires, or by using more participatory methods, such as focus groups that include chain actors and service providers. Participatory and experiential research methods are particularly useful when attempting to determine willingness to pay for services, which needs to be verified in practice.

Formal quantitative questionnaires are likely to be more expensive and demand more time. If using survey research methods, it is important to include several open-ended questions with repeat prompts and follow-up questions to ensure that all formal, embedded and informal services are captured.

Participatory methods are especially useful when linked with supply chain mapping, as services available and demanded at all links in the chain can be identified and discussed by the actors in a common forum (Case Study 3.2). Following such an exercise, analysis of the responses must be communicated back to all stakeholders so that the most important mismatches between supply and demand are identified and can be addressed in the implementation stage.

Developing an action plan

Once the supply and demand for services are better understood, results can be discussed by stakeholders to identify weak or poor-quality services and gaps where services are absent (i.e., demand exists, but there is no supply). For example, a survey carried out with 27 farmer groups in Cauca, Colombia, found that most existing services were concentrated on crop and livestock production, and the main gaps in service provision related to processing and post-harvest technical assistance, support for marketing and training in information technologies. A similar survey in Yorito, Honduras, found the same focus on crop and livestock production, with significant gaps in post-harvest technical assistance, farmer organizing, accounting, marketing and access to finance.

In both cases, these gaps were presented in workshops with farmer groups and service providers who reached consensus on future priorities based on known demand and the potential for financially viable and efficient services (Case Study 1.1).

This type of process helps build the foundation on which action plans for implementation can be developed jointly with service providers and client groups. There are two approaches to implementation:

Build new business development service models—design specific services where demand has been identified, and facilitate or contract their provision with interested organizations, combined with service promotion or education to potential clients.

Support existing business development service providers—implement more general support to providers, encouraging them to design, introduce (or improve) and promote their own services.

The choice of which approach to use will be based on several factors, including:

- The capacity of local service providers to develop and implement new and improved services, based on the diagnostic study results.
- The type of service and value chain involved, and whether the service is financially viable and sustainable in the short to medium term. This includes a consideration of the existing balance between free or subsidized services and market-based services in the target area and value chains.
- The overall socioeconomic environment of the area, including its degree of market orientation, communications and transport infrastructure, and civil society development, among other factors.

Where market orientation is weak or relatively new and services providers are unfamiliar with managing market-based services, the first and more hands-on approach is probably warranted. But where conditions are favorable and the value chain or local area is already at a commercial stage, there may be sufficient economic incentives to encourage and facilitate existing providers to introduce new services themselves. The actual implementation mechanisms under each of these approaches are outlined in the following section.

The diagnostic study serves to identify both the problems with existing services and the opportunity (gaps) where services are missing. In the next stage, specific interventions that resolve the problems or realize the opportunities are identified and implemented, based on the results of the diagnostic work. In general, interventions in service markets can be defined as supply or demand side, depending on whether they are directed at service providers or clients.

Implementing the action plan

Supply-side interventions

Supply-side mechanisms for improving services involve working with existing or potential new service providers to design, or in some cases redesign, and promote their services in line with known or forecasted demand. This can include facilitation of and assistance with the following activities.

Supporting market research and business plan development

Organizations can assist providers in conducting research to gain more detailed market information on a specific service offering, or they can directly provide the necessary information to the provider. In some cases, the providers themselves may finance market research and business plan development as an essential part of their business development process, but in other situations this type of preliminary activity may be supported by project funds. For example, the International Center for Tropical Agriculture joined with two consortia of community-based organizations in Colombia and Honduras to improve local business services for rural agro-enterprises. As part of this project, potential or existing service providers interested in introducing or enhancing their services were able to access grant- and loan-based financial support from each consortia to research and present a business plan to demonstrate service viability over time (Case Study 1.1).

Identify new service providers and facilitate partnerships

Many times, organizations can play a critical facilitation role by simply “connecting the dots” and strengthening the overall environment in which the project operates. This can include working within and beyond the local area or the particular value chain under consideration, where relevant, to offer information to providers and link them to potential clients. For instance, Land O’Lakes facilitated commercial linkages

among Kenyan processors, smallholder business organizations, input companies and other service providers, with the aim of building partnerships, achieving economies of scale and upgrading milk quality to national and international standards (Case Study 3.2). Similarly, in Ethiopia, facilitation of linkages between farmers, other value chain actors and service providers, such as extension agents, researchers and microfinance institutions, was critical in developing a new business model that enabled smallholders to participate equitably in an export-oriented value chain (Case Study 4.1).

Develop embedded services

Organizations can help develop a variety of embedded services provided by value chain actors to rural smallholders and primary processors. This includes services such as technical assistance from input suppliers and working capital finance from exporters. For instance, a beverage firm in the Philippines firm provides technical assistance to a fruit-processing cooperative (Case Study 3.1). Similarly, Colombian traders provide information to horticultural producers related to urban market demand that influences their crop selection and planting/harvesting times (Case Study 1.1). A Kenyan dairy sector initiative also facilitates use of embedded services to dairy farmers, with the cost covered by deductions from the milk checks received by producers (Case Study 3.2).

Develop and promote new or improved services

Many providers can benefit from developing new services or redesigning existing services to better align with client demands in terms of content, quality, frequency and cost.

In Uganda, for example, an outdated market information service was redesigned and strengthened to enable farmers to negotiate prices and make decisions on what to produce, when to sell and where to sell. With this evolution, the part of the service transitioned from donor-funded to fee-based in line with demand (Case Study 2.3). In Guatemala, a large-scale horticultural cooperative was able to leverage its relationship with an international buyer to expand training on food safety and packaging procedures (Case Study 4.2). Similarly, In El Salvador, agribusiness centers improved the quality of existing services, adding business and marketing plan development and market information-sharing services based on new realizations of customer demand (Case Study 1.2).

Provide capacity building for service providers

Several of the case studies directly involve capacity building for service providers to enhance their ability to develop and implement relevant, viable services.

In Kenya, project partners facilitated training workshops and seminars for service providers on business planning, financial management, embedded service delivery, marketing, after-sales service, and sustainable natural resource management practices within the dairy sector (Case Study 3.2).

Other examples include a navy beans project in Ethiopia (Case Study 4.1), a project in Uganda to strengthen agro-dealer services (Case Study 2.2), and efforts to improve market linkages for passion fruit and chili pepper farmers in Kenya and Uganda (Case Study 3.3), where fee-based services around technical assistance, business management and group organization were important.

Offer financial support for new or improved services

Financial support may include debt and or equity capital investments for service business development, as well as targeted, temporary subsidies to cover situations where the start-up cost of a new service may be hindering viability (e.g., due to a limited number of initial clients and higher unit costs). Any financial support needs to be based on a business plan for the service that demonstrates long-term viability. In the Colombia case study, the team followed this strategy, with loans from the local service support fund contingent on the development of a viable business plan (Case Study 1.1). Similarly, the Kenya dairy case study promoted new financing arrangements for the dairy sector through collaboration with financial institutions and other donor-supported development programs (Case Study 3.2). These arrangements included products targeting both service providers and consumers, with an emphasis on increasing women's access to financial services.

Another example comes from the financial services promoted in Nicaragua for bean producers, with emphasis on enhancing the services provided by a range of microfinance institutions (Case Study 5.2). Other case studies, such as working with chickpea farmers in Tanzania (Case Study 5.1) and establishing grain warehouse receipts programs in East Africa (Case Study 5.3), are concerned with improving the returns to producers through better post-

harvest operation of the value chain—including making the terms of payment more favorable to small-scale producers (i.e., faster payment, using warehouse inventory as collateral).

Provide services for service providers

In the longer term, service providers themselves need to be able to access opportunities to further improve their services and upgrade their capacity. This goes beyond the remit of short-term projects and involves linkages with research and development organizations, value chain actors and government. For example, Uganda's market information services have evolved from a donor-funded project to an entire sector that is commercially viable and growing. This evolution involved interaction and support from a wide range of development and commercial partners.

Demand-side interventions

Demand-side interventions are focused on encouraging prospective users or clients of services to take up the services. Such interventions can include generic awareness and promotional activities, as well as specific mechanisms oriented at particular services.

Provide subsidies to reduce the price of a service

Providing subsidies is a practical means to encourage new clients to try a service they have not used, or to trial a service that has changed to be more in line with client demands. The idea of such targeted subsidies is to reduce the cost of an initial trial, so that clients can assess the value of the service against the full fee that will be charged after the trial period is completed.

Another option is to provide service users with vouchers that can be redeemed by service providers from the institutions responsible for operating the initiative. This demand-side mechanism gives the service user the flexibility to decide which provider to use. The supply-side alternative would be to provide funds directly to service providers to directly reduce the cost of the service to first-time users. For example, seed vouchers provided to farmers in Burkina Faso allowed them the option to obtain seed from any seed provider, both from the formal and informal sectors, at CRS-sponsored seed fairs (Case Study 2.1).

Raise client awareness

Raising awareness of new or improved services, and their benefits, through general promotional campaigns or via specific advertising of particular services by the providers themselves is another demand-side approach. In El Salvador,

agribusiness centers became a focal point where a range of services was promoted (Case Study 1.2). In Colombia, the local NGO consortium, Inter-institutional Consortium for Sustainable Agriculture, undertook promotion of its support fund to encourage and solicit applications from potential providers for a range of services in demand (Case Study 1.1). A project within the Kenya dairy sector used a directory of services to promote providers to potential clients across the sector (Case Study 3.2).

Group service users or clients to reduce unit costs through enhanced negotiating power

Coordination of service demand can substantially reduce costs and enhance the negotiating power of the service users. For example, a recent project in Honduras was able to negotiate lower legal fees for the formal registration of farmer groups and enterprises that would not have been possible if they were contracted individually (Case Study 1.1). Similarly, coordination of planting and harvesting times among a number of horticultural producers was key to enabling these farmers to win a contract to supply institutional markets that demanded supply continuity in Colombia (Case Study 1.1). This coordination service was a viable business in its own right. A similar supply chain coordination service is operated by Cuatro Pinos in Guatemala (Case Study 4.2).

Implementation Issues

Development organizations and market facilitators should take into account the following issues when designing implementation mechanisms for strengthening service provision.

Area (territorial) versus value chain approach

Many initiatives that aim to link smallholder farmers to markets now take a value chain focus, working with chain actors to improve efficiency, profitability and equitable trading relationships. Examples in this guide are the Kenya dairy project, Kenya passion fruit project, Uganda chili project and Ethiopia navy bean project. Service provision forms one part of this overall task and is usually tackled as part of value chain enhancement or upgrading initiatives. However, not all services are dependent on specific value chains. Market information and access, input supply and financial services, for example, tend to be more generic in nature, and they require clients from many value chains to be viable. For such generic types of service, an exclusive focus on a particular value chain may artificially limit the size of the market for that service, and

reduce its viability as a business. In contrast, some services (e.g., veterinary assistance) may be specific to a particular value chain, and there is little point in considering a more generic offering. Thus, depending on the type of service, it may be better to consider a geographic area (territorial) approach in some cases or a more specific focus on the value chain approach.

Role of the support institution

The key role of support institutions is facilitation. The support institution should work with both the service providers and the target clients to improve the service provision as part of a larger project goal. For instance, the Kenya dairy project used a range of local facilitators selected from the private sector through a competitive bidding process. The facilitation role required bringing together chain actors and service providers from differing cultural, organizational and educational backgrounds, and forging a common agenda for action. This required the project team to maintain a balance between cooperation and competition among chain actors and service providers (Case Study 3.2). Typically, a forum for dialogue and negotiation needs to be established where chain actors and service providers can meet to identify priority interventions and the methodology to implement them. The types of services to be promoted are normally based on the diagnostic studies carried out in the design phase of the project and in the early implementation phase, as outlined earlier in this chapter. Involving local actors in these studies helps to build ownership and accountability of the results, and it helps to align needs more effectively with the local situation.

Subsidies for services

Ideally, market-based services should operate free of subsidies—this approach allows the most efficient providers with the best-fit services to succeed. There may be opportunities for start-up fee-based services in some value chains, such as in the dairy or export-oriented horticulture, but even embedded services that target more commercially oriented farmers have been easier to fund than services relying on up-front payments by users.

To help build services to support smallholders, it is common that project teams offer an initial subsidy to encourage trials of new or improved services. This can be justified in terms of “buying down” some of the risk that the service company has in offering a service in a new location, or to a new set of clients.

Co-investment in a new service is also justified with the expectation that satisfied clients will return to a service that is established in the area and available at full cost only. In the context of access to finance, guarantee funds have also, in part, been successful in stimulating financing for smallholders by reducing risk, decreasing administrative costs and encouraging banks to lend to new client groups.

There is also a case for the use of vouchers to assist customers in buying new services, or to pay a part of the costs of a service. In some projects that support highly vulnerable segments of a community, there may also be a rationale for providing vouchers that cover the full costs of certain services. This will enable the poorest people in a community to access services that others can and are able to afford. For example, most farmers may be willing to pay for seed of improved varieties if they could link to authentic vendors. Vouchers may be given to the poorest people in the community to access the seed if they are not in a position to pay.

We should also be mindful that many locations or situations with remote and dispersed smallholder producers selling into low value and poorly developed markets are either unable or unwilling to support services that cover their full cost of provision. This situation is particularly common in the areas of technical assistance and training, which many farmers view as an entitlement, after years of receiving free government extension services.

In some cases, subsidies aiming to supply a “public good” service may be a reasonable option, but should only be supported where there is a clear commitment from a public sector agency for longer-term provision (i.e., a post-project strategy exists).

Exit strategy

From the outset, every initiative should plan for the continuation of a service before project funds are withdrawn. Several case studies in Part 2 of this guide provide examples of projects where initial support was phased out responsibly and without causing problems in the viability of the services provided, nor of the organizations that provide them.

For instance, some of the agribusiness centers in El Salvador generated sufficient income to continue once CRS’s direct support was terminated (Case Study 1.2). In Colombia, the

local services support fund has continued to operate since the project finished and has been significantly recapitalized (Case Study 1.1). In Kenya, several of the passion fruit service providers remain viable, despite undergoing a difficult period after project termination (Case Study 3.3). Cuatro Pinos in Guatemala has a long track record of sustainable service provision to the horticultural sector using fee-based and embedded services that cover costs. Their strong business orientation and private sector engagement has been key to their success (Case Study 4.2).

Monitoring, evaluation and learning

Monitoring occurs alongside implementation. What is measured needs to be designed at the planning stage and the information needs to be collected routinely. Monitoring the performance of a business service requires business metrics that, among other things, highlight if revenue earned from delivering a service is covering the costs of delivering that service. In other words, will the service become profitable and at what point will it break even? What is required to achieve this financial break-even point?

Metrics to monitor the performance of a business service must not only be related to the project’s own anticipated outputs and outcomes, but they also need to make business sense. Targets need to be set in terms of clients using the service, with associated revenue streams. If the planned service usage, and/or original revenue estimates are not realized by a specific time, the business plans will need to be changed.

Monitoring for the business service environment is therefore much more than just providing activity and output accountability to donors. The monitoring process must generate business analytics that can be used by project managers who are facilitating the service provision and by those who are implementing the services. An effective management plan will enable the facilitators and service teams to make timely operational adjustments to improve service effectiveness and profitability.

Mid-term project reviews, which take place during implementation, can also be understood as part of the monitoring process. They provide snapshots to assess whether a given process is on track, and to highlight organizational or budgetary issues that require attention.

Evaluation takes place toward the end of time-bound projects and provides more detailed information to assess intermediate results and outcomes of interventions. Such evaluations provide accountability and support to plan additional operational phases, if applicable. Evaluations can also take place following a project's completion to assess the effectiveness of exit strategies and the overall sustainability or impact of services following direct project support. Fundamentally, evaluations enable facilitating organizations to assess whether the "pathway to impact" or "theory of change" has been realized.

Learning is based on use of the information collected during monitoring and evaluation. To be useful, the information from monitoring and evaluation processes must be documented, discussed and disseminated in a timely manner. This is important for stakeholders in existing projects so that best practices and lessons learned can become more widely known, but it is also critical for future expansion into new value chains, geographic areas, communities and organizations. For example, this guide forms part of a learning process for the initiatives and experiences presented and discussed here.

The monitoring and evaluation process

To improve rural business development services, monitoring and evaluation should gather information from both service providers and service users.

Key questions for service providers relate to their performance compared to their business plans: services offered, numbers of clients, revenue versus costs and overall financial viability, among several other indicators. The project should assess both the contribution of the service to rural development and the longer-term commercial viability of the service.

For service users, key questions relate to how the service has been used, such as frequency, cost and practical applications. Facilitators will also want to determine how business development services have impacted client agro-enterprises: has the farmer, producer group or cooperative increased production, improved product quality, expanded to new markets, increased employment, reduced costs, or achieved any non-monetary benefits, such as greater gender equality? Gathering feedback on service quality, willingness to pay and suggestions for improvements should also be solicited from service users.

The steps to complete include the following:

- During project planning, select indicators and metrics that will show service usefulness in terms of (1) services supplied to target clients and (2) learning and making short-term adjustments to strengthen services. The data needs to be simple and easy to obtain so the monitoring process does not become confusing or burdensome.
- Produce a monitoring plan that clearly designates who will collect the information, when and how to collect the information, who will analyze the data, and most importantly how the learning will be used.
- Collect initial baseline data on each indicator to measure changes. In some cases, projects also use control areas or individuals not involved in the project to compare with the project's direct beneficiaries.
- During the implementation process, ensure routine and accurate collection of monitoring data and conduct periodic analyses to check data quality and consistency. Presentation of analyzed data and reports during stakeholder and project meetings will assist implementation and enable course corrections, if necessary.
- Mid-project reviews may be undertaken to assess progress and identify both operational and institutional issues that need to be adjusted during the remaining period.
- Schedule and budget for end-of-project and post-project evaluations to ensure stakeholder accountability and contribute to wider lessons and scaling out, if success was achieved.

It is important to use the results to benefit the initiative and to contribute to broader learning and knowledge sharing. Accomplishing this requires:

- **Documentation.** In addition to formal project reports, documentation in more accessible formats that are appropriate to rural stakeholders is useful. These can take the form of case studies, videos, brochures and posters.
- **Feedback to the service providers and service users.** Post-project feedback should be delivered to service providers and service users through any forum or platform that has been previously established so the outcomes, benefits, and remaining problems and issues can be highlighted and discussed. This contributes to learning and improvements over time. As markets are dynamic, the content and nature of the services that chain

actors demand may change over time; service providers need to be aware of these changes.

- **Dissemination.** Sharing lessons through national, regional or other development forums and business networks enables methods and experiences to be scaled up to a wider area and across other value chains.

Lessons and challenges of monitoring and evaluation processes

The case studies in Part 2 provide several examples of monitoring and evaluation processes in action. Key lessons include:

- **Monitoring and evaluation is weak.** Few good cases of comprehensive impact evaluation have yet to be undertaken. This is partly because the strengthening of rural business development services is a relatively new type of intervention. Existing evaluations and impact studies include horticultural business development services in Kenya (Sebstad & Snodgrass, 2008); the National Agricultural Advisory Services (NAADS) in Uganda (Benin, et al., 2011); and the value of the market information system in Uganda (Svensson & Yanagizawa, 2009). Conducted by external research teams, the methods used in these studies included structured and semi-structured interviews with service providers and clients, and comparisons between service users and control groups of similar users in adjacent areas.
- The studies proved useful as a means of documenting the positive effects that business development services had on value chain performance and poverty alleviation. In general, it was easier to document improvements in value chain components—such as adoption of new seed varieties, greater use of post-harvest technologies and development of new market linkages—than to demonstrate conclusively that these have resulted in significant economic benefits to small-scale producers and other target clients. This is due to issues of attribution, as control groups also showed positive economic changes.
- **Difficulty in knowing when to measure impact.** Some of the case studies are at the beginning of the implementation stage and are unable to justify any impact evaluations. Others, such as the establishment of agribusiness centers in El Salvador, have demonstrated financial viability (in most cases) but there is not yet clear information on the benefits to the users of the services they provide. The case of Cuatro Pinos in Guatemala is a strong enterprise with a solid track record

that has outgrown the project, but it offers many best practices and lessons learned.

- **Competition with subsidized services.** Several case studies report that the provision of free services distorts the market and reduces the potential for unsubsidized providers to prosper. The agri-dealer input supply project in Uganda, the dairy sector project in Kenya and the support services project in Colombia and Honduras all found major challenges in attempting to establish fee-based services in some areas, especially related to technical assistance and training, when these services are being provided for free by public sector agencies. The Uganda project competed with other projects that provided subsidized inputs in the same area, indicating that coordination between agencies across the public, private and NGO sectors is needed.
- **Time frame required for interventions.** Many of the initiatives presented in this guide are relatively short-term projects. However, the process of strengthening business services almost always goes beyond a project time frame. The Kenya passion fruit case study shows that when project support was abruptly terminated, the provider underwent significant difficulties and a reorientation in order to survive (Case Study 3.3). This learning experience provided opportunities to create new services in other value chains, but it reflects the dangers of donor dependency and the need for a coherent exit strategy in place from the beginning.
- The time frame for success is likely to be longer for geographical areas and communities that are less market-oriented, or for value chains that rely on local markets or are less commercial. The success of service development in export-oriented horticulture, such as passion fruit in Kenya, chili in Uganda, the dairy sector in Kenya, and in regions with good market linkages (Cauca in Colombia), indicates that in favorable circumstances a time frame of five years is adequate, including a transition away from any project-based support. In less optimal conditions (such as highlighted in the case studies for navy bean project in Ethiopia, and Yorito in Honduras), a longer time horizon is required, with time allocated to awareness raising, improving the basic business skills of farmers, and developing relationships and trust before attempting to introduce market-oriented private business services.

Part 2: Case Studies

Implementation Approach	Number	Title	Location
Area Based	1.1	A Local Business Development Services Fund to Improve Agro-Enterprise Support Services	Colombia Honduras
Area Based	1.2	Catalyzing Smallholder Inclusion in Value Chains through Agribusiness Development Centers	El Salvador
General	2.1	Connecting African Farmers to Seed Enterprises with Vouchers and Fairs	Burkina Faso
General	2.2	Development of Agricultural Input Dealers in Rural Uganda	Uganda
General	2.3	Building Second-Generation Market Information Systems	Uganda
General	2.4	Agricultural Extension Services in Africa	Africa
Value Chains	3.1	The Role of the Development Facilitator in Building the Capacity of Smallholder Farmers to Link with Modern Markets: Calamansi Growers in the Philippines	Philippines
Value Chains	3.2	Kenya Dairy Sector Competitiveness Program: A New Business Model for Kenya's Dairy Industry	Kenya
Value Chains	3.3	Private Provision of Market Linkage Services for High-Value Crops	Kenya and Uganda
New Business Models	4.1	Enabling Informal Farmers to Access Formal Markets	Ethiopia
New Business Models	4.2	Social Intermediaries for Market Access: The Case of the Cuatro Pinos Cooperative in Guatemala	Guatemala
Finance	5.1	How Savings-Led Microfinance Has Improved Chickpea Marketing in the Lake Zone of Tanzania	Tanzania
Finance	5.2	Facilitating Financial Linkages for Smallholder Producers in Nicaragua	Nicaragua
Finance	5.3	Establishing a Warehouse Receipts Program: The Experience of the Eastern Africa Grain Council	East Africa
Finance	5.4	Inventory Credit Improves Farmers' Incomes and Food Security in Niger	Niger

CASE STUDY 1.1

A Local Business Development Services Fund to Improve Agro-Enterprise Support Services

By Chris Wheatley, Braun Wheatley Partners, Carlos Chilito, CorpoInnova, Luz Angela Libreros, and Marco Antonio Vasquez, VECCO

A market-oriented approach to service provision in rural areas poses many questions. For example, are farmers and rural small businesses willing to pay for services? How can services be sustainable after a project ends?

This case study describes how the approach to business development services, which was successful in promoting urban small enterprise in the 1990s, was strengthened and adapted in two contrasting rural situations in Colombia and Honduras.

Background: Improving business services through community-based multi-stakeholder consortia

Between 2003 and 2007, the International Center for Tropical Agriculture (CIAT) joined with two consortia of community-based organizations to improve local business services for rural agro-enterprises. The project was financed by the New Zealand Aid Programme (NZAID).

CIAT's rural agro-enterprise development project had been working with these two consortia for more than five years to identify, design and implement a variety of agro-enterprise projects. The addition of a business development services component was seen as a complementary, and necessary, element to help ensure the initiative's sustainability over the longer (post-project) period.¹

The project was undertaken in two locations:

- Caldono municipality, Cauca Department, Colombia, with the Inter-institutional Consortium for Sustainable Agriculture (CIPASLA) of

local community-based organizations and nongovernmental organizations.

- Yorito and Sulaco municipalities, Yoro Department, Honduras, with the consortium of local farmers' and women's groups (Comité Local para el Desarrollo Sostenible de la Cuenca del Río Tascalapa or CLODEST).

Caldono has good market access. It is located on the main road between two provincial cities and benefits from communication and transport infrastructure. Yorito is farther from markets with poor road and telecommunications infrastructure. Additionally, CIPASLA's member organizations are more market-oriented than CLODEST. The differences between the two locations and local organizations made for a worthwhile contrast, which has enhanced the lessons learned from the project.

Approach: The business service improvement process

The project was divided into three phases:

1. Diagnostic stage and action plan development
2. Implementation of the action plans
3. Monitoring and evaluation, scale-up and learning

The two local consortia agreed to use a support fund known as FASSLA, the Spanish acronym for Local Agro-Enterprise Support Services Fund, as the mechanism to facilitate the development of new or improved local services. Potential (or existing) service providers would be able to access financial support for introducing or enhancing their services through a process that involved presentation of business plans to demonstrate service viability over time.

However, the two consortia decided to operate the fund in different ways. CLODEST provided grant support to service providers, with the effect that the support fund would run down during the life of the project. CIPASLA, on the

1. More information on CIAT's approach can be found at: CIAT rural agroenterprise development: Good practice guides. International Center for Tropical Agriculture (CIAT) website. http://webapp.ciat.cgiar.org/agroempresas/ingles/good_practice_guide_series.htm

other hand, believed that the services should be viable businesses in their own right and therefore should be offered through loans, not grants. This would enable the support fund to remain active beyond the life of the project, based on interest payments accruing to the loans over time.

Phase 1. Diagnostic studies and action plan development

The project first sought to understand the existing supply and demand for services in both areas before developing an action plan. Similar diagnostic studies for support service supply and demand were carried out in both locations; CIPASLA undertook their own study in Colombia, while CLODEST, which lacked the in-house capacity to do this, contracted research to a locally based consulting firm in Honduras known as CODESA. CODESA was founded by former agricultural extension agents made redundant when the old public sector extension service was disbanded. Demand was assessed through focus group interviews with farmer groups and small enterprises, and supply was assessed through interviews with a wide range of service providers, including providers of informal services who comprised some of the value chain actors themselves.

In Cauca, Colombia, existing services were limited to the provision of credit and inputs to support production. However, farmers also demanded services related to post-harvest management and marketing support, as well as information technology solutions, legal advice and accounting services.

In Yorito, Honduras, a similar situation was reported. Most existing services focused on the production component of agriculture with informal service providers supplying marketing, credit and inputs. Yet services prioritized by CLODEST's members were marketing, legal and accounting, mobilization of additional funding and strategic planning for member organizations.

Phase 2. Implementation

In Colombia, CIPASLA's loan-based FASSLA fund of about US\$20,000 was made accessible to enterprises that submitted business plans for new or improved services and demonstrated a capacity to repay the loan. The fund was widely promoted in the local area and many concept notes were received. The enterprises with concept notes that met a set of basic criteria were selected to advance to the business plan stage. This

filter served to eliminate non-viable proposals. For potential service providers that did proceed to the next round, CIPASLA employees, who received training from the Colombian National Apprenticeship Service, supported them in business plan preparation.

The successful proposals were almost all from the informal sector: existing chain actors, such as processors or traders, who required working capital loans up to US\$1,000 to increase their purchases of local raw materials (e.g., sugarcane, cassava, coffee, vegetables) from neighboring producers in order to expand their business. There were no successful applicants in the areas of accounting or legal services; they were all eliminated at the business plan stage. CIPASLA itself attempted to establish information services via the Internet, but the high cost and unreliable connectivity proved too difficult and the service failed.

Examples of services funded through CIPASLA's FASSLA include:

- A new input supply business to mix locally purchased feed ingredients to make a range of balanced feed rations for sale to pig producers.
- Expansion of the vegetable marketing business of a local trader. When buying from smallholder farmers, the trader embeds in the price the cost of additional services, including the provision of seed and advice on which vegetables to plant in line with market demand.
- Expansion of existing small-scale local processing enterprises, including those for cassava, sugarcane, coffee and dairy, to enable them to increase the raw material volumes purchased locally and meet product demand.
- A new business to organize a schedule of planting and harvesting among local vegetable producers to collectively ensure the continuity of supply required to meet demand from local institutional buyers.

In the case of CLODEST, expressions of interest were received in all areas and evaluated against a set of pre-established criteria. As the financial support was grant-based, contracts were drawn up with the selected providers and the services were implemented. The strategic planning, project development and resource mobilization services were contracted to CODESA, the local consulting firm that undertook the diagnostic study. As a result of the study, CODESA effectively re-oriented the services. The marketing service was contracted to a local agronomist,

an accountant undertook basic training for local agro-enterprises and farmer groups, and a legal assistant provided assistance in formal legal registration of each CLODEST member organization or enterprise.

As these services were carried out under service provider contracts with CLODEST, the longer-term achievements were limited. Firstly, legal registration was obtained for all groups or enterprises, and they were trained in basic bookkeeping. However, there was no continuity of service provision after the contract period ended for these subsidized services. Secondly, the marketing service was a failure with no new markets realized despite the identification of several possibilities. The strategic planning and project development services were more successful. The planning process led to the identification of future projects and the development of proposals to national agencies, some of which were funded.

Phase 3. Monitoring, evaluation, scale-up and learning

At the close of the project in 2006, the funds remaining in CIPASLA's FASSLA were divided into three successor support funds (see next section for details), which have continued to disburse loans. Two years later, an evaluation study found a number of benefits, including:

- **Access to more working capital** (27 percent of respondents), **improved or expanded infrastructure and purchase of new technology especially for *panela* production** (37 percent of respondents) **and increases in income** (20 percent of respondents).
- **Quality of life.** Thirty percent of respondents reported an increase in monthly income up to 250,000 Colombian pesos (Col\$), 33 percent reported increases between Col\$250,000 and Col\$500,000, and remaining respondents reported even greater increases.² According to the survey, beneficiaries invested this additional income in family well-being (57 percent of respondents), including better education and home improvements, while the rest of the income gains were reportedly used to re-invest in their business or for personal benefit.
- **Expanding businesses.** Ninety-four percent of respondents wanted to continue improving and expanding their businesses. Priority activities included: improve product quality, diversify,

expand infrastructure, widen geographic coverage and invest in technology systems.

- **Intention and need to obtain new credits.** Eighty percent of respondents wanted to access additional loans through the fund to improve their business further, especially due to the simplicity of the process and interest rates charged.

For those indirect clients who used and benefited from the services of the providers, reported outcomes included:

- **Business improvements.** Eighty-seven percent of indirect clients reported having a positive experience in their relations with the service provider, with 21 percent reporting income increases and 74 percent reporting improvements to their own business that translate into financial benefits, such as more working capital, better infrastructure and lower transport costs.
- **Capacity to invest.** For indirect clients, the main investments made with increased income were:
 - More money to spend on food and other household expenses, such as education and home improvements.
 - Increasing their purchase of inputs for the business, such as seed, livestock and animal feed.
- **Embedded services.** The indirect beneficiaries detailed a number of additional embedded services that they received alongside the principal service offered by the provider. These included information on market prices; the purchase and supply of agricultural inputs on their behalf, thereby reducing transport costs and time; technical assistance; working capital loans; and some direct supply of inputs that was then discounted from the purchase price.
- **Improved operating environment.** While they were unable to assign a monetary value to additional benefits, the smallholder farmers surveyed generally perceived that the project helped stabilize prices, increased the sense of belonging by better use of local resources, reduced transportation costs, increased access to inputs and improved the quantity and quality of production.

Successes and challenges

The three-year project funded by NZAID ended in late 2006. At that time, the CIPASLA consortium in Cauca was in a difficult position as its main source of funding was ending with no prospect

2 US\$1.00 = Col\$2,000 approx.

of renewal. The members of CIPASLA were concerned about the future of the FASSLA fund, which had retained considerable assets due to the very high level of loan repayments. Since the existence of CIPASLA was in doubt, all parties in Cauca decided that the best way forward was to divide the FASSLA fund among three member organizations, namely:

1. Association of Panela Producers (ASOPANELA). "Panela" is a traditional unrefined sugar product.
2. Corporation of Farmer Research Committees (CORFOCIAL). CORFOCIAL was formed through CIAT's participatory research program in the 1980s.
3. Users Association of Cabuyal River Microwatershed (ASOBESURCA). ASOBESURCA is a farmers' association near Cabuyal River and the area of action for CIPASLA in Cauca.

In late 2009, the three support funds continued to operate and were successful in maintaining or increasing the amount of capital in each fund. Each fund started out with Col\$12 million, (equivalent to US\$6,000 at an exchange rate of Col\$2,000 = US\$1). The balances at the time of the study were: ASOPANELA = Col\$62 million (equivalent to US\$31,000), of which Col\$30 million of additional capital was obtained from the U.S. Agency for International Development; ASOBESURCE = Col\$25 million; and CORFOCIAL = Col\$17 million.

In Yoro, Honduras, continuity after the NZAID project ended was an even greater problem due to CLODEST's limited ability to operate autonomously, and the exhaustion of its FASSLA fund. While the support fund did not achieve its full aims in Yoro, the local consulting firm CODESA successfully internalized the concept of market-oriented service provision and generated demand for new services across a wider geographical area than that covered by this study. Thus, future scale-up in Honduras will likely come more from CODESA than through the CLODEST consortium. This was not expected in the project design, but it reflects the difference in capacity and learning ability between the two consortia.

This project was conceived as a trial of the market-based business development service model in two rural areas of Latin America. The

funds were designed to provide short-term financial support to cover the start-up costs of new or improved services, based on unsatisfied demands identified in the diagnostic study. As a result of this experience between 2003 and 2009, it is clear that initiating services in rural areas is a medium-term process, extending beyond the life of a typical three-year project time frame. Success was achieved in Cauca through loan-financed embedded services delivered by traders, processors and other value chain actors, and not through provision of fee-based services, despite an apparent willingness to pay in the diagnostic study. In Yoro, grant-based finance of service providers did not result in sustainable service delivery beyond the initial period contracted through the project.

Best practices and insights

Some good practices that developed from the project were:

- Using business plans to assess the viability of potential services. Several non-viable services were eliminated at an early stage due to business plans that clearly showed the venture would not be profitable given operational costs and other concerns.
- Working with traders and other value chain stakeholders through embedded services. This is a viable strategy where fee-based services are met with resistance. Helping local traders and processors to expand their operations enabled them to link more farmers to markets and increase overall farmer awareness of market requirements, such as quality standards and harvest calendars.

Lessons from this experience include:

- Willingness to pay for services needs to be verified in practice.
- Projects need flexibility and time to adapt to conditions on the ground. This may require changes in approach and exit strategies and may demand a longer and more flexible time frame.
- The community-based consortia were not effective service providers in their own right. Greater success was achieved when value chain actors themselves took on service provision.
- The loan-based support fund has proven sustainable in the post-project environment to date.

Conclusions

The project has shown that where market linkages exist and local institutional capacity are quite strong, such as in Cauca, a flexible service-based approach could foster a more dynamic, market-oriented rural economy that involves local farmers, traders, processors and other actors. The use of a locally managed support fund enables local households to benefit most, and appears to have assisted in promoting high levels of loan repayment.

In Yorito, the weaker institutional capacity of CLODEST, the poor linkages to markets and the lack of trust in local traders were barriers to the development of this service model. An initial subsidy to services using a grant-based funding mechanism did not result in sustainable service provision. The exception was the strategic planning and project development services of the consulting firm, CODESA, which generated new development projects.

CASE STUDY 1.2

Catalyzing Smallholder Inclusion in Value Chains through Agribusiness Development Centers

By José Ángel Cruz, Catholic Relief Services

Agribusiness development centers—run by private individuals, nongovernmental organizations (NGOs) or government agencies—support smallholder farmers with a range of services that link them to markets. Yet in rural areas, private businesses that provide these types of services are scarce, and farmers may be unable or unwilling to pay for these services even when they do exist. Additionally, government agencies lack the skills and resources to perform these tasks effectively. This case study describes how agribusiness development centers were established in El Salvador.

Why set up the centers?

El Salvador's poverty is concentrated in rural areas, where more than 60 percent of people are extremely poor. Market chains are inefficient and characterized by ad hoc and opportunistic transactions. As a result, most smallholder producers are not competitive and are unable to take advantages of new market opportunities.

To overcome this challenge, CRS El Salvador and a network of partners, including Caritas El Salvador, the University of Central America and local NGOs, established rural agribusiness centers. The centers provide smallholder farmers and farmer groups with access to basic technical, marketing and financial information at a cost to enable them to make informed business decisions and improve their market performance. This work has focused on developing agro-enterprises and creating and strengthening local business support services to serve smallholders who cannot afford the commercial services designed for large-scale farmers.

Three agribusiness development centers were established in municipalities that were not served effectively by public or private service entities, including:

- San Ignacio in the department of Chalatenango, which is 92 km north of San Salvador, the capital. This center supports market chains for vegetables, fruits, dairy, honey and handicrafts. It is managed by the Asociación de Municipios Cayaguanca (Association of Cayaguanca Municipalities).
- San Vicente in the department of San Vicente, 60 km east of San Salvador, serves the plantain and sugarcane chains. It is managed by the Asociación Cooperativa de Aprovechamiento Agropecuario La Esperanza San Esteban (La Esperanza, San Esteban Cooperative Association for Agricultural Supply).
- San Francisco Gotera in the department of Morazán, 190 km east of San Salvador, serves market chains in stockbreeding, vegetables, grains and crafts. It is managed by the Fundación para el Desarrollo (Foundation for Development).

Establishment and operation of centers

The establishment and operation of these centers progressed through four steps.

Step 1. Establish the center

The establishment of the centers consisted of four main actions:

- Financial support. The country's Ministry of Agriculture and Livestock provided full financial support in the form of a two-year grant to establish the centers and build a client base so they could become financially independent over time.
- Personnel. Three professional staff were hired to support each center: a business administration expert, a market specialist and an agricultural professional.
- Assets. Each office was provided with basic equipment: computers, multimedia equipment, software, camera, a training room, furniture, a car and a motorcycle.

- Orientation. The agribusiness staff received considerable training in agro-enterprise development. This training provided the staff with a series of tools and techniques to identify market opportunities, analyze market chains and evaluate business services. It also covered issues such as product standards, marketing rules and regulations, how to run workshops on business services, and how to build trust with local farmer organizations.

Step 2. Position the center in the local business and institutional network

This step involved the following activities:

- Gathered baseline information. The center staff, along with Catholic Relief Services and its partners, collected information about the surrounding area.
- Built partnerships. The centers also identified and contacted other organizations working in the region that could act as partners.
- Promoted the center. Promotion was done through radio, newspapers, mobile megaphone advertising, flyers and personal visits to producer organizations and institutions.
- Aligned supply with demand. The centers gradually adjusted the services they provided to the needs of their farmer clients.

Step 3. Provide services

The centers started working with farmers and farmer groups. They undertook the following activities:

- Identified potential clients including farmers, farmer groups, buyers and local NGOs.
- Identified market opportunities for promising products on which to focus.
- Prioritized products according to market analysis and the center's own capacity.
- Met with local actors to present ideas on how to analyze and upgrade market chains on the prioritized products.
- Coordinated between the center's services and the network of actors involved in the respective market chains.
- Implemented activities. The main services offered were training, market information, business plan development consulting, business rounds (i.e., individual meetings with potential business partners to discuss the supply and demand for agricultural goods and services), input and product fairs, marketing plans and business assessments.

Step 4. Achieve sustainability

The centers were designed to be profitable enterprises. The project design called for them to be financially self-sustaining within two years. If the target of 85 percent financial sustainability was not achieved in this time, the centers would be closed. The annual cost of running an agribusiness development center is US\$42,000.

The actions taken to cover costs and ensure profitability included:

- **Ensuring good management.** This included (1) identifying suitable local host organizations that had the capacity to run an agribusiness center; (2) establishing a board with representatives of different producer organizations and the host organization to monitor the center and advise on its performance; and (3) preparing a business plan with performance indicators and monitoring methods to measure performance of the center.
- **Generating revenue.** This was achieved by (1) selling high-quality, competitively priced services; (2) targeting clients that were not currently served by competing service providers; and (3) writing proposals for business development projects that were funded by donor agencies, local organizations and financial institutions.
- **Establishing strategic partnerships and networks.** As the centers identify or create opportunities, they encounter organizations that may need skills that the centers can provide, or that wish to complement their own work. The resulting partnerships benefit both parties. Networks of clients, producer organizations and service providers who value these services help to consolidate the business. These contacts enable access to market information and business opportunities.

Successes and challenges

The Ministry of Agriculture and Livestock's financial support for the centers ceased at the end of the project's second year in 2007. CRS terminated its technical and financial support for the centers in 2008 and assumed an advisory role.

Business viability

Two of the three centers are sustainable—those in San Ignacio and San Francisco Gotera. This is due in large part to the strength of their host organizations and their geographical location, which provide several opportunities to sell services to local farmers, farmer groups and agricultural development projects in the area.

The future of the center in San Vicente is less certain. It sells services to farmers and farmer groups, but unlike the other two centers, it has not been able to find other sources of project support. This is perhaps because agro-enterprise projects are scarce in that region. Despite the area's agricultural potential, most of projects in this area focus on food security, health and education.

An ongoing challenge is matching the need to develop a financially sustainable agribusiness center with the goal of providing these services to smallholder producers who have a limited ability to pay. A balance of better and less well-off clientele has to be achieved.

Viability of the centers also depends on good management. The managers and boards of producers must continue to work together to improve the performance of the centers and turn them into competitive enterprises.

Service success

The centers have become agents for coordination among actors in the market chains. For example, they link importers and representatives of commercial brands with producer associations and cooperatives. These new relationships have put an end to exclusive trading between individual producers and suppliers, leading to improved opportunities and greater competition.

In all, the centers have coordinated among 65 local public and private organizations. They have established a database of information about production and trade in their service areas, which is connected to the ministry's web portal. They have facilitated 38 business rounds, leading to commercial transactions with a total value of US\$328,000. They have trained 17 local managers to lead producer organizations, and have connected more than 8,000 users to specialized information.

The centers play a connecting role in the chain. By understanding who produces what and who needs what, they help bring buyers and

sellers together, facilitate negotiations, foster the exchange of information and identify new business opportunities.

Best practices and insights

Best practices and lessons from this project are relevant for (1) organizations that support the establishment of agribusiness centers and (2) the management and staff of the agribusiness centers themselves.

Organizations that support the establishment of agribusiness centers:

- **Define a clear and responsible exit strategy.** A clearly defined strategy on how the supporting organization will leave in place the elements needed for the centers' long-term sustainability should be developed during the project design phase and communicated to all stakeholders. The strategy should include actions that (1) promote supportive national and local policies for agribusiness development and (2) commit institutions that can upgrade the skills of center staff after the project terminates.
- **Identify appropriate institutions to manage and run the centers.** The centers that have entrepreneurial managers and well-qualified technical staff are proving to be the most successful. The selection of appropriate local institutions responsible for managing and running the centers is critical to their eventual viability. Among the most important selection criteria are (1) the conviction that the center can provide fee-paying services that are in demand; (2) the determination to run the center as a business; and (3) strong and professional leadership.
- **Provide continuity in support.** The project's three-year time frame was too short to consolidate the managerial ability of the centers' staff. For this reason, training needs to be well planned and iterative. It should provide sufficient time for the managers to gain a good command of the types of business services, the skills needed to support an agribusiness center, as well as the types of financial planning, rigor and performance evaluation required. Even after three years, it was clear that the staff required further support to ensure the centers' financial viability. An additional two years of gradually diminishing mentoring, capacity building and monitoring would have been appropriate.

Management and staff of the centers:

- **Begin by focusing on clients that can pay for services.** While the ultimate goal of a center may be to extend support to vulnerable and marginal farmers, the center has to achieve economic viability by first providing services to clients that can pay. Eventually, cross-subsidy may be possible. That is, the income obtained from those who can afford to pay can be used to subsidize those who are unable to pay or cannot yet pay a full fee.
- **Provide subsidies for recently created agro-enterprises.** Many recently created agro-enterprises are made up of less well-off farmers who will not be in a position to pay for services until their enterprises turn a profit. Agribusiness centers should look for opportunities to use resources from government or nongovernmental development initiatives to fully or partially subsidize the most critical services for these enterprises over a given period of time.
- **Develop a business plan from the beginning.** A medium- and long-term business plan for the center that identifies services that have demand helps to avoid focusing on existing services that do not have sufficient demand to be commercially viable.
- **Integrate producer organizations into the centers' administration.** The participation of producer organizations in the governing body of the center catalyzes a sense of ownership and responsibility toward the center. This new role for representatives of the producer organizations is a learning process that should start from the first year.
- **Focus on priority commodities.** To be viable, agribusiness centers should focus on a range of both higher- and lower-value products with strong growth prospects. For

example, the portfolio could include basic grains where market information is critical for product sales. In more developed sectors, such as vegetable production, centers can provide support in administration, accounting, company registration, packaging design, production technology, good agricultural and manufacturing practices, and financing.

- **Sell services from the start.** In this project, services were offered free for the first two years. This led to farmers not appreciating the real value of these services and viewing them as an entitlement. In future projects, the agribusiness center should charge clients from the beginning. They may not charge the full cost at the outset, but farmers should realize that such services have value, and that if they invest in this type of support, they can become more profitable and open new market opportunities.
- **Be flexible.** Each center should have a staff of professionals who provide certain services. The nature of the services may change over time as the center positions itself, so staff have to be able take on new roles or the center may need to draw on people with new skills.
- **Collaborate and learn from others' experience.** Collaborating with organizations, such as research institutions, financial intermediaries, NGOs and government agencies, avoids duplication and strengthens the centers' ability to innovate and provide quality services.

Further information

Cruz, J. A. (2009). Fostering agribusiness development centers in El Salvador. In: Ferris, S., Mundy, P., & Best, R. *Getting to market: From agriculture to agroenterprise* (pp. 152–162). Baltimore, Maryland, USA: Catholic Relief Services.

CASE STUDY 2.1

Connecting African Farmers to Seed Enterprises with Vouchers and Fairs

By Tom Remington, Catholic Relief Services

The availability of improved seed and farmers' ability to access seed are critical for restoring production following disaster. In the past, aid agencies have crowded out local, private seed providers with indiscriminate free distribution of often poor-quality and non-adapted varieties.

This case study explains how seed vouchers and fairs served as a business development service for a small seed enterprise in southern Burkina Faso. Vouchers and fairs are a mechanism for farmers to engage with local seed enterprises. They also pave the way for illustrating to farmers the value of paying for high-quality seed from reputable suppliers, as they move from producing to meet their immediate food needs to selling ever-increasing quantities in the market.

A Different approach to restoring seed supplies after disaster

Across Africa, there are two distinct seed systems: (1) the farmer system that includes farmer-saved seed, seed obtained from friends and neighbors and, probably most important, seed purchased at the local grain market; and (2) the formal system that includes certified seed of modern varieties developed by international and national breeding programs that is then produced and sold by commercial seed companies. Certification is a formal recognition that the seed meets standards of varietal and analytical purity and has a high viability, or germination rate.

Africa is beset by frequent disasters that disrupt agriculture—mostly drought and floods but also conflict. Responding to these disasters with seed aid has a compelling logic. For example, with 1 metric ton (MT) of seed aid, farmers can produce 100 MT of sorghum or millet. This can quickly and dramatically reduce the need for expensive food aid that is shipped across continents and trucked to remote places to feed people. Despite the greater efficiency of supplying farmers

with seed aid, over the past 20 years, seed aid has become a hallowed institution, with seed distributions being carried out more than 20 times in Zimbabwe, Ethiopia, Burundi and Kenya at a cost of hundreds of millions of dollars a year.

The institutional process of seed distribution was originally called “seeds and tools.” Direct seed distribution (DSD) relies on seed from the formal seed sector. Both the variety and the quality of formal seed are believed to be better than farmers have or can access through local informal channels. Seed procurement is a straightforward tendering exercise for donors and nongovernmental organizations (NGOs) alike. DSD has proven extremely profitable for seed companies. However, problems continue to emerge. For instance, massive donor-funded purchases come without warning, thereby overwhelming the certified seed supply, distorting the market and creating opportunities for fraud by labeling grain as certified seed. Local agro-dealers are also harmed as they do not receive seed from seed companies to retail to farmers, rather the farmers receive free seed.

In 2000, Catholic Relief Services tried a different approach. We assumed that good-quality seed of the preferred crops and varieties was available in the farmer seed system, but that farmers lacked the necessary cash to purchase it or they were too distant from available stocks to access seed readily. In other words, seed insecurity was a problem of access and not of availability or of quality. The new approach combined the issuance of seed vouchers and the organization of special seed fairs. These seed fairs were held in areas where disaster-affected farmers could exchange vouchers with a wide range of seed sellers.

From the start, seed vouchers and fairs had their critics, especially commercial seed companies but also organizations, such as the Food and Agriculture Organization of the United Nations, that support the formal seed sector. Opponents

claimed that seed sold at the fairs by farmers and traders was not seed, but grain. Seed fairs were called food fairs! CRS believed that farmers would make wise choices in purchasing seed and that seed fairs should be open to all seed sellers. CRS structured the seed fairs to have a level playing field on which the commercial seed companies selling certified seed of improved varieties could compete with farmers and market traders selling uncertified seed of traditional varieties. The key to any successful seed business is satisfied customers, and seed fairs offered an opportunity for seed enterprises to market directly to farmers and convince them to exchange their vouchers for certified seed. Farmers could then evaluate the seed, and if satisfied, return the next year and purchase the certified seed again, this time without a voucher.

Seed vouchers and fairs in Burkina Faso

Extensive flooding in August 2007 in southern Burkina Faso negatively impacted yields. Whereas the region normally produces 133 percent of cereal needs, production amounted to only 62 percent in 2007. A rapid seed security assessment in early 2008 revealed that, though farmers normally get most of their seed from what they produce and save, they would have to purchase most of their seed from the market for the next planting. In normal years, farmers source 74 percent of their seed from their own stock, 16 percent from the market and 7 percent from the formal seed sector. Yet for 2008, farmers expected to source only 36 percent from their own stock, 40 percent from the market and 25 percent from the formal sector. Knowing this, CRS planned a series of 20 seed fairs and the distribution of US\$20 vouchers to 8,650 farmers with funding from the U.S. Agency for International Development.

Farmers exchanged vouchers for 302 MT of seed from 680 seed vendors, 57 percent of whom were women. Of the total amount of seed exchanged, 5 percent (15.5 MT) was from the formal sector. The average of 35 kg of seed purchased by the farmers in exchange for vouchers roughly corresponded to the calculated shortfall in their own saved seed.

Successes and challenges

When CRS explained to certified seed enterprises the plan to organize seed fairs and distribute

vouchers to farmers, they readily agreed to participate. Unfortunately, the seed enterprises did not understand that they would be competing against farmers and vendors selling uncertified seed. When learning this, the seed enterprises, members of the Burkina Faso National Seed Producers Association, tried to prevent the participation of local farmers and traders, insisting that only certified seed could be sold. They said that “if it was not certified, it was not seed.” After much discussion, with the Ministry of Agriculture siding with the seed enterprises and the municipal authorities with CRS, the seed fairs were allowed to continue. Most of the seed enterprises boycotted, but several decided to participate including Venegre Association, an established and reputable farmer organization producing certified seed.

The major reason for the decision by the Burkina Faso National Seed Producers Association to boycott the fairs was the announcement that the World Bank was to fund the purchase of more than 7,000 MT of certified seed. The projected amount of available certified seed, calculated from foundation seed sales, would not meet this demand. Therefore, most of the seed of rice, sorghum and pearl millet had to be uncertified farmer seed. Seed producers had no incentive to compete at seed fairs when they could sell grain, fraudulently labeled as certified seed, wholesale to meet the World Bank demand. It was a case of “seed not being seed” unless it was conditioned and sold as certified seed by them.

At the seed fairs, CRS agreed to inform farmers about the difference between farmer seed and certified seed, encourage farmers to consider the purchase of certified seed, provide certified seed sellers a preferred location at the fair site and have farmers visit the certified seed area prior to moving to the open fair site.

The combination of seed vouchers and fairs proved to be an exceptional market opportunity for the Venegre Association. They had the opportunity to engage with and sell directly to farmers and succeeded in selling almost 7 MT of seed in 1 kg packets. They learned that farmers mostly demanded maize and cowpea, not rice, sorghum or soybean. They also learned that farmers were willing to pay a premium for seed they wanted: US\$1.70 per kilogram for the short-duration yellow maize variety KEJ and US\$1.85 for the cowpea variety K VX 61-1.

Best practices and insights

- **Choice.** Farmers prefer to weigh the pros and cons and then make their own decisions on whether to purchase seed, what kind and from whom. Farmers were keen to purchase certified seed of new varieties that they had not yet owned.
- **Risk.** Farmers seek to avoid risk. The risk of serious crop failure due to bad seed is significant and can be avoided by diversifying seed purchases. At seed fairs, farmers can split their vouchers and buy seed of different crops and varieties from different vendors. With DSD, there is a risk of receiving seed of non-adapted varieties.
- **Trust.** Farmers cannot tell good seed from bad seed by looking at it. Farmers ensure that their seed is of good quality by first using their own seed and then buying from people whom they trust. At seed fairs, farmers can purchase seed from sellers that they know and trust. With DSD, farmers have no idea who produced the seed they are given.
- **Social connections.** Farmers like to get together and share ideas and information. Seed fairs provide a space for farmers to interact with each other and with seed sellers. They are exceptional opportunities to promote new ideas, products and businesses. Alternatively, DSD is a top-down approach, with no opportunity for farmers to participate.
- **Distance.** Farmers do not like the cost and time required to travel to cities. They prefer their local markets. Therefore, seed fairs held in village market centers are opportunities for seed companies to reach out to farmers in their own rural communities.
- **Free stuff.** Farmers, like everyone else, enjoy receiving gifts. Coupons can be given to farmers at seed fairs to exchange for small promotional packets of new seed varieties so they can evaluate it themselves.

The combination of seed vouchers and seed fairs presents an opportunity for seed enterprises to connect with farmers and grow their businesses. Yet for this to happen, seed enterprises must treat farmers as customers. Rather than insisting that “farmer seed is not seed,” they need to educate farmers on the quality of certified seed and characteristics of new varieties. Seed

enterprises should not expect or insist that farmers purchase 100 percent certified seed to meet their seed requirements. Rather, they should present their seed in small attractive packets with their logo and convince farmers to purchase a few kilograms. If farmers are satisfied, they will become repeat customers and perhaps increase the quantity of seed they purchase over time. Because certification is a formal recognition, it is not always appropriate for small seed enterprises selling directly to farmers who need to rely on trust or what might be called “social certification.”

Seed vouchers and fairs are now being promoted by other NGOs (at last count, 64 NGOs in eastern Democratic Republic of the Congo). NGOs need to proactively engage the range of formal seed sector actors and stakeholders in the planning and implementation of seed fairs, beginning with seed security assessments. Practitioners are encouraged to exploit vouchers and fairs as powerful marketing tools and start using them beyond the provision of seed; for example, offering coupons for fertilizer, crop insurance or even livestock.

Country seed laws are intended to protect consumers from fraudulent seed—seed that is packaged, priced and mislabeled as certified seed. Seed laws are not intended to prohibit the sale of uncertified seed by farmers and traders. However, seed laws are sometimes interpreted incorrectly and are used to discourage the sale of farmer seed and prevent the emergence of new seed enterprises. To ensure that the issuance of seed vouchers and the holding of seed fairs is allowed, NGOs need to proactively engage policymakers.

Further information

- Bramel, P., Remington, T., & McNeil, M. (Eds). (2004). *CRS seed vouchers & fairs: Using markets in disaster response*. Nairobi, Kenya: Catholic Relief Services.
- Remington, T. (2008). *CRS Burkina Seed Fair Experience*. Baltimore, Maryland, USA: Catholic Relief Services.
- Sperling, L., Cooper, H. D., & Remington, T. (2008). Moving towards more effective seed aid. *Journal of Development Studies*, 44(4), 586–612.
- Tripp, R. (2002). *Seed provision and agricultural development: The institutions of rural change*. London: Overseas Development Institute.

CASE STUDY 2.2

Development of Agricultural Input Dealers in Rural Uganda

By Rita Laker-Ojok, AT Uganda Ltd.

The transformation of smallholder farming from semi-subsistence to market-oriented commercial agriculture requires access to high-quality and affordable agricultural inputs, such as improved seed varieties, fertilizer and crop protection products. In addition to having access to these inputs, farmers need the knowledge to use the products correctly and to understand the benefits that can be gained through their use.

In many rural communities, small-scale dealers supply agro-inputs to farmers. These dealers face many of the same problems as smallholder farmers: lack of entrepreneurial skills as well as limited access to affordable technical and financial business services. This case study is about the formation of a cadre of entrepreneurs that provide fee-based services to agro-input dealers in Uganda. The aim was to improve the business performance of the agro-input dealers by making them more responsive to the needs of farmers.

The creation of the Uganda National Agro-Input Dealers Association

Uganda is a nation of small-scale subsistence farmers. More than 80 percent of the population live in rural areas, and most households have at least a small plot of land. While Uganda's agricultural potential is significant, use of purchased inputs is among the lowest in the world. Uganda's Bureau of Statistics reported that in 2005 and 2006, only 6.3 percent of farmers used improved seed; less than 1 percent used fertilizer; and 3.4 percent used pesticides, herbicides or fungicides. Most smallholder farmers were trapped in a cycle of poverty characterized by low input use and low yields.

The importance of using agricultural inputs to enhance future productivity and meet national food needs is what motivated AT Uganda to invest in the establishment and strengthening of an agro-inputs distribution network in Uganda.

Originating from Appropriate Technology International in 1994, AT Uganda is now an independent nongovernmental organization (NGO) in Uganda. The organization has implemented a range of projects in the agricultural sector.

In 2002, AT Uganda launched the "Facilitating Agricultural Input Distribution Linkages" project that led to the formation of the Uganda National Agro-Input Dealers Association (UNADA). Since then, AT Uganda has been providing technical support to build UNADA's institutional capacity and enhance its services to members.

UNADA is the national apex organization for agro-input dealers in Uganda. It is a member-based organization that exists to serve the interests of the agro-input sector. Its mission is to represent, network and empower member agro-dealers to operate sustainable, profitable businesses that provide quality agro-vet inputs and services to farmers. As a business association, the heart of the organization is its roughly 680 member businesses, which are organized into 78 local branches across 10 regions in Uganda. Each of the branches elects a representative to sit on the regional coordinating committee.

Strengthening agro-input dealers' businesses

Census and needs assessment for project design

In 2004, AT Uganda commissioned a national census of agro-input dealers. The census provided a valuable profile of the sector and offered an opportunity for UNADA to reach out to and mobilize the entrepreneurs that made up this important sector. As a result, UNADA expanded its coverage nationwide. The census identified critical constraints and service needs in the sector. The most important constraints revolved around business management skills, demand development, credit access and quality control.

These issues became the focus of UNADA's member services, capacity building and policy engagement activities.

In December 2008, a second census and needs assessment was conducted. This census gathered more detailed information regarding the enterprise-level factors holding back the progress of agro-input businesses with the objective of expanding the range of services that UNADA could offer to its members. The census identified and interviewed 2,064 input dealers. Of these dealers 59 percent sold crop inputs, 12 percent sold livestock inputs and 29 percent sold both. The vast majority (80 percent) were sole proprietorships, while 6 percent were formally registered companies, 1 percent were community-based organizations or NGOs and 1 percent were cooperative societies.

As part of the needs assessment, dealers were asked to rate a number of business skills according to their perceived importance and their own level of competence. The skills ranked as most important by the largest proportion of dealers included business plan development, internal auditing, financial analysis, networking and management of farmer demonstrations.

This information guided the design, implementation and monitoring of a new phase of the project supported by the Alliance for a Green Revolution in Africa and aimed at strengthening access to capital and business development services (BDS) for agro-dealers. AT Uganda held follow-up focus group discussions with 95 agro-input dealers to better understand their service needs and willingness to pay for such services. The dealers identified constraints to efficient business operations and explained how they had tried to address those problems. All participants recognized the need for advisory services. In addition to the needs identified in the census, focus group discussions identified record keeping (especially interpretation of the records) and access to markets as services for which they would be willing to pay, although ability to pay was limited.

Building a cadre of service providers in partnership with the Uganda Change Agent Association

AT Uganda identified the Uganda Change Agent Association (UCAA) as an appropriately skilled partner in providing BDS to dealers. UCAA is a local NGO with deeply rooted community

structures nationwide. They had already established a large cadre of development trainers with experience working in rural communities. Importantly, UCAA also had good knowledge of financial management and auditing, had tested change process methodologies and had modest payment expectations.

UCAA assisted AT Uganda in identifying the most suitable trainers for refresher courses in business plan development and BDS provision. They would be expected to provide business services to agro-input dealers on a fee-for-service basis and would not be employed directly by either AT Uganda or UNADA. However, AT Uganda and UNADA could engage them from time to time to undertake specific assignments on contractual terms.

A total of 23 UCAA trainers (at least 2 from each of the 10 regions of the country) were selected to form a cadre of BDS providers offering a portfolio of demand-led, needs-based services to agro-input dealers. This team of trainers was supplemented by other skilled individuals selected directly by AT Uganda based on previous contact and experience. The criteria used for selection of the service providers were:

- Prior business management training skills.
- Community mobilization skills and understanding of training methodology.
- Based in rural areas, with all of the regions of the country well represented.
- Fluent in English and one of the major local languages.
- Committed and commercially oriented.
- Willing and able to take on additional BDS provision tasks on a fee-for-service basis.
- Willing to market their services to earn a sustainable income.

Training of service providers and their linkage with agro-input dealers

AT Uganda provided the cadre of selected service providers with a four-week orientation and refresher training on the nature of the agro-input system in Uganda, the unique challenges of business management in this sector and general theory of BDS provision, as well as business plan development, financial management and marketing modules.

A critical first step was forming the linkage between service providers and dealers. This was achieved during the course of the various meetings and trainings staged by AT Uganda and UNADA. AT Uganda used every meeting held with agro-input

dealers to sensitize and re-emphasize the benefits of BDS, together with the service providers.

Building a service portfolio based on needs

The UNADA constitution stipulates that each branch must be audited and present their audited accounts at an annual general meeting. As a means of introducing the BDS providers to the agro-input dealers, their first assignment was to assist in carrying out the UNADA branch audits. This service was contracted to UCAA in the past. The opportunity to have face-to-face visits throughout all of UNADA's 78 local branches provided an opportunity for the service providers to demonstrate their usefulness to the potential dealers' clients. The service providers, who worked in teams of two and were supported by a UNADA field officer, were also tasked to train the branches in basic bookkeeping and association management. They also discussed the other services they could offer with prospective clients. Approximately 490 dealers were consulted during the course of the audit.

Paying for services

The service providers submit a price quotation to agro-input dealers, and the fee is often negotiated between the service provider and the dealer. Upon completion of the agreement, the dealers pay the service providers directly who then provide monthly reports to AT Uganda. AT Uganda then pays the service provider an additional 30 percent after verifying the quality of the work done and payment made by the dealer. This acts as a partial subsidy and provides a means for the service providers to test services and offer them at a lower price to dealers. Some service providers adopted a time charge, with day rates ranging between US\$2.50 and US\$6. Other service providers charged a piece rate. For example, the charge for production of a business plan is up to US\$35.

The role of AT Uganda

AT Uganda contracted a full-time BDS specialist to oversee the performance of the BDS providers, further enhance their capacity for service delivery and increase the visibility of BDS among agro-input dealers. The role of AT Uganda also involved monitoring service quality and user satisfaction and technical backstopping. However, due to weak management, UNADA was not as active in promoting the BDS providers among its members.

AT Uganda also facilitated dealers' access to credit through a credit guarantee system. Dealers were linked to suppliers who provided inventory on 60-day credit, with a 50 percent down payment. The supplier was provided with a guarantee on the line of credit by AT Uganda. Rural dealers operating as distributors with a turnover of US\$5,000 and more were required to produce business plans and were referred to the BDS providers for assistance. The BDS providers also assisted the agro-input dealers with filling out the forms and making linkages to the potential suppliers. These opportunities and others generated additional business for the BDS providers.

Services provided to agro-input dealers

Marketing plans and demonstration plots

Service providers assisted agro-input dealers in developing marketing plans to grow the demand for their products. They also helped dealers establish and manage demonstration plots to show how inputs can be used for maximum benefit.

Business planning

Most dealers in Uganda did not see the need for formal planning or paying someone to help them plan. However, because a business plan is a condition for appointment as a registered distributor by some input manufacturers, dealers have asked service providers to help them with business planning. At least 28 dealers have developed business plans, paying BDS providers about 60,000 Ugandan shillings (approximately US\$30) for these services.

Marketing of agricultural inputs

The biggest challenge that agro-input dealers identified was marketing of agricultural inputs. Agro-input dealers were willing to pay BDS providers to help them access difficult markets, such as the government's National Agricultural Advisory Service (NAADS) program, because part of NAADS' work involves procuring agricultural inputs and distributing them to farmers under a revolving credit program. Two BDS providers succeeded in assisting their clients to enter this market.

Soil testing services

Farmers realize the importance of soil testing in deciding which fertilizer to use. As a result, some

BDS providers received specific training to be able to offer this service to farmers. At least 120 farmers in Serere District paid US\$5 for soil testing.

Successes and challenges

Entrepreneurial and technical knowledge

Developing the confidence of the service providers to approach dealers and offer their services to them takes time. Similarly, dealers need to be encouraged to see the value of BDS that are not directly linked to immediate financial gains. These two factors slowed the pace of interaction between service providers and the agro-input dealers, especially at the beginning of the program. Service providers require continuous backstopping. They need hands-on training as each assignment is different and challenging.

Widening the BDS providers' income base

The ability of BDS providers to generate sufficient business to earn a living is an ongoing challenge. AT Uganda has encouraged them to expand their business by marketing their services to other clients as well, but without losing focus on the demands from their main agro-input clients.

Competition with free services

Agro-input dealers, like other small-scale enterprises, are used to receiving free services from donors and governments. They often ask why they are required to pay for these services.

Service provider performance

Of the 28 service providers trained, 4 submitted regular reports on their activities with agro-dealers, and 16 are doing some tasks independently. Two have become trainers for Uganda Manufacturers' Association and for the Uganda Cooperative Alliance, while the rest have moved on to work in other sectors.

Association of BDS providers

The service providers have come to realize that the market potential for their services is great. They also recognize that they could do more business if they were better organized and had more visibility across the nation. They have therefore decided to form an association of BDS providers with the objective of raising their profile and advertising their services collectively. AT Uganda is helping them complete the necessary

documentation to registrar. AT Uganda has also devoted a page on its website to BDS.

Increased use of inputs by farmers

The question on how provision of prioritized BDS to agro-input dealers has in turn encouraged farmers to buy more inputs is at the heart of the project. The extent of farmers' willingness to adopt improved practices and purchase the recommended inputs has yet to be assessed.

Best practices and insights

Introduction of service providers to dealers

Deliberately planned introduction of service providers to potential clients (the agro-input dealers) was critical. This should be done in such a way that the service providers are visible from the beginning and not seen to be associated with the donor. In the AT Uganda case study, service providers were introduced through routine dealers' meetings but the service providers themselves also did immediate follow-up.

Time and support

It takes time for BDS to be accepted by dealers and other small and medium enterprises in Uganda. It is therefore important for future BDS projects to support service providers for significant periods of time (at least three years) as opposed to short-term interventions. Service providers need to be encouraged to invest in developing their skills even if they have to pay for such trainings themselves.

Broad product offering

The tendency to focus BDS on narrow products and markets makes the business less attractive to service providers and may unnecessarily reduce their earning potential. Development efforts must broaden the market for BDS, and service providers need to see a career in BDS in order to devote adequate time and resources.

Willingness to pay

Where BDS is addressing a real need, agro-input dealers and other small and medium enterprises would be willing to pay for the service. According to dealers, real needs seem to be directly linked to immediate profits. Services that are seen to increase sales are easy sells, but many programs advocate for services like business planning that dealers cannot directly link to improved profits.

CASE STUDY 2.3

Building Second-Generation Market Information Systems

By Shaun Ferris, Catholic Relief Services, and Peter Robbins, Commodity Information Services

Providing smallholder farmers in developing countries with accurate and relevant market information is a major challenge in efforts to improve their competitiveness and efficiency in agricultural markets. In Africa, few farmers or service providers have access to such information. One reason for poor information services is that 30 years ago governments in many developing countries ran commodity marketing boards that paid farmers a fixed price for their goods, and therefore no market-based information was needed. When market reforms led to the removal of these marketing boards, governments realized that farmers would now need market linkage support in the transition to a well-served open market. Most government transition plans therefore included a provision for public marketing information services. Unfortunately, virtually all of these first-generation state-operated market information systems (MIS) failed to provide relevant and timely information to farmers. A combination of poor service delivery, lack of government support and donor fatigue meant that the majority of these services ceased to operate.

However, in the past 10 years new second-generation MIS have emerged, which are testing new methods to provide farmers with much-needed information about their market opportunities. This case study is focused on MIS that have emerged in the past decade in Africa, with a focus on developments in Uganda.

Market information systems

An MIS as an organization that regularly provides information related to agricultural markets to producers and traders. The purpose of the service is to increase the efficiency of agricultural markets and help overcome market failures that are based on weak and asymmetric access to information. These services are usually

considered a public good, so the information is often disseminated freely.

Types of market information

There are three main types:

- **Traditional market information** systems that provide regular spot prices of agricultural goods to the farming community.
- **Market intelligence** that provides forecasting information on a narrow range of products and that mainly supports the needs of traders.
- **Market linkage information** that focuses on a single product and specifically aims to bring together buyers and sellers.

Why market information systems are valuable to market chain actors

Farmers who are ignorant of market conditions are prey to traders seeking to push down prices. Market information assists farmers in their negotiations with traders, enabling them to make more informed decisions on where and when to sell their goods. Access to price trend data allows farmers and service providers to analyze product price movements and make decisions on which crops to grow, and when to sell or store their crops based on seasonal price variation. Financial institutions use market price information to monitor the health of the agriculture sector and to assess risks of lending for production loans, speculative storage and trading options. Policymakers and researchers use both current and historical market information to monitor crop and food security conditions and plan for market investments and interventions. Due to the range of potential users and uses of market information, there is increasing demand for access to such data. But the data is only useful if it is reliable, accurate and timely.

The benefits of a successful market information service are that it:

- Strengthens farmers' bargaining position.
- Increases competition.
- Lowers transaction costs and time.
- Assists in matching supply with demand.
- Increases the volume of trade.
- Improves the rural economy.
- Strengthens food security.
- Assists government planning.
- Boosts economic activity.

Few first-generation MIS achieved any of these goals as they were challenged by overly bureaucratic government protocols and limited options for data dissemination. However, second-generation MIS have made a number of changes in how to collect, manage, analyze and deliver information to customers. The following section reviews how different types of second-generation MIS were developed in Uganda within the FOODNET project from 1999 to 2008.³

Developing market information systems in Uganda

Three levels of MIS were designed to serve the marketing needs of farmers, traders, processors and input suppliers in Uganda's agricultural sector:

- **Local**—aims to meet the specific needs of smallholder farmers and traders at the district or cluster of districts level.
- **National**—provides a regular overview of the countrywide market status targeting government, national traders and food security agencies.
- **Regional**—aims to support the needs of the formal and informal traders involved with cross-border trade of high-volume staple commodities.

Local market information service

Local MIS in Uganda provided regular and timely price data on the top 10 to 15 dry staple products, collected from 5 to 10 markets within a defined geographical area, such as a district or cluster of districts. The purpose of this service was to determine whether a subnational institution, such as a local government agency, local entrepreneur, bank or nongovernmental organization (NGO) could develop a viable local information service. The target population within a district was approximately 50,000 people. The district service was operated by one marketing

officer with a motorbike, who travelled to the major markets within a district to gather prices and discuss market conditions with farmers. The market information was then relayed to the farming community via two weekly 10-minute FM radio broadcasts in the local language at a time when most farmers were free to listen. This pilot project, funded by the Centre for Agricultural Technical Assistance (Netherlands), included three separate districts, which were managed by one centralized analyst in Kampala.

The weekly radio bulletins were supplemented with a radio drama series titled "Market to Market" to help farmers understand and use the market information they received. The script for this radio series was based on the book written by Andrew Shepherd called *Market information services: Theory and practice*. The bulletins placed emphasis on how to use market information and the benefits of farmers working together in groups and selling collectively. Market information was provided free of charge to both farmers and the radio companies. Major costs for the service were staff, radio airtime and transport costs for market visits and monitoring purposes.

The business model of this service operated on a public goods concept. Customers received the information as a public good without charge and governments or donors paid for the service.

National market information service

A national Ugandan MIS was developed in collaboration with the Ministry of Trade, the FOODNET project (funded by the U.S. Agency for International Development) and private communication firms. The national MIS in Uganda collected commodity data on off-lorry, wholesale and retail prices for 28 agricultural commodities from 16 districts, with a target audience of 5 to 7 million farmers. District-level prices were collected on a weekly basis, and prices were collected for the same commodities on a daily basis from three terminal markets in Kampala. In addition, in partnership with other food security and value chain-focused organizations in Uganda, the system collected trade volumes in major commodity markets, demand and supply conditions, and the quality of the produce in the markets. Weather conditions in selected districts and production and price projections of major staples were also captured.

At the district level, ministry trade officers or NGO staff collected information. These market agents received intensive training on how to

3. FOODNET: a regional marketing and processing research network established under the Association for Strengthening Agricultural Research in Eastern and Southern Africa.

collect market price data and were monitored closely for two years to ensure prices were accurate. The market monitors were paid US\$25 per month, which included the price of sending the data to the analysis unit, where two analysts processed it. Within two days of receipt, information was disseminated to farmers through 15 district-level FM radio stations in all the major languages as well as through mobile phone SMS on three national telecom carriers, email, Internet and fax.

In 2008, the national MIS was privatized in an open tender process and is now operated by FIT Uganda. With privatization, the service has shifted away from using radio as the main means of dissemination to a web to mobile phone SMS-based service. This shift in approach significantly reduced the number of people who receive the information but also reduced the costs of providing it. The new service has a website that provides opportunities for buyers and sellers to place offers, but this option has not been widely used.

The original business model was developed as a strategic public goods service, catering to the needs of millions of farmers. A major innovation in terms of its operation and governance was that management was outsourced to a project, under the auspices of the Ministry of Trade. After seven years of donor funding as a public good, a decision was made to reformulate this service into a private good over a five-year period. The new business model is to offer the MIS as a free good to farmers, but finance the service through income streams from a range of supporters. Ideas on possible income streams include subscriptions from NGO projects and private companies, advertising, special data services for consultants and income from SMS services. The process of transitioning from a public to a private sector program is ongoing.

The regional market information service

The regional market service, Regional Agricultural Trade Intelligence Network (RATIN), was developed to enhance regional trade in four countries in East Africa: Rwanda, Uganda, Kenya and Tanzania. The main clients for the regional service were:

- Small- and medium-scale commodity traders handling between 50 metric tons (MT) and 100 MT.
- Larger traders handling more than 500 MT.

- Farmer associations, transporters, development agencies, government policymakers and food aid agencies.

Market intelligence requires higher resolution of data than a traditional MIS, with more price and market news gathered on a narrower set of products and from fewer market points; in this case the market intelligence work focused only on the two most traded crops: maize and beans.

Key features of the RATIN service:

- Price data came from the national MIS but only used terminal market information, (i.e., data from the largest two or three wholesale markets within a country).
- Data collectors based at key border crossings monitored the flow of cross-border trade volumes of maize and beans and gathered data on the number of trucks of maize and beans crossing the border. This information provided critical information on formal and informal trade flows.
- Trade table meetings were held monthly or every two months. These meetings included leading production, marketing and trade experts who brought together the latest information and thinking about crop performance, stocks, imports and harvests, and made up the basis of a crop forecast committee. Information from these meetings was used to develop a “trade position” which is based on current demand, stocks, prices and flows of produce, for that month and to provide a rolling “food balance” projection, which is a measure of the country’s food supply during a specific time period. The food balance sheet shows the food items for human consumption, along with how it is produced, used, imported or exported, and how it benefits the society. An e-newsletter was sent to all 1,500 registered stakeholders on a monthly basis and a hard copy market news bulletin in English and Swahili was sent to trader associations.

The business model of this service was established as a partnership between three regional programs: FOODNET, Famine Early Warning Systems Network (FEWS NET) and the Regional Agricultural Trade Expansion Support (RATES) project. It was financially supported by donor contributions. The regional market intelligence website was migrated to the Eastern African Grain Council in 2008. The service is a public good providing free data.

Costs and income streams for the different services

Each of the services—at local, national and regional levels—requires different business plans, financing structures and time frames. The information in Table 1 provides start-up and recurrent costs, target audience type and possible incomes streams.

Impact of the services

Two impact surveys were conducted to evaluate

private. In the Ugandan MIS case, the national MIS was an outsourced team of staff that included 20 part-time data collectors, 2 analysts and a manager who worked with a range of private media companies. Small, versatile teams cut costs and enabled data to be rapidly compiled, packaged and prepared for dissemination.

Focus on reliability and quality

Second-generation MIS must provide regular, reliable and accurate market data. This requires the service to be focused on a limited number of

Table 1. Scope and scale of market information systems in Uganda.

Item	Local	National	Regional
Start-up cost (US\$)	\$10,000 per district	<ul style="list-style-type: none"> • \$200,000 (basic price data) • \$500,000 to \$700,000 (with market news and marketing information) 	<ul style="list-style-type: none"> • \$250,000
Recurrent annual cost (US\$)	\$5,000 per district	<ul style="list-style-type: none"> • \$50,000 to 100,000 (basic) • \$200,000 to \$300,000 (with marketing information) 	<ul style="list-style-type: none"> • \$100,000 to \$150,000
Client base	1 to 2 million farmers	<ul style="list-style-type: none"> • 20 to 30 million farmers 	<ul style="list-style-type: none"> • 5,000 informal and formal traders
Income streams	<ul style="list-style-type: none"> • Advertisements • Local stockists 	<ul style="list-style-type: none"> • Value chain subscription • Monthly charge • SMS income • Advertisements from input suppliers • Syndication of radio stations 	<ul style="list-style-type: none"> • Embedded service of regional association of traders • Commission on Internet-based trades

Source: Ferris, S. & Robbins, P. (2004). *Developing marketing information services in Eastern Africa: The FOODNET experience*. ASARECA Monograph 9. Ibadan, Nigeria: International Institute of Tropical Agriculture.

the benefits of the local and national MIS in Uganda. They found that farmers used the information to negotiate prices and make decisions on what to produce, when to sell, where to sell and whether to store. Income gains for farmers using MIS are difficult to attribute. Of the farmers who regularly received the information, 58 percent said they were able to use the information to improve their incomes. Income gains were estimated to be in the range of 16 percent for individuals and up to 24 percent when farmers combined the use of market information with collective marketing.

Best practices and insights

Independent management

Second-generation MIS are rarely managed entirely by government agencies. Instead, they tend to be public-private partnerships and increasingly fully

markets and products. In Uganda, 28 products from 16 markets were collected under the national MIS. To ensure data quality, the first two years of the project included intensive training and monitoring of field staff. After that period, markets were routinely evaluated to ensure that enumerators were gathering the correct information.

Farmer segmentation

The type of service and how information is offered depends on client types and the level of modernization of the marketing system. As discussed in Part 1 of this guide, typical farmer segmentation for main grain crops such as maize will be:

1. Commercial smallholder farmers who sell more than 75 percent of their produce (1 to 2 percent)

2. Semi-commercial farmers who sell less than 50 percent of production (10 to 15 percent)
3. Farmers who sell or buy depending on the season (20 to 30 percent)
4. Farmers who are net buyers (40 to 50 percent)

The national MIS targeted farmers in segments 2 and 3, with training on how to understand and use market information reaching all farmer segments. The RATIN service, however, provided forecast information and targeted only the top two segments.

Cost structures

The cost of first-generation MIS operated by government agencies ranged from US\$300,000 to US\$500,000 per year, and much of this cost was for staff and logistics. The high costs of these services made it difficult for governments to operate and donors grew tired of high recurrent costs with diminishing service quality. The second-generation Ugandan MIS were able to reduce costs over time from US\$100,000 per year to US\$60,000. The structure of the costs was approximately 25 percent for staff, 25 percent for logistics and 50 percent for media. The most recent types of MIS are seeking to overcome recurrent donor requests by shifting into private services. The costs of establishing a private service varies a lot! Depending on the type of service, establishing a fully private model may cost US\$500,000 to US\$1 million to set up and ranges from US\$200,000 to US\$300,000 per year to operate. If an entrepreneurial team forgoes a large part of their salary options in the first years, these costs can be reduced, but the goal is to quickly establish clients and income streams that achieve profitability within a two- to four-year period. Often the approach is a combination of private managers who offset early costs with private investments and public project investments and grants.

Use of information and communications technology

Second-generation MIS are making significant gains in efficiency through innovative technology, software management systems and mobile communications. Such technologies have enabled the data management team to overcome major logistical, data management and communication challenges. Most new MIS are now using SMS as the means of targeting information to networks of registered farmers.

Data management

Second-generation MIS started using Microsoft Excel spreadsheets to collate and manage their information. But in the past several years, most have progressed to Microsoft Access and MySQL databases. The leap from static Excel spreadsheets to customized database management platforms is often difficult, and the cost of developing and maintaining these software systems is high and requires specialized staff. Most companies outsource the development of data management platforms to specialist companies and, where available, buy existing software systems. Due to the size of the market, there are few out-of-the-box MIS products available. However, several companies are actively pursuing the development of standardized MIS management products, such as those being developed by Esoko, FIT and Frontline SMS.

Radio-based dissemination of data

In Uganda, it was found that from 2000 to 2007, rural radio was the most effective means of delivering information to the large number of farmers. In many countries, this may continue to be the case as rural radio overcomes literacy issues and enables mass coverage. However, radio dissemination is costly and in most cases is limited by a one-way information flow. The use of call-in options and call centers to the radio companies was one way of providing two-way communication. Until now, radio has not provided effective avenues for income streams. In Uganda, costs of radio dissemination were reduced by bulk airtime purchases, and co-investing in radio stations with agreements for free airtime. Ambitions for selling market news to advertisers did not materialize.

Mobile phone systems

Current trends for MIS are to replace radio with dissemination of information via mobile phone systems. This has become possible with the ubiquitous spread of mobile phones. The advantage of the phone as a dissemination channel is that farmers can receive information directly. If they are registered into a network, the information can be customized to their needs. A key advantage of mobile technology is that it offers two-way communication. This means that market data can be sent to individuals who can store and share market information at their convenience. Once an individual is registered, an MIS provider can send not only price data, but also information about input suppliers, product

offers, weather conditions, finance, agronomic advice, and even offers to buy and sell.

New business models for MIS

The most recent MIS providers are exploring ways to establish multifaceted business models that support different customers. This would include producer networks that receive free basic information and formal trading clients and NGOs that pay a subscription to use the information service and receive more customized services. Some models are also being developed that require farmers to pay for regular market information; for example, in India the Reuters Market Light team provides farmers with 10 SMS messages each month for a fee of US\$1 per month. This approach is gaining interest, although fee-for-service models are unlikely to be accessible among the poorest farmers. The aim of subscription-based information systems is to offer formal traders and input suppliers an opportunity to use mobile communications as a means of monitoring their agents and rural stores through a web-to-phone system that tracks inventory levels, logistics and fuel usage,

competitor pricing and financial flows. This will enable companies to provide embedded market information to their buying agents and farmer customers. The advantage of this approach is that it provides a financially sustainable business model that offers a seemingly free service to farmers. However, it requires that farmers link into such buyer networks to benefit from the market data available.

Further information

- Kleih, U., Odwongo, W., & Ndyashangaki, C. (1999). *Community access to marketing opportunities: Options for remote areas. Uganda case study*. National Resources Institute.
- Shepherd A. W. (1997). *Market information services: Theory and practice*. Rome, Italy: Food and Agriculture Organization of the United Nations.
- Ferris, S. & Robbins, P. (2004). *Developing marketing information services in Eastern Africa: The FOODNET experience*. ASARECA Monograph 9. Ibadan, Nigeria: International Institute of Tropical Agriculture. http://www.iita.org/c/document_library/get_file?uuid=a44e210d-2ec5-4ebf-94fc-63af52706595&groupId=25357

CASE STUDY 2.4

Agricultural Extension Services in Africa

By Shaun Ferris, Catholic Relief Services

For many developing countries in sub-Saharan Africa, the agriculture sector is the main source of employment and income in both domestic and export markets. However, few governments in these agriculturally dependent economies meet the Common Africa Agricultural Development Program goal of investing 10 percent of their GDP in their agricultural sectors, commonly known as the Maputo Declaration. As a result, millions of smallholder farmers have no access to extension services. Fifty years ago, most countries had robust extension services, but these services were eroded by a combination of structural adjustment, declining terms of trade for agricultural goods and broadening sector demands on government coffers. This case study focuses on the changing face of extension services with examples of new norms in agriculture, which combine government extension, public-private partnerships for extension and purely private options.

What are agricultural extension services?

Agricultural extension services cover a broad range of advisory, information and training services that support a range of crop, forest, livestock and fisheries products. Extension agents tend to support specific areas, such as field crops, horticultural crops, tree crops or livestock. They provide farmers with information that includes agronomy and competitive production systems, pest and disease control, input options, more effective organizational structures, post-harvest handling, marketing options, finance and business strategies.

Agricultural extension services also provide a direct link between national research and farmers. Extension agents play a key role in enabling farmers to test and use new technology packages that are appropriate for their local climate, infrastructure, investment capacity and market opportunities. In the past 10 years, extension

agents have witnessed increasing demand for more business support, and this has defined many service providers into production and/or agro-enterprise categories. The following examples from Uganda, Australia and Zambia highlight trends and options in extension systems.

The evolution of extension services in Uganda

In the 1960s, Uganda had a strong and well-established agricultural extension service to support export commodities. This extension service and the associated markets were decimated during the disruption of the Amin years in the 1970s. In the early 1980s, the World Bank introduced the Training and Visit extension system to rebuild agriculture, but investments were inadequate in successfully rebuilding an extension program at the national level. In 1989, Uganda's government formally dissolved agricultural marketing boards, which led to the rapid collapse of farmer cooperatives and the associated input supply and banking sectors. To compensate for these losses, a National Agricultural Research Organization (NARO) was established and a policy of "unified extension" aimed to place at least one general extension agent in every sub-county to support approximately 5,000 people. Although the purpose of the reform was to streamline efforts and reduce costs, the result was a substantial weakening of the extension services.

Since then, the quality and effectiveness of government extension services have steadily declined, with large numbers of staff collecting a salary, but with insufficient funds to support field activities. This process has been repeated across Africa and resulted in agricultural stagnation. Figure 1 shows how the increase in cereal yields has stagnated over the past 30 years. This is a tragic outcome for the farmers and a poor reflection on development processes.

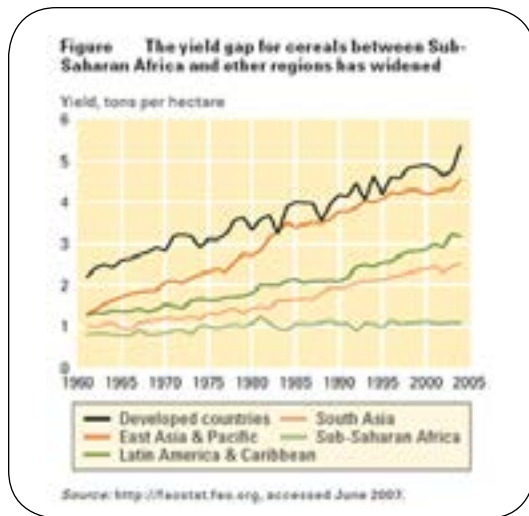


Figure 1. Yield gap for cereals between sub-Saharan Africa and other regions.

Source: The World Bank. (2007). *World Development Report 2008: Agriculture for Development*. Washington, DC, USA: The World Bank.

Diversity of extension service providers

The vacuum created by the loss of formal government extension led to increased civil and donor funding to nongovernmental agencies that

implement extension services. These new service providers include international nongovernmental organizations (NGOs), local NGOs, cooperative agencies and farmer organizations as well as private consulting firms and contractors. Since the 1990s, shifts in funding sources meant that greater emphasis was placed on food crops and on serving poor farmers with less investment in cash crops. This shift in investment reflected donor strategies and also indicated how services were adjusting to support farming community demographics.

Farmer segments

The agricultural sector in Uganda includes a range of actors who can be categorized into four major types:

1. Commercial farmers who sell more than 90 percent of their goods to the market (1 to 2 percent)
2. Farmers who own assets and regularly sell surplus to markets (10 to 15 percent)
3. Farmers who are occasionally connected to markets, depending on rainfall (20 to 30 percent)
4. Farmers who buy more than they sell and depend on labor markets for income (40 to 50 percent)

To meet the needs of these farming segments, service providers have adopted a range of strategies, as shown in Table 2.

Table 2. Typology of agricultural extension service providers, clients and their roles in Uganda.

Segment	Agricultural Service Provider	Main Clients	Role
1	Consultants	Estates, export farmers, commercial farmers	Address critical problems or opportunities in the business and/or marketing of commercial farmers.
2	Contractors, international research projects (e.g., Consultative Group for International Agricultural Research) and private companies	Progressive or "asset-ready" farmers who have land, access to water and basic technologies and who are innovative, keen to try new technologies and have access to markets	Focus on more productive farmers with assets and skills that are seeking advice on use of new technologies and market linkage. They often work on more commercial and export products.
2	Ministry of Agriculture extension staff, National Agricultural Research Organization and the National Agricultural Advisory Service extension	Poor but "asset-ready" farmers who are able to take on new technologies	Provide farmers with advice on production practices and problems with pests and disease. In some cases, government extension officers are co-opted by nongovernmental organizations to work with poor farmers.
3	Missionaries, nongovernmental organizations and the Ministry of Agriculture	Chronically poor farmers with little assets who are net food buyers, live in remote areas and have limited market access	Provide safety net options, food aid, free seed, tools, fertilizer and training in basic production methods. After emergencies are stabilized, support shifts to productivity.

Challenges

Providing extension services in poor countries such as Uganda has a number of challenges. As populations expand, farm sizes diminish, productivity declines and the average age of farmers increases.

Given these challenges, donors are trying to find new ways of providing more effective services to farmers, as a means to support what is effectively a large agrarian safety net and to identify ways to attract youth back to the land. Current strategies are seeking public-private options or private solutions rather than government-led options. However, governments typically want government-controlled solutions and many government staff do not trust the private sector.

Types of extension services offered to smallholders in Uganda

Public research

NARO is the agency mandated to provide research products for crops, fisheries, forestry and livestock markets. In Uganda, NARO is mandated to ensure dissemination and application of research results. For the past 20 years, most funds for NARO have been focused on raising the production of food crops for low-income farmers. This means that NARO generally has few linkages with the private sector. Its relevance to the commercial sector, other than coffee, is limited, leading to concerns about NARO's lack of economic and marketing capacity. Despite these problems, NARO is a relatively strong research organization within East Africa and was selected for leadership support by the World Bank for cassava research.

Private research

NARO's emphasis on food crops has led to commercial sectors undertaking their own research. Several seed companies are now introducing new varieties of the most commercial crops, including hybrid maize, cotton, beans, soybeans, sunflower and horticultural crops from other countries. They are testing these varieties in small research plots prior to registration, certification and sale to farmers. Similarly, the high-value horticulture sector has collaborated, with support from donors, to form a small analytical team to research a range of issues that challenge the sector.

National agricultural advisory services

In 2001, the World Bank and government of Uganda established the National Agricultural Advisory Service (NAADS), which aims to transition public extension into a privatized system. This transition program will occur over a 25-year time frame, with the first 7-year period costing US\$108 million. The NAADS process requires that farmer groups devise plans for an enterprise and make requests for services through sub-county committees. The committees tender for contracts with local service providers who compete to supply advice to farmers. The NAADS process aims to promote farmer groups as units of learning and collective marketing and to build the capacity and demand for local advisory agents. According to the initial agreement, farmers contribute 2 percent of costs while the government covers 18 percent and donors fund 80 percent. The government plans to retrench or not hire new government extension staff to enable NAADS to expand. However, the retrenchment has been slow, which has created tensions between NAADS and the Ministry of Agriculture, and progress with funded service provision to farmers has suffered in terms of quality and scale.

Nongovernmental organizations

There are probably more than 1,000 NGOs of various sizes supporting farming communities in Uganda. This array of agencies includes more than 20 large international NGOs, with annual budgets exceeding US\$3 million. Such NGOs manage major projects that deliver food, shelter, microfinance, education, water and sanitation and agricultural skills from basic to fairly sophisticated value chain upgrading to rural communities. Although NGOs are chastised for being highly input-driven, giving away free assets such as seed, tools and fertilizers to communities, more professional NGOs support investments in market-oriented agricultural interventions that seek to build the capacity of farmers and their organizations and create competitive, productive and profitable farming enterprises. NGOs also seek to support farmers and business development services through fee-based services, smart subsidies and vouchers, rather than providing free assets and services directly.

Contractor projects

Since 1991, the U.S. Agency for International Development has funded three major agricultural productivity projects in Uganda: Investment in Developing Export Agriculture (IDEA) project,

Agricultural Productivity Enhancement Program (APEP) and Livelihoods and Enterprises for Agricultural Development (LEAD) program. Each had annual budgets of approximately US\$3 to US\$5 million, with the aim of boosting agricultural production and competitiveness.

The IDEA project introduced a value chain approach to a small but professional extension team that worked with input suppliers, farmer cooperatives, traders, processors and exporters to upgrade a limited number of value chains. The project enabled Ugandan high-value horticulture farmers, specifically flower farmers, to increase their land under cultivation from an average of 5 to 10 hectares in 1994 to 180 hectares by 2005, with a crop value of US\$32 million. In the higher-value sector, another initiative increased the value of vanilla exports from near zero to US\$5 million per year.

For field crops, the project used demonstration plots and intensive farmer training to increase maize and bean productivity to supply national and regional food aid markets and also to target regional commercial markets. Capacity building was incremental and focused on introducing new varieties, then fertilizer and zero tillage, but all with a clearly defined market linkage strategy. The IDEA team was pivotal in working with value chain partners to (1) upgrade the seed sector, (2) establish small-scale fertilizer supply points, (3) encourage banks to test farmer lending options, (4) revitalize market information and (5) build demand through traders and the United Nations World Food Programme.

Over the project period (1995 to 2005), annual production of maize increased from approximately 300,000 metric tons (MT) to 800,000 MT. Key success factors in this project included the skills of the small expert team, the use of value chain methodology, and the linkage between food aid procurement and production investments. Major challenges included the weak capacity of farmer groups. The Cooperative League of the USA (also known as the National Cooperative Business Association or CLUSA) was integrated into the program to provide and scale up a more disciplined approach to strengthening farmer groups. The CLUSA approach is highly market driven and focused on skills transfer rather than input handouts. CLUSA builds farmer groups with clear business goals that are monitored by paid extension agents who train and evaluate groups according to their business performance. The CLUSA collective marketing model was

applied successfully in Uganda in the maize, cotton, upland rice, coffee and sunflower sectors.

Private and public-private sector extension services

In addition to government- and donor-led approaches, the private sector is increasingly involved in supporting extension services in Uganda. In the formal sector, there are many examples of companies who support farmers within specific value chain projects, and an emerging trend is to develop public-private extension services to expand production and increase quality. For example:

- **British American Tobacco** field managers provide intensive production and post-harvest handling training to their tobacco growers to achieve production targets. This is an effective approach as they are virtually the only tobacco leaf buyer in the market, so investments are more easily recovered than in more competitive markets.
- **Uganda Breweries Ltd.** worked with IDEA/APEP in Eastern Uganda to purchase barley from farmers on a contractual basis. The brewery entered this arrangement to support a new, lower-cost beverage that used only domestic ingredients, rather than imported barley. The aim was to build supply chains using methods that shared extension and storage costs. The goal was for the extension to be maintained by the brewery when the public support was withdrawn.
- **Mukwano Industries Ltd.**, the main oil and soap processor in Uganda, worked with the IDEA project to increase sunflower production as an alternative to palm oil imports. Farmers were provided with hybrid seed and organized to supply Mukwano's processing factory. The farming community recognized this as a sound business opportunity and responded quickly by investing in expanded oil seed production.
- **Cotton ginnings.** Until 2005, farmers in Uganda sold their cotton to the highest bidder, regardless of who supplied them with seed, fertilizer and chemicals. Consequently, ginnings stopped providing input services and the sector rapidly declined. To redress this downward spiral, the government forged an agreement with farmers, ginnings and NGOs such that farmers within a specific zone agreed to supply one ginnery, and ginnings agreed to provide production services to the zone's farmers. The aim of this work is to restructure the supply chain and once organized, to hand

over the role of the NGO-based extension services to the commercial cotton sector.

New approaches in extension

The experiences in Uganda highlight the diversity of approaches being used to improve services to farmers and demonstrates the value of building relationships between the public and private sectors. Other countries as disparate as Australia and Zambia are also experimenting with different types of public-private and solely private forms of service provision.

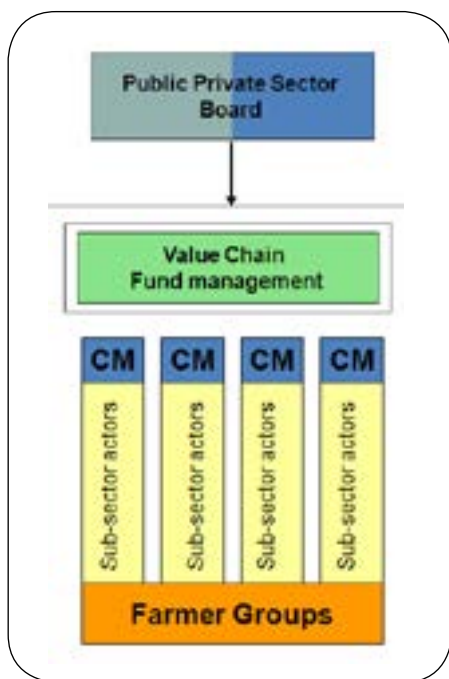


Figure 2. Extension model based on Australian, public-private sector arrangement for financing and management.

Australia's extension model

In Australia, the management of public extension services has been tendered to a private sector management team. This management team has a mandate to invest its annual budget across a limited number of value chains. Value chain fund managers provide resources to various chain managers based on the quality of proposals they receive for upgrading specific crops. Proposals are based on the needs of the value chain members who work together to prioritize specific areas that will help consolidate and grow their value chain. This method requires close collaboration between researchers, input suppliers, farmers, buyers and the investment community. It also requires

that actors along the value chain understand, articulate and agree on critical constraints and develop viable plans to increase their overall competitiveness and profitability. Although this approach has not been tested in an emerging economy, it has merit in being able to leverage investments from the national government with private sector funds.

Agent-led approach in Zambia

In Zambia, the Production, Finance, Technology (PROFIT) project is working on an agent-led extension service designed to assist specific value chains in developing low-risk, scalable business models that provide smallholders with products, services, knowledge and innovation. Agents are trained on how to provide farmer groups with production and marketing support and ways to aggregate orders for input and output markets. The agent then helps farmers connect with the private sector so they can:

- Increase their productivity by having the right inputs at the right time.
- Increase income levels through more affordable purchase of agrochemicals and achieve economies of scale under collective marketing.

The agent-led system requires intensive start-up support and training. However, once established, the agent should be in a position to receive an income based on a commission from the input and output firms. The agent approach is being advocated as a complement or alternative to traditional government extension, with the agent providing a powerful linkage between private input and output services and remote farming communities. Most government extension services still supply knowledge and have not yet been successful in providing farmers with a package of technologies nor with access to input and output markets. The agent system is based on providing all four components: aggregated inputs, knowledge, innovation and access to output markets.

Rise of the Internet

The ability to share information through mobile devices is a major global innovation that is positively impacting extension service provision. Several companies and agencies now use mobile technology to assist farmers with information related to weather, disease outbreaks, input locations products and costs, finance options, market information and advisory services. For example, in Kenya KenCall established a help desk service that enables farmers to call and talk to

experts who can assist with their specific problems. The Food and Agriculture Organization of the United Nations also built a large online information portal that allows farmers to send questions and photos seeking advice on specific agricultural issues, particularly related to pests and diseases. The Centre for Biosciences and Agriculture International (CABI) has a community health doctor approach based on their Plantwise information portal. Mobile phones and Internet connectivity have also promoted the re-emergence of market information systems (Case Study 2.3). Although the use of mobile phones and linked Internet services by public extension agencies is still limited in most developing countries, it is a rapidly emerging area. This ability to access information will radically change their ability to reach farmers and provide them with improved services.

Best practices and insights

Some of the most relevant lessons for development organizations include:

- Public extension services exist in many countries and government staff are often well experienced, but they do not have sufficient funds or training to provide effective field services. Engaging in public extension services generally requires additional financial support in terms of per diems or logistics allowances.
- Public-private extension services offer an alternative that is more flexible and could cover the needs of poorer farmers. This arrangement generally focuses on single value chains—public support is typically for farmer organization and productivity enhancement, whereas private support is generally for providing market linkages. Over time, private services can take over from public extension programs if the buyer is able to capture the production gains made through their own investments, or if they are willing to collaborate with other buyers

in a pre-competitive manner to boost the overall industry.

- Private extension services tend to focus on the most commercial farmers producing higher-value crops as they have the monetary resources to pay for such services.
- Crowding out private providers. One of the difficult decisions for extension service providers is to find ways to zone services so that free and subsidized services do not compete with private services.
- Value chain approach. Extension services have benefited from taking a value chain approach to their support, providing production information within an agribusiness framework. For instance, the Australian extension model has potential for significant collaboration between public and private sector partners.
- Use of the Internet. All types of service providers can increase their reach through Internet communication systems.

Further information

- Benin, S., Nkonya, E., Okecho, G., Pender, J., Mugarura, S., & Kato, E. (2005). *Quantifying the impact of the National Agricultural Advisory Services in the Uganda rural livelihoods. Household Survey*. Washington, DC, USA: International Food Policy Research Institute.
- Dorward, A., & Kydd, J. (2005). *Making market systems work better for the poor (M4P): Promoting effective, efficient and accessible coordination and exchange*. Presented at Making Markets Work for the Poor, February 15–16, Manila, Philippines.
- Food and Agriculture Organization of the United Nations (FAO) & Programme de développement des services financiers ruraux (PDSFR). (2006). *Guide de Bonnes Pratiques du Warrantage au Niger*. FAO and PDSFR.
- Wood, M. *Agent approach to extension services*. PROFIT Project Zambia.
- Ferris, S.; Robbins, P.; Best, R.; Seville, D.; Buxton, A.; Shriver, J., & Wei E. *Linking Smallholder Farmers to Markets and the Implications for Extension and Advisory Services*. MEAS Discussion Paper 4. 2014.

CASE STUDY 3.1

The Role of the Development Facilitator in Building the Capacity of Smallholder Farmers to Link with Modern Markets: Calamansi Growers in the Philippines

By Pedro Terry R. Tuason III, CRS Philippines

Development agencies play an important role in the initial stages of establishing a foundation for agro-enterprise. Farmers need to be trained on how to improve production, plan businesses and strengthen their organization. Investment is required in market research, value-adding processing technologies, partnership building and financial planning, among other topics. This case study relates how Catholic Relief Services and local partners have facilitated the process of linking Philippine fruit farmers to new markets by providing enabling subsidies and grants to address gaps and bottlenecks and build relations with public and private sector service providers. The farmers are closely involved at each stage of the process. In particular, their participation in financial planning and profitability analysis has made them more aware of production costs and service fees that need to be covered to maintain their competitiveness.

Calamansi and its income-generating potential for smallholder farmers

The calamansi, an evergreen tree of the genus *citrus* and family *Rutaceae*, is one of the major crops of the Siay municipality in Zamboanga Sibugay Province on the island of Mindanao in the Philippines. The tree is characterized by fruit with a spongy or leathery rind and a juicy pulp, divided into sections. Rich in vitamins and minerals, particularly vitamin C, the fruit is refreshing and nutritionally valuable.

Unlike in other parts of the Philippines, Mindanao calamansi farmers have the advantage of being able to supply fresh fruits throughout the year. Despite this advantage, for most months of the year calamansi prices are low (US\$0.75 to US\$0.85 per 27-kilogram bag). During this

time, farmers would prefer to leave the fruits unharvested as they have no incentive to sell them. However, they still have to spend money for labor to gather the ripened fruits to prevent negative effects on the soil and the spread of disease. Yet when the price of calamansi is high, the potential for farmers to earn more income is lost due to several intermediaries along the supply chain.

The calamansi farmers and laborers of Siay municipality have been partners with CRS Philippines for almost five years. Over this time, a series of interventions have been made to help farmers in three target “barangays” (the smallest administrative division) earn more from their calamansi harvest by building their capacity to sell fruit in urban markets.

Phased interventions to link calamansi farmers to modern markets

Assessing product supply and demand

In 2005, CRS and its partner nongovernmental organization (Xavier Science Foundation—Xavier Agriculture Extension Service) undertook a baseline study and conducted market research to assess the supply of calamansi and potential demand for fresh and processed calamansi products.

The baseline revealed that most calamansi growers have between 0.5 and 1.5 hectares, with a few medium-sized growers with farms ranging from 3 to 14 hectares. Each year, farmers in the three target barangays produce approximately 6,000 metric tons (MT) of calamansi fruit.

However, they face several challenges in marketing their output. These challenges include

improper harvesting practices, lack of insect and pest management, poor-quality packaging materials, and limited infrastructure facilities such as sorting sheds and temporary storage to consolidate shipments. High transport costs also hinder the potential of marketing calamansi; Siay is far from urban markets and most farms are located in areas with poor road access.

The market research first identified different actors in the market chain: there is only one major buyer of calamansi in Siay, and two other buyers occasionally compete with the major buyer. From November to February, buyers (called “viajeros”) come from Manila to Mindanao for their supply of calamansi. In this period, production of the fruit in Luzon and Visayas is severely affected by the annual typhoon and wet season. From May to November, calamansi growers closer to Manila have peak production, and calamansi from Siay is left out of the market because of high costs of transport.

In Manila, calamansi is brought for consolidation and onward sale to the “bagsakan” or wholesale markets that supply institutional buyers (e.g., schools, universities, hotels, hospitals and processors of ready-to-drink juices). For example, Ruvita Enterprises links growers to institutional markets, and Gucila Marketing Enterprises and Global Partners Inc. are interested in a calamansi puree product.

The market research also identified the location and costs of service providers, including:

- Suppliers of plastic crates, packaging materials, cartoon boxes and other inputs, such as Sanko Plastics.
- Land transport and haulers.
- Shipping services in the main port areas of Zamboanga City, Dipolog City, Ozamis City and Cagayan de Oro City.
- Providers of container vans, such as refrigerated containers from CRYO and FBIC, and fan and dry containers from FBIC and Aboitiz.
- Providers of cold rooms and storage facilities in Zamboanga City, Siay and Cagayan de Oro.

Organizing production and marketing clusters and building capacity

CRS and its partners have developed a clustering approach to farmer organization that:

- Prepares farmers to link with the markets.

- Assists them to effectively organize into small groups or clusters.
- Guides them in engaging markets that provide them with more favorable trading arrangements that improve their incomes and secure their livelihoods.

The eight steps that make up the clustering approach are: (1) site selection, partnership building and working group formation; (2) product supply assessment and product selection; (3) market chain study; (4) cluster formation; (5) cluster plan formulation; (6) test marketing; (7) scaling up and (8) cluster strengthening. Details of each of these steps are provided in *The clustering approach to agroenterprise development for small farmers* (CRS 2007, 2014).

For each of the nine calamansi production clusters that have been formed, a production plan projects their anticipated output (e.g., kilograms of calamansi per month) and defines product quality specifications. The plan also outlines a set of production and product handling techniques agreed to by cluster members.

Each cluster has a leader who takes overall responsibility for the coordination of product movements, schedules of harvest, consolidation and delivery. The assistant cluster leader takes charge of the implementation of production schedules and compliance with quality standards. Cluster leaders and their assistants have undergone business planning workshops to decide on and formulate business plans based on the different market options. In addition, production and post-production practices that contribute to either high- or poor-quality products were traced. The practices that contribute to high quality were further improved and practices that contribute to poor-quality production were changed.

After a few years of operation, the general membership of the clusters decided to formalize and register their groups into a cooperative: the Zamboanga Sibugay High-Value Crop Marketing Cooperative. The need to aggregate and formalize became necessary when some purchasers began to require government registration and business papers. At the time of the project, the cooperative had 204 members.

Product sampling

Fruit samples were sent to food processing enterprises in Manila to check for quality and

determine shelf life. Additionally, calamansi produced in Siay was processed into puree in a commercial multi-fruit processing plant in Cagayan de Oro City and sent to a wholesale buyer. Various other product samples were sent to prospective buyers in Manila, including hand-squeezed puree and fresh fruit.

The feedback received from buyers became the basis for medium-term capacity building interventions to improve product quality. For example, Siay calamansi was discovered to be less preferred in the fresh fruit market because of short, three-day shelf life. And while puree samples met pH, color, soluble solids and sugar content requirements, it exhibited a bitter taste defect that needed to be corrected.

Agricultural technology dissemination

In addition to market research, the project has been successful in training smallholder farmers on simple farming technologies and good agricultural practices aimed at increasing farm productivity and efficiency. For instance, at Farmer Field Schools farmers formulate natural farming technology systems aimed at increasing yield while decreasing the cost of pest management.

Access to credit through microfinance institutions

CRS also works with partner microfinance institutions to develop appropriate agricultural financing models for calamansi farmers, including:

- **Production financing:** Loans used for the procurement of agricultural inputs and labor so that individual farmers can invest in crop production.
- **Purchase order financing:** Designed to work in the same way as production financing, these loans are secured against a forward contract between the farmers' group and a buyer.
- **Receivables financing:** Loans extended to a producer organization for use as working capital to pay farmers for the crops they have delivered at harvest time. The group repays the loan when the buyer pays for the crop delivered, usually set at a 30-day term.

Provision of post-harvest facilities and other infrastructure

- The lack of post-harvest facilities and other infrastructure was a major barrier. The quality of the fresh fruit being marketed by

the cooperative dramatically improved with the construction of seven sorting sheds, combined with training on improvements in production, product packaging and handling. Cooperative members contributed land and labor, and CRS provided the materials. The sorting sheds have also become the venue for cluster activities, such as training workshops and regular meetings. CRS assisted the clusters in formulating a management plan that outlines selection of persons-in-charge to keep the facilities in good condition, maintenance requirements and usage fees. Non-cooperative members can also use the facilities by paying a fee, which is used to maintain the infrastructure.

- CRS has also supported the construction of water reservoirs and the repair of access roads. Cluster members pay 5 to 20 pesos per month (equivalent to US\$0.11 to US\$0.44) toward the maintenance of the water tanks. Repaired access roads have facilitated the transport of fresh fruits from the farms to the sorting sheds, and some farmers report reductions in transport cost by as much as 50 percent. Aside from savings in cost, the repair of the roads decreases the incidence of damage to fresh fruits during transport. The access roads are now maintained by the barangay local government.

Adding value to enter new markets

Farmers found it hard to make a profit selling fresh fruit to Manila between May and November when the large calamansi-producing provinces closest to the city harvested their crop. Oversupply of fresh calamansi fruits during this period caused prices to dip so low that farmers were unable to cover their production and marketing costs. As a result, cooperative members decided to invest in processing for concentrate and ready-to-drink beverages.

The cooperative started processing calamansi in early 2008 to supply the local market. This was on a small scale in the home of one of the members. A number of agencies and institutions recognized the cooperative's needs and worked together to increase the scale of the operations to make the venture successful. The municipal government of Siay leased one of its facilities at no cost to house the processing equipment for 10 years. CRS, in turn, managed the renovation of the building as well as the construction of two ferro-cement tanks for the supply of processing water.

The required processing equipment was sourced from the Department of Science and Technology's (DOST) Small Enterprises Technology Upgrading Program (SET-UP). CRS facilitated the initial meeting between the cooperative and DOST and assisted in preparing the proposal for the cooperative to access the facility. The value of the successful proposal, worth 500,000 pesos (US\$11,100), was used to purchase electrically powered processing equipment (e.g., a 150-liter capacity steam jacketed kettle, 40 feet of cooling coil, a transfer pump, a 150 liter filling tank and a juice extractor with a vertical hydraulic press and electric motor).

CRS also sought the assistance of other national and regional government agencies to improve the operation of the processing facility. The Department of Trade and Industry and DOST conducted training on good manufacturing procedures. After the training, the cooperative drafted Sanitary Standard Operating Procedures with the assistance of the Municipal Sanitation Office. The calamansi concentrate and ready-to-drink beverage also passed through various laboratory tests undertaken by DOST, namely (1) microbial tests, which included yeasts and molds count, total coli form count and aerobic plate count; (2) nutritional data; (3) sodium test; and (4) shelf-life testing.

CRS has assisted the cooperative in searching for larger and more stable markets. For example, during the project, the cooperative signed a memorandum of agreement with an exporter in Manila for 2,400 bottles per month. Part of the agreement was for the exporter to provide on-site technical assistance to the cooperative through a production trial run for the export market. Other markets for calamansi concentrate include schools, government offices, hotels and private establishments. Promotion of the products was done through flyers, banners and streamers. The cooperative also participated in trade fairs, which can link them to possible new markets.

Local staff composed of a manager, a production officer, 10 trained processors, a bookkeeper and a property custodian now administer the calamansi processing center. The generation of employment for Siay residents, especially cooperative members, has fostered trust and confidence among the community.

Successes and challenges

Growth in sales

Since the project started in early 2005, calamansi farmers in Siay have moved from selling irregularly to local traders to having access to Manila wholesalers to whom they supply competitively for nine months a year. The cooperative has a secure financial base and a track record of organized product supply. Collective sales of fresh calamansi increased from 21.5 MT in 2005 to 60.8 MT in 2009. The value of these sales has also increased, from US\$63,810 to US\$268,150 in the same period.

Confidence to meet new challenges

The cooperative's experience with processing calamansi for the institutional market was slow. Initially, farmers were intimidated by the stringent quality standards and the various post-harvest handling requirements (e.g., use of wooden crates, sorting, drying, documentation). Much of this uncertainty was driven by stories of others who had tried but failed to supply food processors. Siay's farmers needed to go through the experience of an actual delivery to believe that they could attain the required quality standards. In 2009, 8,524 bottles of calamansi concentrate were sold for a value of US\$11,130.

Initial investment in human and social capital and infrastructure

Since the project's inception in 2005, CRS has invested around US\$108,820 in providing support for training in production, post-harvest handling and business skills, as well as investment in infrastructure, market research and product development. Today, CRS support has been reduced to one staff member who assists the cooperative in securing permits from the Bureau of Food and Drug Administration and in running their business effectively. From its initial role as a co-implementer, CRS now acts as an advisor to the cooperative.

Access to services

Through their clusters and the cooperative, calamansi farmers have benefited from greater access to services. For instance, technical assistance in production and post-harvest handling was provided through the clusters and the Farmer Field Schools. The cooperative and the clusters provided linkages between farmers and buyers, with costs being covered by the margins obtained from sales. Technical assistance for

the processing of calamansi was later obtained from government ministries at no cost and from private companies with whom the cooperative has negotiated sales agreements.

Perceptions of handouts weaken self-reliance

For the clustering approach to agro-enterprise development to be effective, facilitators have to ensure that the process empowers farmers, their organizations and other actors in the market chain. Empowerment is achieved by emphasizing the value of self-reliance. However, this becomes problematic when the local government unit is the lead organization in project implementation, as farmers commonly perceive that the local government unit's support comes in the form of handouts. Additionally, facilitators from the local government units often lack orientation and training in community organization, marketing and processes that lead to outcomes that are not dependent on free goods and services.

Technology to maintaining competitiveness

Most farmers do not calculate their production costs, and if they do, they do not include the value of their own labor. They are used to a "jackpot" mentality in spot trading, where price is based on fluctuations in supply and demand. Producing a processed product for an institutional market has required a total shift in the way price is fixed. The project has led them through the exercise of listing all their activities to determine a break-even price critical in arriving at price offers. Often farmers' unit cost is higher than that of better-off producers who are more efficient at producing and marketing. Therefore, constant benchmarking of costs and profitability becomes critical. And maintaining competitiveness in the market requires access to technology and services that lower unit product cost through higher yield and better rates of recovery in processing, or that increase prices by improving product quality.

Best practices and insights

The calamansi project has sought to build the capacity of smallholder farmers to engage with modern markets. It has been executed with the intention of reaching a stage where farmers and their organizations are capable of continuing to produce and market calamansi products without continued injections of external donor support. CRS has played the role of external development

facilitator. A critical part of this role has been to ensure that farmers, the clusters and the cooperative have access to services they need to maintain and increase their competitiveness. Good practices and lessons learned from this experience include:

- Grants and subsidies are required for building the human capital (knowledge and skills) and social capital (organization and relationships) of farmers. Investment is also required in infrastructure, market research and product development. Farmers have to be informed that these investments represent short-term support during the incubation stage of their enterprise and are not permanent support measures.
- Guiding clusters through an interactive enterprise planning process helps farmers think in a more entrepreneurial way. Financial planning and profitability analysis helps them recognize what costs need to be covered and what service fees have to be paid for. Farmer involvement results in farmer ownership of the plan and the ability to adjust it based on their needs.
- Small failures and setbacks will happen. Development facilitators must not readily subsidize losses or costs. Interventions only become necessary when the survival of the enterprise is at stake. Clusters are more likely to be able to cope with the ups and downs of business if they have had adequate preparation to engage with markets.
- The cluster facilitates the market link between farmer and buyer for which farmers pay a service fee. There should be no layers between the cluster and the buyer. This means that the farmer members of the cluster receive the buyer's price for their product.
- Credit is better provided through organizations that have expertise in credit management. The development facilitator's role is to reduce risks by ensuring that technologies for productivity are in place, field monitoring and technical advice is available, the loan is used for its intended purpose, and built-in schemes of loan payment from product sales are in place.

Further information

Catholic Relief Services. (2007). *The clustering approach to agroenterprise development for small farmers: The CRS-Philippines experience. A guidebook for facilitators*. Davao City, Philippines: Catholic Relief Services. http://www.pinoyme.com/b2b/wp-content/uploads/2008/07/part_1.pdf.

Catholic Relief Services. (2014). *Moving together to the market: The clustering approach to agroenterprise development for small farmers*. Baltimore, Maryland, USA: Catholic Relief Services. <http://static1.1.sqspcdn.com/static/f/752898/25350064/1408713852200/>

[moving-together-to-the-market-the-clustering-approach-to-agroenterprise-development.pdf](#)

Uy, J. 2009. Collective marketing of calamansi in the Philippines. In: Ferris, S., Mundy, P. and Best, R. (Eds). *Getting to market. From agriculture to agroenterprise*. Baltimore, Maryland, USA: Catholic Relief Services.

CASE STUDY 3.2

Kenya Dairy Sector Competitiveness Program: A New Business Model for Kenya's Dairy Industry

By Bradley Buck, Mary Munene and Nancy Amayo, Land O'Lakes, Kenya

In countries such as Kenya, where there is a commercial agricultural sector with good growth prospects, the market for business services is likely to be strong. However, the challenge for development organizations is how to mobilize existing service providers and upgrade their capacity so the services they offer meet the needs of different actors in the value chain. This case study looks at how to do this through competitive grants to business service providers. It also explores the catalytic role of the business development service facilitator.

Growing Kenya's dairy sector

Dairy is one of Kenya's most developed sectors. Each year, the country produces 3.5 billion liters of milk, with annual revenue reaching US\$1 billion. Dairy is the second-largest contributor to agricultural GDP, after beef. Most of the more than 500,000 small-scale dairy farmers milk two to four cows and are located in the Central Highlands and Rift Valley. They deliver their raw milk to vendors ("hawkers") or local milk bulking and cooling centers.

In order to meet growing domestic demand for dairy products and compete in regional markets, the Kenyan dairy sector needs to ensure that its high-quality milk moves efficiently across farms, collection points and processors. Efficient value chain logistics also leads to higher utilization of processing plant capacity and lower consumer prices.

At the farm level, a greater proportion of new and existing smallholder producers must make the investment in improved cows and facilities to build the volume of milk required for Kenya's growing population and to ensure high use of processing plant capacity. Producers also need access to training, technical assistance and inputs, and they must adopt improved technologies for profitable production of high-quality raw milk.

Land O'Lakes has assisted smallholder producers in Kenya to incorporate productivity-enhancing inputs. These include frozen semen from proven bulls and concentrated feeds formulated for high-producing cows. Land O'Lakes has also promoted sustainable dairy production by introducing:

- Leguminous fodder crops to improve feeds and protect the soil.
- Silage to reduce overgrazing.
- Gloves for safe handling of agrochemicals and information on the safe use and disposal of pharmaceuticals and agrochemicals.
- Metal cans for hygienic transport of milk.
- Energy-saving stoves in family homes to reduce environmental degradation through deforestation.

Farmers were linked to the market through milk bulking and cooling businesses. These allowed them to aggregate larger volumes of quality milk and competitively sell to processors. At the same time, processors were seeking high-quality raw milk, but needed to control procurement costs as they ramped up plant capacity to expand their production.

Land O'Lakes adopted a market development approach to facilitate the provision of business development services. We build partnerships with private sector players within the value chain and provide short-term subgrants or contracts with local facilitator firms. The U.S. Agency for International Development supported this work through the Kenya Dairy Sector Competitiveness Program (KDSCP). Kenya has a network of business service providers, including food science and business management professionals, community-level stockists or agro-vets, and small-scale feed manufacturers. Our approach strengthened market functioning for targeted services by building and linking supply and demand, while enabling commercial transactions between the farmers and service providers.

The milkshed model

Land O'Lakes' business development-centered approach in KDSCP helped to transform Kenya's dairy industry into a globally competitive regional market leader. Specifically, we promoted a milkshed development model that focused on collecting 50,000 to 100,000 liters of milk or more from multiple collection centers within a given area (a "milkshed"). It contrasted with previous models where activities centered on individual farmers or collection centers.

The new model, which is how world-class dairies view their supply base, requires significant investment in upgrading existing or new milk bulking facilities and support markets. The application of the model:

- Maximized collection and transport efficiencies to reduce costs.
- Installed quality assurance practices across the milkshed.
- Facilitated strategic public-private alliances that built sustainable markets.
- Fostered linkages among and between leading dairy processors, producer organizations, financial service providers, input and service providers, local authorities and development partners.

Critical to the success of this approach were strong vertical and horizontal linkages. Vertical linkages—between farmers and producer organizations, producer organizations and processors, and processors and retailers/exporters—provided market access and facilitated knowledge and resource flows throughout the value chain. Horizontal partnerships helped build economies of scale by reducing collection and transport redundancies and inefficiencies.

Transforming Kenya's dairy industry

We engaged key industry stakeholders—including commercial business service providers, industry associations and occasionally government service providers—to identify constraints to competitiveness and employ market-based solutions.

We also stimulated investment in the research, dissemination and expansion of new and existing market-based services, inputs and technologies that directly increased competitiveness and ensured environmentally sustainable commercial dairy practices. Our approach prioritized the use of local Kenyan resources, which were mobilized through a competitive sub-awards program.

The aim was to supply beneficiaries with the necessary business development services and financial products to catalyze market growth and foster industry competitiveness.

In each of the eight milksheds where we worked, Land O'Lakes used a competitive bidding process to hire competent facilitation firms with staff experienced in business development services, business advising, production and quality control. After identifying and addressing constraints to competitiveness in specific areas of the value chain, the facilitators worked throughout the dairy sector in each milkshed, exposing various actors to the business development services approach, clarifying the type of available support and providing them with an application form for detailing specific areas where they need assistance.

The facilitators were then charged with developing action plans to address these discrete competitiveness constraints in a manner that built in a responsible exit strategy and allowed them to leave with the market more competitive than it was before.

To enable this process, Land O'Lakes provided facilitators with grant awards ranging from US\$10,000 to US\$100,000. These grants were designed to resolve key constraints, such as building the leadership capacity among small farming organizations or facilitating financial services for service providers. To date, we have provided nearly 50 awards, at a rate of four to five grants per month, with an average amount of US\$30,000.

At the enterprise level, Land O'Lakes facilitated commercial linkages among processors, producer organizations, and commercial input and service providers. The goal of this effort was to build robust and sustainable partnerships, achieve economies of scale and upgrade milk quality in high-potential milksheds to meet national and international standards.

Key components of our methodology

The predominance of commercial agriculture and dairy farming in the Kenyan economy has attracted a wide array of commercial business service providers. These service providers have the potential to meet the majority of service and input requirements demanded by stakeholders at key points along the dairy value chain. In the past, government, donors and nongovernmental

organizations have subsidized the costs of business development services, which has distorted commercial markets. Today, the few subsidies that remain are largely within farm-level extension services.

Land O'Lakes follows a market-based solutions model that (1) identifies key constraints and opportunities to competitiveness at critical points in the value chain; (2) identifies market-based solutions to these constraints working through commercial business service providers; (3) assesses and prioritizes the most viable and critical solutions; and (4) implements solutions by facilitating service providers and by promoting embedded service delivery within producer organizations, processors and input and service providers. Land O'Lakes also strengthens new service providers by expanding the number of innovative, low-cost and high-impact services, inputs and technologies available in the marketplace, and increasing their utilization among producers.

To minimize potential market distortions, most services are provided at commercial market rates. This includes fee-based services that generate revenues at the enterprise level and embedded services whose cost are deducted from a farmer's milk sales. Such services are budgeted and accounted for as operational costs and are passed on to the consumer in the final retail price.

Key components of our methodology include:

- **Milkshed mapping.** Land O'Lakes hired local consultants through competitive tenders to conduct milkshed assessments to determine the production and collection potential of a given milk production area.
- **Producer organization needs analysis.** Once milksheds were identified and prioritized, Land O'Lakes collaborated with leading processors to identify existing producer organizations within each milkshed. We then facilitated a rapid needs analysis to better understand the strengths and weaknesses of each organization.
- **Milkshed action plans.** The findings from the needs analysis were presented to regional stakeholders during milkshed action planning workshops that focused on identifying constraints and prioritizing market-based solutions to increase competitiveness.
- **Embedded services.** Land O'Lakes assisted target producer organizations and dairy

processors to help determine the services that should be outsourced and those that might be provided in-house, and then integrated these findings into their respective business plans.

- **Evaluation of business service providers.** For outsourced input and service delivery, Land O'Lakes conducted a business development services market diagnostic in each milkshed to highlight the supply and demand of key support services and inputs required by various stakeholders along the value chain as well as to assess the capacity of existing service providers.
- **Capacity building of business service providers.** Based on results of the evaluation process, Land O'Lakes facilitated training workshops and seminars for service providers that covered topics such as business planning, financial management, embedded service delivery, marketing, after-sales service, gender and youth aspects of dairy businesses, and sustainable natural resource management practices.
- **Directory of business service providers.** Land O'Lakes solicited corporate capability statements from known and potential business service providers that were compiled into an online directory as part of the KDSCP knowledge management system.
- **Business-to-business linkages.** Land O'Lakes competitively selected third-party business development service facilitators for each milkshed to assist with linkages between service providers and producer organizations on a demand- and market-driven basis.
- **Value chain financing.** Land O'Lakes promoted new and innovative financing arrangements for the dairy sector by collaborating with financial institutions and other donor-supported development programs. These included products targeting business development service providers and consumers as well as those that increase women's access to financial services.

Successes and challenges

Successes

- Training and technical assistance in dairy husbandry was provided to 36,736 producers (23 percent women), with 40,000 more reached indirectly at breeders' shows and exhibitions.
- A total of 5,466 new jobs were created and producers increased their milk-related incomes by 28.2 percent.

- Sixty-nine producer organizations and smallholder business organizations were transformed into sustainable businesses through redesigns of their operations to maximize returns and eliminate waste.
- We facilitated better prices for two farmer groups, which were providing their members with considerable incremental income. The overall value of milk sold by beneficiary farmers in the past year was US\$26.4 million—surpassing our second-year target of US\$21.4 million by 23.5 percent.
- A total of 20,158 producers (33 percent women) received assistance in accessing credit in KDSCP's first year, surpassing our target of 18,000 farmers by the end of year 2.

Challenges

- Underfunding and insufficient communication and coordination among government of Kenya departments initially resulted in low participation among government staff, although this improved.
- Low purchasing power and poor milk marketing limited uptake in production, processing and storage technology, including artificial insemination, information and communication technology, biogas, chaff cutters, silage making and milk cooling tanks.
- A history of cooperative failure hindered trust among farmers and many in producer organizations.
- Poor business skills within the producer organization management committees made them reluctant to contract with new service providers, even when current providers were ineffective or a poor value.
- Subsidized or free services by the government and development partners led to the slow uptake in fee-based business development

services by farmers, producer organizations and service providers who were conditioned to expect direct financial assistance.

Best practices and insights

- Milkshed mapping, milkshed action plans and producer organization needs analyses were extremely useful in enabling the program to focus on high-potential, high-need areas and beneficiaries.
- The milkshed approach enabled better coordination, information sharing and ability to leverage resources across public, nongovernmental and private sector partners supporting dairy development in Kenya.
- Stakeholders along the value chain were willing to come together as long as there was a constructive agenda that benefited all. Beneficiaries were willing to pay for a wide range of goods and services once they understood how they contribute to profitability.
- The creation of competition at all levels ensured beneficiaries received a good value for their money and avoided an over-reliance on too few input suppliers, service providers and/or buyers.
- Working with individual business development service facilitators for each milkshed enabled the development of creative approaches for stimulating and building capacity within a short time frame.

Further information

Action for Enterprise. (2014). *Value chain program design: Promoting market-based solutions for MSME and industry competitiveness*. Paper to USAID/EGAD/MD. Arlington, Virginia, USA: Action for Enterprises.

CASE STUDY 3.3

Private Provision of Market Linkage Services for High-Value Crops

By Naomi Mungai, Finline Rural Reach Ltd., Kenya, and Fred Sango, Agribusiness Management Associates Uganda Ltd.

Due to a long history of government-subsidized or donor-supported interventions, private fee-based service provision to smallholder farmers is uncommon in many developing countries. This case study shows how two private sector firms have established themselves by providing fee-based services to the passion fruit and chili value chains in Kenya and Uganda, respectively.

Constraints to fruit, vegetables and spices export markets

East Africa is well positioned to export fresh fruit, vegetables and spices, for which there is an increasing demand in Europe. However, smallholder farmers are largely excluded from this market opportunity because of exacting standards set by importing countries. In addition, exporting companies are wary of working with smallholders and doubt their capacity to produce the quantity and quality required to sustain the export market.

In order for smallholder farmers to participate in and benefit from these markets, several constraints must be overcome, including:

- Weak farmer organization and business orientation, especially in their ability to consolidate production and maintain records.
- Insufficient technical skills and post-harvest management practices.
- Poor access to inputs, especially seed, which affects the quantity and quality of production.
- Limited access to financial products and services.
- Patchy and untimely support from public and private service providers.

There has been considerable effort over the past 10 years to address these constraints through donor-financed interventions. Several projects have given special attention to partnering with private sector service providers, with a view

to ensuring the sustainability of the activities supported once the interventions ceased. This case will examine the experience of two of these service providers:

- Finline Rural Reach Ltd., which supported the establishment of a passion fruit value chain in Kenya.
- Agribusiness Management Associates Ltd., which supported the establishment of a chili value chain in Uganda.

Fineline Rural Reach and the passion fruit value chain

Fineline Rural Reach Ltd. (FRR) is a private company incorporated under the 2006 Kenyan Companies Act. It was formed as a subsidiary of Finline Systems and Management Ltd., a microfinance and enterprise development consulting firm, in line with the Kenya business development services program, and was funded by the U.S. Agency for International Development, which required all projects under the program to be commercialized for sustainability after the funding period. FRR took over the management of a passion fruit project after the donor exit in 2007, supporting the smallholder passion fruit business in the country's Embu, Meru and Kirinyaga districts.

A typical passion fruit farmer in these districts owns on average of 2 acres of land, with about 0.25 acres dedicated to growing approximately 150 passion fruit vines. The rest of the land is devoted to other crops, such as tea, coffee, maize and vegetables. FRR's primary role was to link exporters with smallholder farmers and to ensure that the needs of both were met through equitable trading relationships. FRR is governed by a board of directors and employs a manager, a coordinator and four field officers. All staff for this project work were hired competitively.

Services offered by Finline Rural Reach

Group mobilization, strengthening and management

This included outreach and recruitment activities to bring in new groups and identify existing groups in passion fruit-growing areas. Strengthening of groups was achieved through training in records management at the individual and group level; facilitation of elections to appoint suitable leaders; and reconstitution and restructuring of groups in terms of management policies and procedures, such as meeting attendance frequency and formation of subcommittees within the group.

Group management activities were undertaken by the group management officers (field officers), who were in charge of a designated number of groups (maximum 20), backstopped by FRR's coordinator and the manager. The Ministry of Agriculture and local authorities also helped organize meetings and facilitate recruitment of farmers.

Orchard management

Orchard management involved establishing production performance targets for farmers, farmer groups, group management officers and an overall program for production purposes. The group management officers, in liaison with the buyers' agronomists, enforced quality management systems by training farmers on the safe use of agrochemicals and on record keeping to avoid exceeding agrochemical maximum residual levels. FRR also linked farmers to input providers of quality planting materials and agrochemicals. For planting materials, this involved the establishment of group and farmer-level nurseries. Some selected farmers were encouraged to produce higher numbers of seedlings beyond their needs and were trained to produce the desired quality. FRR helped them to register at the Horticultural Crops Development Authority and the Kenya Phytosanitary Health Inspectorate.

Market linkages

FRR ensured smooth relationships existed between farmers and exporters by undertaking the following activities:

- Preparing production projections. FRR provided regular and accurate production projections and liaised with farmer management committees to ensure that their members complied with production targets.
- Coordinating fruit harvesting and collection. FRR organized collection routes and collection

centers to improve efficiency and reduce costs for the exporter.

- Reviewing contracts and coordinating payments. Over time, FRR has developed payment mechanisms that were acceptable to all parties. FRR signed memorandums of agreement with all the buyers specifying the dates of payment following fruit deliveries. Farmers signed supply contracts with the buyers specifying the same. These agreements were binding documents. FRR collected the payment checks from buyers and delivered them to the farmers. FRR also monitored the payment to individual farmers by their respective organization, ensuring that payments were not late and that no unfair deductions were made.
- Managing quality standards. FRR ensured that produce met the market requirements and facilitated GLOBALG.A.P. certification.
- Project updates. FRR regularly updated buyers on crosscutting issues that can adversely affect the progress of the project.

For these services, FRR charged a fee that was openly discussed and agreed to by both farmers and buyers. After delivery of each consignment, the exporter made two check payments: one to FRR for the fees and the other to farmer groups directly. The provision of effective business development services brought mutual benefits to both the farmers and buyers: farmers gained access to a ready market for their produce and the exporters and processors were assured of a steady supply of high-quality fresh produce.

Passion fruit value chain performance

The number of farmers benefiting from the intervention grew from 400 in 2004 to 2,074 in 2009, organized into 87 producer organizations. Market linkages were formalized with four leading exporters. Since the project was initiated, more than 1,800 metric tons (MT) of passion fruit were sold, resulting in farmers receiving more than 90 million Kenyan shillings (US\$1.3 million). Additionally, 10 of the 87 groups underwent GLOBALG.A.P. training, and 5 groups had undertaken the pre-audits in preparation for certification.

Smallholders were able to produce high-quality grade 1 fruit for export to the satisfaction of the buyers. They used grafting techniques, good agricultural practices and orchard management skills. They gained vital negotiation skills and took up passion fruit production as a business.

The working relationship with exporters improved over the course of the intervention. The farmers appreciated the role played by FRR and sought its services to source other products. New exporters observed the success and were interested in working with FRR.

Brokers, who used to buy directly from farmers, increased their prices to survive in the market. Today, they buy grade 2 fruits at competitive prices and are sometimes offered attractive prices for grade 1 fruit. This has meant that some farmer groups dropped out of the FRR-managed passion fruit business arrangement but not the sector.

Attitudes of other stakeholders have changed. The Ministry of Agriculture staff initially felt that FRR was a competitor and that they should offer the work FRR was doing. Today, they have come to recognize the role played by FRR and appreciated the participation of the private sector. They participated in FRR and farmer meetings, provided technical advice to farmers, witnessed the signing of supply contracts, and collected data from the passion fruit business for their monthly reports. Despite getting free services from others, farmers showed that they were willing to pay for services when they could see the value for money.

FRR was the only service provider operating according to the original Kenya business development services concept. It was able to operate independently and reach a break-even point. However, it became evident that passion fruit alone would not make the company profitable and plans for diversification were put in place. This aimed to spread the risk and broaden the capital base for both FRR and the farmers it served.

Agribusiness Management Associates and the chili value chain

Agribusiness Management Associates (AMA) is a registered Ugandan limited liability consulting company headquartered in Kampala. AMA works with government agencies, agribusiness companies and international technical assistance agencies. The company undertakes market and feasibility analyses, provides training and technical assistance, and manages agricultural research and extension activities. Founding members of AMA previously worked on the Investment in Developing Export Agriculture (IDEA) project, funded by the U.S. Agency for

International Development, where they gained experience in marketing, production, post-harvest handling, processing and quality assurance of high-value products.

In 2005, AMA joined a U.K. Department for International Development-funded project that supported the production and export of chili to European Union countries. The key value chain actors were chili farmers, who were members of Awagga Ekku Cooperative Society and Jaksons Farms Ltd., which exported fresh fruits and vegetables to Europe. The Natural Resources Institute and the Natural Resources Development College Export Growers Association provided technical assistance and training on food safety and quality regulations and made contacts with European buyers. Because strict European food safety regulations were identified as a major threat that could cause them to lose the export market, AMA's role was to provide continuous support to and training of Awagga Ekku farmers and staff of Jaksons Farms on the establishment of a quality management system.

The Awagga Ekku Cooperative Society was located 100 km south of Kampala in Uganda's Mpigi District. Agricultural production took place in the valleys to take advantage of natural rain-fed irrigation. Most farmers grew matoke bananas, coffee, cassava, sweet potato, cocoyam, beans and maize. Forty of Awagga Ekku's 85 member farmers were growing hot pepper, which was a major export crop.

Services offered by Agribusiness Management Associates

Market linkage

- AMA organized monthly review meetings with Jaksons Farm and the farmer cooperative, while quarterly meetings were held with international partners. This ensured active participation of all the actors and partners.
- Communicating and continually updating information on the dynamics of the hot pepper export market.
- Training farmers and Jaksons Farm staff in food safety and the implementation of a quality management system, including good agricultural and post-harvest handling practices.

Business management

AMA supported the farmer cooperative with leadership development, contract marketing and negotiation skills, and provided updates on additional or new marketing requirements.

AMA received payment for these services either directly by Jaksons Farm, which sponsors the training of farmers by AMA and other service providers, or through financial support provided from development partners. This latter arrangement was short term in nature. Long-term sustainability came through farmers observing the true value of services that increased production and resulted in higher incomes, and were then willing to cover their cost.

Services offered by Jaksons Farm

Agricultural extension

Jaksons Farm provided, as an embedded service, extension advice and training to cooperative farmers on production and post-harvest quality management.

Record keeping

The extension staff managed the centralized farmer record system, and transferred the records kept by each individual farmer in their farm diary. This was an embedded service in the commercial contract with outgrowers.

Agricultural inputs and crop spraying

Agrochemicals were bought in bulk from reliable suppliers and made available to farmers on credit. Spray application was done by trained spray operators based on scouting reports. Records of agrochemical were kept by each farmer. Payment for the products and spraying were deducted from the sale price.

Hot pepper value chain performance

In 2007–2008, Awagga Ekku became the first farmer cooperative in Uganda to be GLOBALG.A.P. certified. In turn, by being able to comply with statutory and market requirements, Jaksons Farm increased sales by 40 percent, from 70 MT to 98 MT, in the three-year period from 2005–2006 to 2007–2008. Their annual gross revenue increased from US\$193,000 to US\$294,000 in the same period. Farmers used the additional income from hot pepper production to improve their houses and pay for their children's school fees. Jaksons Farm and Awagga Ekku heightened their visibility and reputation for quality; this led to contracts with other local and international buyers. This expansion of the market base consolidated the gains made and increased revenues for both Jaksons Farm and Awagga Ekku farmers.

AMA continued to provide services to Jaksons Farm and Awagga Ekku following the end of the project. With the knowledge and skills gained

during the project, AMA staff were providing technical support to other farmer groups and companies wishing to establish quality management systems.

Successes and challenges

Both the passion fruit and hot pepper value chains have considerable growth potential. Markets were available and accessible, and quality crops could be produced in a profitable and sustainable way. The cases illustrate the key role that private service providers play in establishing and consolidating linkages between farmers and buyers.

There were, however, environmental, technical and organizational constraints that affected the competitiveness of these value chains. The existence of these constraints jeopardized the long-term sustainability of the individuals or firms that provided services to the chain actors by reducing the ability of their clients to pay for the services offered. The constraints included:

- Drought. Because production of both crops was rain fed, access to irrigation can overcome periods of drought and enable constant production throughout the year. Yet without investment in irrigation, buyers and market linkage service providers look for areas that already have irrigation facilities to source supplies. Smallholder farmers without irrigation were bypassed. This constraint identifies an unfulfilled service need and a business opportunity for existing or other service providers.
- High-quality seed. Lack of certified seed compromised the productivity and quality of both crops. Greater investment in horticultural research within the national agricultural research organizations is needed to support the competitiveness and expansion of the smallholder fruit and vegetable sector.
- Pest and disease management. Management of pests and diseases was an ongoing challenge for horticultural producers that required constant vigilance and updating of information on the use of accepted agrochemicals for their control. Well-focused and publicly funded research is also required to develop new management practices.
- Complexity of quality management systems. Low literacy levels among smallholder farmers limit their ability to implement quality management systems and caused

some farmers to drop out. Farmer-to-farmer extension has emerged as a good practice that follows a process of training, coaching and mentoring lead farmers in the management of the system.

Best practices and insights

- The market linkage function was essential to maintain the business. Services such as management and business skills training for farmer organizations and agricultural extension need to be provided to ensure the success of the market linkage function. This will depend on local needs and demand, and the existence of other providers.
- Ensuring accurate production projections, good record keeping and transparent management of payments are among the most crucial market linkage activities.
- Changing service provider staff attitudes from donor mentality to a business orientation takes time. Basing staff performance on business indicators (for example, production, profitability and cash flow targets) helps this transition.

- Successful market linkage service providers must be well grounded both in knowledge and hands-on skills to fully command the respect of farmers and buyers.
- Proper costing of services to be offered ensures cost recovery and business sustainability. Fees need to be agreed upon by all parties up front.
- Business diversification, both by farmers in terms of crops and by service providers in terms of clients, is important to reduce risks associated with a narrow product or client base.

Further information

Mungai, N. (2009). *Factors hindering business development services provision in small scale horticulture enterprises in Mt. Kenya Region*. Paper presented at the Regional Workshop on Delivering Business Development Services to Rural Areas, Nairobi, Kenya, September 21-25, 2009.

Ssango, F. and Kavuma, J. (2009). *Market-led business development services delivery to smallholder farmers in Central Uganda*. Paper presented at the Regional Workshop on Delivering Business Development Services to Rural Areas, Nairobi, Kenya, September 21-25, 2009.

CASE STUDY 4.1

Enabling Informal Farmers to Access Formal Markets

By Don Seville, Sustainable Food Laboratory, and Shaun Ferris, Catholic Relief Services

Background and introduction

There is increasing interest in finding ways to link informal smallholder farmers with the formalized marketplace. Aligning thousands of poor traditional farmers with the rigorous and rapidly changing food quality and safety requirements of modern supply chains poses many challenges. If done well, the process of linking informal farmers to formal markets can result in better incomes and new business opportunities. However, modern markets are dynamic and exacting and in many cases, smallholder farmers are unable to maintain their position as regular suppliers. To address these and related challenges, new and more inclusive business models are being developed as a means of building more robust trading relationships between smallholder farmers and formal buyers. This case examines how the Sustainable Food Laboratory and Catholic Relief Services worked in Ethiopia from 2007 to 2012 to promote and improve the production and export of navy beans.

Ethiopia has exported navy beans from the Rift Valley for the past 40 years. Ethiopian farmers are attracted to navy beans as they are a short-duration and drought-resistant rotation crop that improves soil fertility and provides cash in the off-season. In this project, the chain partners included farmers, farmer cooperatives, a major exporter Agricultural Commodity Supplies (ACOS) and a U.K.-based bean canning company. ACOS is an Italian wholesale company that co-invested in a joint venture to build a modern processing facility. The company's scale and interest in improving their supply chain, and link with buyers using a socially responsible product story made them an ideal commercial partner.

The project was implemented in two areas in Oromia Regional State, a major dried beans production area in Ethiopia, working with farmers from sites in Lake Ziway to East Hararghe.

The aim of the project was to support smallholder producers in linking to formal markets and developing more durable trading relationships across the market chain. The project worked to upgrade the bean value chain with a focus on:

- Identifying farmer-trader networks that supplied ACOS for export of beans.
- Using new varieties of beans to improve productivity at the farm level.
- Improving good agricultural practices.
- Improving linkages between farmers and other chain actors.
- Building long-term business relationships between buyers and producers.
- Developing a chain-wide support system that enabled communication and traceability and built confidence throughout the chain.

The goal was to align chain actors and increase both quality and supply volumes to a new market channel in Europe to achieve increased incomes along the chain, including farmer incomes.

Strategy

Value chain upgrading

The project promoted a package of technologies to upgrade bean production, such as (1) improved varieties, (2) agronomic practices and (3) threshing on canvas. The project introduced several new varieties with better yields and disease resistance compared to the local varieties. Promotion of new technologies increased yield and improved the quality of dried beans.

The project addressed the chronic shortage of improved seed varieties with a focus on Awash Melka and Awash-1 varieties. A total of 700 metric tons (MT) of improved seed were provided to approximately 15,000 farmers. Some of the farmers retained seed and exchanged it with other farmers.

Training and capacity building

The project conducted training on dried bean production, post-harvest management and business planning, with a specific focus on the importance of using market information for decision making around collective marketing. A total of 15,431 (13,737 men and 1,694 women) farmers were trained and or received improved seed. The project prepared a guide for dried bean production and post-harvest management. The production guide was translated into two local languages and distributed to extension agents and cooperatives.

The project field staff provided farmer groups with ongoing technical advice on subjects such as (1) group formation, (2) strengthening management practices, (3) improved productivity, (4) post-harvest and storage management, (5) improving grain quality and (6) collective marketing.

Stores

As part of dried bean value chain upgrading, the project supported communities in constructing four mini-stores. These mini-stores served as collection and marketing centers and were prerequisites for collective marketing. The mini-stores had a capacity of 50 MT.

Improving quality of product

Traditionally, dried beans were threshed on the ground, which produced a contaminated product. The project introduced a new method of threshing using canvas. Along with training and provision of inputs (canvas and seed), price incentives were essential to rewarding and encouraging those who supplied a better-quality product.

Improved trading relationships

Over the project period, the CRS team worked with a number of service providers, including research, extension and microfinance institutions, to increase the use of new varieties, upgrade training by extension staff and test new finance instruments for input supply.

Joint meetings were held at the community level where farmers, facilitators (nongovernmental, extension and research organizations), exporters and traders met for the first time. They discussed ways to improve their supply chain. Key topics discussed included working together to access a new market, market size, buying price, variety type and quality requirements. These meetings were essential in bringing together the main

market actors and helping to bridge the informal and formal marketing worlds.

The joint field visits improved trading relations between farmers, ACOS and their trader network. The visits built trust and helped to align the chain partners more effectively. This process helped ACOS to secure their full order, which in the past had been severely challenged by high levels of side selling. As a result of these efforts, better understanding of working relationships was created which improved the flow of produce to a new and more lucrative market. Problems of product quality, rates of sales and side selling were still present, but they were at more viable levels, and over time the trading relationships work helped all sides to better understand each other's challenges.

Successes and challenges

As a result of meetings, discussions and networking between farmers, CRS staff, ACOS staff and local extension agents, the farmer cooperatives and farmer unions made verbal agreements with ACOS in regard to buying conditions. These discussions also enabled the farmers and ACOS to agree to buy the variety Awash Melka at the prevailing market price, as long as the quality met their standards. This was a significant shift in thinking for the industry, as before this time, many farmers who had taken up the variety Awash Melka based on research results were unable to sell this variety to the buyers, due to its difference in size, color and shape. If this agreement had not been made, thousands of farmers would have been left with losses on their sales.

Summary gains from the project

Between 2008 and 2011 CRS supplied approximately 15,000 Ethiopian farmers with 700 MT of bean seed, planted at approximately 100 kg per hectare. This investment upgraded yields and quality across the production system. The combination of seed and training in good agricultural practices led to production increases of 50 to 100 percent over baseline figures, a change from baseline productivity (0.7 MT per hectare to 1.4 MT per hectare). Disease-tolerant varieties reduced disease pressure on yields in 2011. Over the duration of the project, the cumulative production was estimated at approximately 6,940 MT of white pea bean grain, with a cumulative wholesale market value of

US\$2.5 million. These figures would have been higher if not for the severe drought in 2009, which reduced yields by 90 percent.

Best practices and insights

Making the bridge

Nongovernmental organizations working to support long-distance value chains need to build long-term relationships with a trusted intermediary if they are to successfully bridge the formal and informal business worlds. This means that project managers need to establish meeting points that bring together actors from the production, trading and buying parts of the chain and offer them the opportunity to learn about each other's challenges and find solutions that are mutually beneficial.

Facilitation

Chain-wide development is complicated. Successfully supporting the testing of improved research products, improving agronomic practices, integrating better financing systems, supporting improved trading relationships between farmer organizations and buyers, undertaking market analysis of products and establishing networking opportunities at the wholesale retail level requires certain skills and types of facilitators; a generalist is unlikely to succeed.

At specific stages in the value chain, the overall project management team will need to work with facilitators who have the skills to test ideas and build confidence and trust between various actors in the chain. This project found that researchers and agronomists were required to work with extension agents and farmers to upgrade productivity, agricultural economists to undertake diagnostic analysis of the traders and processors and work on trading relationships, and market retail experts to discuss with canning factories and retail supermarkets in the United Kingdom. Each of these facilitators brought specific skills that were necessary to provide expertise at the right stage of the supply chain. All of these experts reported their findings back to the project managers who synthesized the information to make decisions on where and how to make upgrading investments that would equitably support the entire chain.

Time frame requirements for value chain development are long term

To secure and upgrade one supply chain may take four to eight years. Being able to apply the lessons learned may only take three to five years. However, contextual differences are critical to making things work. Many of the issues faced in this project may not transform into formulaic guidance.

Principles to develop new business model projects

Although recipes to upgrade value chain projects are complicated by context, the key principles that we identified to improve new business models were:

- Chain-wide collaboration
- New market linkages
- Fair and transparent governance
- Equitable access to services
- Inclusive innovation
- Measurement of outcomes

Seed systems

Although basic, the establishment of an effective seed delivery system was a critical constraint for the sustainability of the bean production and upgrading process. More efforts are required to build long-term sustainable seed system solutions that address the formal and informal worlds. Navy beans are not part of a commercial seed system, and to address this need, CRS trained nine seed enterprise groups and built five seed storage units to support seed marketing. Half of these seed enterprises failed. The successful seed producer organizations were those in the most commercial bean production areas who were linked to the most commercial farmer unions. These unions had credit facilities that enabled farmers to take out loans to buy seed and to buy a substantial amount of grain at the end of the season for forward marketing.

Credit

In this project, working with a microfinance institute was a positive step in finding finance for seed loans. Although this intervention ended due to changes in local government policies on eligible interest rates, the use of loan funds to support inputs was very helpful to the farmers. Access to credit is clearly part of any long-term success in upgrading value chains.

Business data and communications

This project revealed that individual relationships may open doors for farmers, but they are time-consuming to build and fragile to maintain. Establishing trust based on reliable data, rather than personal relationships, may be more efficient, sustainable, and scalable. In an attempt to address the data challenge, CRS configured a mobile technology to collect production and marketing data in a more systematic manner. The goal of this work was to provide farmers with information on their production and business performance to assist them in their farm investments. Farmers need more business advice as part of their extension package; the lack of business skills are a major challenge for sustainable upgrading in value chains. This area of capacity building should be part of any value chain project design, whether from public or private sources.

Companies have short-term memories

We found that there are major differences in thinking of top management, corporate social responsibility teams and buyers at the field, factory and shop floor levels. Experience shows that today's deal may not fit tomorrow's arrangement. Chain-wide facilitation teams require great flexibility in operations and the ability to reformulate initial plans to meet volatile and shifting market conditions and changes in views of actors within a lead company.

Further information

Ferris, S., Paschall, M., Seville, D., Dadi, L., & Kumssa, G. (2012). *Dried beans in Ethiopia: Increasing food security through trade*. International Institute for Environment and the Sustainable Food Lab. <http://pubs.iied.org/pdfs/16035IIED.pdf>

CASE STUDY 4.2

Social Intermediaries for Market Access: The Case of the Cuatro Pinos Cooperative in Guatemala

By Mark Lundy, International Center for Tropical Agriculture, Colombia

The Integrated Agricultural Cooperative Cuatro Pinos was founded in 1979. The cooperative emerged from a Swiss development project to help families displaced by earthquakes in Guatemala rebuild their homes. Following the successful completion of this activity, the cooperative began to focus on the marketing of agricultural products from seven principally indigenous communities located around the town of Santiago de Saquetepéquez.

This case examines the success of the Cuatro Pinos Cooperative in meeting dual business and social development goals. The cooperative has evolved into what is called a “social intermediary firm” that performs a vital role in linking smallholder farmers to international markets. It provides focused technical, financial and social services to its suppliers, whether they are members or non-members. Often an intermediary firm is either “too social” and not profitable or “too profitable” and not an effective agent for social change. Cuatro Pinos is striking a good balance between both ends of this spectrum.

Background to Cuatro Pinos

Cuatro Pinos has survived three major phases over its 30-year history: (1) initial expansion and successful entry into the export of fresh vegetables to the U.S. market (1977–1991), (2) decline and near insolvency due to management crisis (1992–2002), and (3) recovery and consolidation as a market leader in fresh vegetable exports from Guatemala for the U.S. and European markets (2002 to date).

The mission of the cooperative is threefold:

- Increase family incomes through the production of high-value crops destined for non-traditional export markets.
- Organize small farmers in cooperative models that enable them to participate directly as business owners and legitimate exporters.

- Provide social programs to facilitate access to basic goods and services for rural families.

Cuatro Pinos manages a diverse portfolio of vegetables supplied by approximately 5,000 smallholder farmers organized into more than 140 farmer groups, including cooperatives, associations, lead farmer informal groups and nongovernmental organization-led groups. These groups are located in 48 municipalities, some of which suffer from the highest rates of poverty in Guatemala. In addition to its smallholder production base, the cooperative and associated enterprises employ more than 1,200 women in sorting and packing activities. The vast majority of farmers and employees of Cuatro Pinos are from Maya ethnic minority groups traditionally excluded from business opportunities in Guatemala. The average land holding per household is between 0.12 and 0.30 hectare, with an average of five individuals per household.

In 2008, Cuatro Pinos exported fresh vegetables worth US\$14.5 million. This value represents an annual production volume growth rate of approximately 25 percent year to year from 2002 to 2007, and a 15 percent year-to-year growth from 2007 to 2012. In addition to volume growth, Cuatro Pinos has succeeded in positioning itself in competitive and demanding markets with clients such as Costco, Walmart, Wegman’s, Sam’s Club and Tesco based on certified product quality.⁴

Cuatro Pinos works with two types of smallholder farmers: (1) cooperative members and (2) non-member suppliers. There were 562 members of the cooperative, each of whom represented one family from the original seven communities surrounding Santiago de Saquetepéquez. As equity owners, these families produce and sell

4. Due to the international economic crisis, prices received by Cuatro Pinos for its products in the U.S. market declined by 30 percent from 2008 to 2009.

vegetables to Cuatro Pinos, participate in the annual assembly, receive direct access to social services (health care, education, technical assistance) and an annual production bonus (profit share) based on the volume of vegetables they sell to the cooperative. The non-member suppliers, approximately 4,500, far outnumber the cooperative members and tend to come from poorer areas of the country.

Cuatro Pinos success factors

Much of Cuatro Pinos' success can be explained through its attractive value proposition for poor farmers, on the one hand, and exacting buyers on the other. For both groups, Cuatro Pinos offers a low-risk, high-return way of engaging with the other through supply chain coordination, transparent chain governance, market linkages and, critically, access to services. As such, Cuatro Pinos is a clear example of how a market linkage company—or intermediary—can achieve both business and social development goals within marginal communities in a profitable and sustainable fashion.

Forward contracts and certifications

Cuatro Pinos buys through fixed-price contracts from member and non-member farmers alike. These contracts stipulate products, volumes, dates, technology and inputs to use and provide an up-front price to the producer. In addition, Cuatro Pinos negotiates transportation and packing shed costs in such a way that farmers and farmer associations located further from the central offices receive equal treatment to those located close by. Cuatro Pinos provides in-kind credit for seed and inputs, technical assistance and marketing services.

Cuatro Pinos relies heavily on farm-level and packing-level certifications to guarantee product quality. These include the Guatemalan good agricultural practice standard known as the Integral Agricultural and Environmental Protection Program (PIPAA) and increasing use of GLOBALG.A.P. Full transition to GLOBALG.A.P. is driven through price incentives to farmers who gain and maintain certification. Current incentives are US\$0.03 per pound of product with 150 producers certified. The goal is to cover 75 percent of the current producer base within four years.

Supply chain coordination

Supply chain coordination, based principally on sales projections and actual sales data, flows from buyers back to the cooperative and on to farmer organizations. The role of Cuatro Pinos is critical as the cooperative decides from where in Guatemala to source crops to meet projected demand. Based on sales projections, Cuatro Pinos develops production plans with partner organizations and provides technical assistance and in-kind credit.

In cases where there is over- or under-production—relatively normal in the horticulture business—Cuatro Pinos collaborates with San Juan Agroexport, a private firm, to either top-up missing produce or market excess produce. In this manner, both Cuatro Pinos and San Juan Agroexport are able to meet buyer demands in a more consistent fashion. Despite this alliance, however, there are times when the total volume of produce available is less than that demanded by buyers.

Transparent governance

Chain governance from Cuatro Pinos back to producer organizations and individual producers is clear, based on production plans and backed with formal contracts.

Cuatro Pinos also holds frequent discussions and conversations among downstream chain actors. The cooperative has managed to develop relatively long-term relationships with key commercial partners who are seeking a stable supply of high-quality produce and are willing to collaborate with Cuatro Pinos. The role of LA Salad, a vegetable wholesaler based in Los Angeles, California, is critical in this regard as is the use of the San Juan Agroexport office in Miami, Florida, for commercial contacts. By identifying buyers with stable demand, Cuatro Pinos is able to offer forward contracts to producers. In a spot market situation, this would represent an unsustainable level of risk for the cooperative.

Market linkages

One of the hallmarks of the Cuatro Pinos model is its scalability. The model expanded from 2,000 to 5,000 producers between 2005 and 2009. This was achieved by developing a range of partnerships across the Guatemalan highlands. Cooperative staff applied two key principles to achieve this:

- **Market intelligence.** Cuatro Pinos is well connected with other organizations in Guatemala—principally through the export growers union AGEXPORT—and thus can easily identify existing farmer organizations and/or infrastructure investments (irrigation or packing houses) that are operating under capacity. Overlaying that knowledge with the agronomic needs of its principal crops allows the cooperative to quickly target potential partner organizations. This, combined with relatively low-risk, turnkey production, make Cuatro Pinos an attractive business partner for many farmer organizations.
- **Organizational agnosticism.** The second principle of organizational agnosticism has allowed Cuatro Pinos to work with a range of partners, including other cooperatives, diverse types of formal and informal farmer associations, nongovernmental organizations and lead farmer networks. Essentially, the cooperative does not demand that its partners follow a particular organizational model, so long as it shows capacity to meet quality and volume needs in a consistent fashion.

Once relations are established with producer associations, Cuatro Pinos provides additional support in terms of organizational and community development. For instance, during the 2005–2006 production season, the cooperative successfully accessed US\$1.5 million in public sector funds for investment in supplier organizations, including packing sheds, irrigation facilities and rural housing. The cooperative maintains a team of full-time staff dedicated to strengthening partner organizations, both as businesses and as community development agents.

Access to services

Another hallmark of the Cuatro Pinos model is access to services. The majority of services provided by the cooperative to its producers are included in the formal contract. In addition to these services, the cooperative also provides other services to employees and members, as follows.

Inputs, credit and insurance

The cooperative provides inputs on credit to producers based on the planting schedule and projected volumes. The credit is then discounted from product received by the cooperative and the producer receives the balance. Since 2011, the cooperative has piloted three credit models. First, self-funding the provision of inputs on credit to producer associations and individual farmers led to financial management difficulties

as Cuatro Pinos' staff struggled to promote production and recoup outstanding credit. Second, the cooperative engaged a microfinance institution—ECOSABA—to provide loans directly to producers, which was more expensive for the producer than the direct provision model. Finally, Cuatro Pinos tested a third model where the cooperative itself accesses a large credit line, first with a state guarantee through the Da Crédito program and later directly, with the commercial bank Banrural. To date the cooperative has disbursed loans totaling US\$4 million at interest rates between 10 percent and 12.5 percent annually. These rates are significantly lower than the rates available to individual farmers via ECOSABA.

In addition to credit provision, Cuatro Pinos purchases agricultural insurance to cover weather risks. The Guatemalan government subsidizes half of the insurance premium and producers do not know that they are insured to avoid moral hazard. Should a loss occur, the cooperative certifies that the loss is weather related and not due to improper management and then is able to access insurance to write off the loan and keep the producer in the supply chain.

Technical assistance

The cooperative provides training both directly to farmers and indirectly through local extension agents and/or lead farmers linked to producer associations. This technical assistance includes the establishment and monitoring of test plots for new partners as well as ongoing training for extension agents via cross visits and other methods. In the case of partners with packing facilities, the cooperative provides training in packing and sorting and coordinates the necessary certification visits to guarantee that facilities meet or exceed international standards. In addition, the cooperative—in collaboration with San Juan Agroexport—maintains a full-time Ph.D. researcher working on improved production systems and new product development. The costs of technical assistance are covered by the cooperative.

Risk management

Cuatro Pinos and LA Salad manage a shared risk fund that allows the cooperative to guarantee payment to farmers even when product is not sold due to problems at the port of entry or other logistical barriers. The fund, which receives a fixed percentage of every kilogram of produce sold via LA Salad, is used to cover technical assistance from LA Salad to Cuatro Pinos in food safety and packaging. In addition to financial

risk management, the cooperative also hosts the only full-service pesticide residue laboratory in Guatemala, in collaboration with the Ministry of Agriculture and Ranching. The cooperative carries out tests on all shipments of vegetables received and identifies problems prior to their export, thus reducing the risk to both Cuatro Pinos and the final buyer.

Access to social services

The social services provided by Cuatro Pinos to its members include access to low-cost health care, educational scholarships, support to improve the quality of housing and educational opportunities. For example, women working in the central packing shed are able to enroll in literacy courses. These services are mostly limited to the 562 member families, who pay a nominal fee to access them. The balance in cost is covered by the cooperative. In collaboration with LA Salad and Costco, the cooperative recently established the Juan Francisco Camparini Foundation to provide similar services to non-members. The foundation is funded by a small percentage of the profits of each member of the French bean supply chain, which during its first full year of operation in 2008, generated US\$60,000. The foundation plans to focus on the provision of health, education and housing services, principally for women in producer communities.

Successes and challenges

Cuatro Pinos is a sustainable and profitable business that benefits 5,000 smallholder producers, provides off-farm employment to 1,200 women and exports nearly US\$15 million annually. As a successful farmer-owned cooperative business, the services provided and social impacts are likely to continue as long as the export of horticultural crops remains profitable and international buyers continue purchasing produce. Nonetheless, there are several critical issues facing Cuatro Pinos, including:

- **Transformation of the cooperative into a category manager.** With growing demand for horticultural products, Cuatro Pinos is rapidly evolving from a specialist provider focused on three to five key crops to what is known as a category manager, with a portfolio

of 20 to 25 products.⁵ This change presents several opportunities but also threatens the cooperative. A move into a wider range of products helps diversify production systems, contributes to profitable rotation crops and better soil health, and increases the negotiating power of Cuatro Pinos. However, a category manager is expected to take a stronger leadership role in relations with the supermarket and its clients, continually develop new product offers and provide support—in the form of good practices—to other suppliers. This implies improvements in management capacity both at the central cooperative level as well as the ability to manage greater complexity at the packing shed and field level.

- **Ownership structure.** As previously noted, Cuatro Pinos is owned cooperatively by the 562 families who live in relatively close proximity to the central offices and packing shed. Today, these families provide a declining percentage of the products exported by the cooperative, with the difference made up by non-member families located up to six hours from the central plant. Despite this situation, existing members are unwilling to admit new members to the cooperative for fear of losing control of the business and preferential access to employment, health care and educational opportunities. As a result, the management team is forced to develop innovative mechanisms of profit sharing to provide incentives for non-member farmers while, at the same time, keeping the voting owners happy. This balancing act is not easy but one that is inherent to many cooperatives.

Best practices and insights

Build social intermediaries

The case of Cuatro Pinos shows the potential development impact of profitable businesses that incorporate social goals. In many cases, building a social intermediary firm from scratch may be prohibitively expensive or time-consuming, especially when trying to increase management and trading skills. Providing support or incentives to turn existing intermediaries into social intermediaries may be a promising strategy.

5. Supermarkets seek to reduce the number of suppliers they work with while broadening the products offered by these key suppliers. These key suppliers are then able to manage entire categories (e.g., temperate vegetable crops) year-round, hence the term “category manager.”

Examples might include tying support to specific outcomes related to farmer inclusion, income gains, risk reduction or employment generation over a three- to five-year time horizon.

Reduce risks for all actors in the supply chain

For farmers, risk reduction is codified in a formal contract that clearly stipulates all the relevant information, is accompanied by technical assistance and includes access to in-kind credit. This turnkey solution makes inclusion relatively easy, even for the poorest provided they can access land. For buyers, the cooperative focuses relentlessly on meeting and exceeding private sector standards of quality, traceability and food safety. This, in turn, reduces the risk to buyers and makes Cuatro Pinos a more attractive partner.

Add social investment to a successful business

The incorporation of specific mechanisms—the risk management fund with LA Salad and the fund managed by the Juan Francisco Camparini Foundation, for instance—is feasible because

the underlying business is profitable. Prior to focusing on social investment from market actors, it is critical to assure that the business itself is profitable and stable. At that point, innovative mechanisms can be developed to increase the social impact of the enterprise.

Social intelligence and organizational agnosticism

Cuatro Pinos has been able to scale up quickly due to strategic analysis of information obtained through AGEXPORT, a strong network with public and private sector actors and a pragmatic, business-oriented focus. By positioning itself as an export facilitator and organizational development agent, the cooperative is able to leverage investments by others.

Further information

Lundy, M. (2007). *Assessing smallholder participation in the French bean supply chain in Guatemala: Summary document*. Sustainable Food Lab Annual Meeting, Antigua, Guatemala. International Center of Tropical Agriculture. <https://cgspace.cgiar.org/handle/10568/56143>

CASE STUDY 5. 1

How Savings-Led Microfinance Has Improved Chickpea Marketing in the Lake Zone of Tanzania

By Wendy-Ann Rowe, Catholic Relief Services

Organizing smallholder farmers into groups so that they can aggregate their production and meet volume demands of buyers is fraught with challenges. For instance, how can groups maintain their cohesiveness when members decide to sell their crop elsewhere to generate immediate income to meet household needs? How can these farmer groups access working capital loans to pay their members before selling to a trader? This case examines how savings-led microfinance can provide solutions to these challenges.

The chickpea promotion project

In the Lake Zone of Tanzania, chickpea is one of the most important cash crops for smallholder farmers.

Farmers sell their crop to middlemen and traders for export to South Asia. Over the past 20 years, demand for Tanzanian chickpea has grown steadily, with production rising from approximately 10,000 metric tons (MT) in the early 1990s to about 50,000 MT in 2007.

Between 2000 and 2008, Catholic Relief Services partnered with the Mwanza Rural Housing Project and local farmers to increase chickpea production in the region and improve export marketing. The aim was to improve both productivity and market access to increase smallholder farmer incomes.

The starting point was the introduction of four improved varieties of chickpea. One variety was an improved “desi” chickpea commonly grown by farmers and processed into flour before consumption. The other three varieties were “kabuli,” which had not previously been grown by farmers. Kabuli chickpeas are sold and consumed as a whole grain, and based on size can attract a premium price.

A key challenge faced by farmers was their lack of success in selling their product. Farmers had come together under producer marketing groups

to sell their produce collectively, but many of the groups lacked the cohesion needed to successfully engage buyers during the marketing season. Most farmers sold to local buyers (“side selling”) due to lack of ownership with the group and their need for cash.

In 2006, a different model was introduced based on Savings and Internal Lending Communities, known as SILCs, inspired by the success of other nearby CRS projects. Staff within the chickpea project quickly saw the benefits that the SILC model could bring, particularly in the areas of financial management, group governance and group cohesion. These skills were critical in effective farmer group formation.

Need for financing

The urgent need for cash at the time of harvest forces many farmers to sell hurriedly to the nearest buyer at low prices. This means that producer organizations rarely have sufficient volumes of product for collective sale. The formal finance sector can offer no immediate solution to this problem as banks have yet to develop affordable financial products for smallholder farmers, and they are unwilling to lend to farmers with little or no collateral.

SILCs were introduced in an attempt to meet smallholder demand for financing, while at the same time addressing the challenge of cohesiveness within farmers groups. Among the benefits of SILCs to farmers is the possibility of accessing sums of capital from internal savings and lending activities to meet immediate food consumption needs and for the purchase of agricultural inputs.

In the chickpea project, the benefits of the SILC model were quickly translated to a second organizational level. SILC groups realized that they could work more effectively with other SILCs under the umbrella of a SILC Group Association

(SIGA). The purpose of the SIGAs were to bring together individual SILC groups to achieve the volumes of chickpea necessary to market collectively at higher prices.⁶

Relation between SILCs and SIGA

Each SILC group had between 25 and 30 members. SIGAs were made up of three or more SILC groups. By mid-2009, 28 SIGAs were formed from 190 SILC groups with a total membership of 5,020 farmers.

Members met to save and borrow, and the funds were managed under a governance structure that included a chairperson, treasurer and secretary who were appointed by the member SILC groups. The SIGA structure also included an extension agent assigned to the group by the partner, and one or two community resource persons responsible for overseeing financial activities. The extension agent's role was to facilitate input purchases, link SILC members to government extension services, provide some agricultural technical support and ensure the quality of produce to be marketed. The community resource persons assisted primarily in developing SILC groups and were selected from within the community. In many cases, they were well-performing SILC members (perhaps a secretary or treasurer) that had shown exemplary skills in SILC management. The community resource person offered his or her services to the community on a voluntary basis, although some received payment from the SILC and SIGA.

There were three subcommittees operating within the SIGA structure. These were a planning and economic committee, an input and agriculture committee, and a management and administration committee. These subcommittees convened to make decisions on the use of funds and loan requests that came from within the SIGA membership and to make decisions on collective marketing and input purchases.

In this process, all leadership positions within the SIGA structure were unpaid, with the exception of the secretary who received compensation for record keeping at the time of collective marketing and sale. Most SIGAs were not formally registered, yet several were taking steps to do so as they anticipated registration

6. CRS and the Mwanza Rural Housing Project adapted the SIGA model from a pilot that CARE undertook with its partners in nearby Magu District.

would help to protect them legally during the buying and selling process.

SIGAs and their collective marketing function

SIGAs undertook the following key marketing activities:

- Identified a trader for crop purchases.
- Signed delivery contracts.
- Estimated production for sale before the harvest.
- Managed purchase advances from the trader and distributed them to SILC groups.
- Ensured that the quality of the crops delivered met the buyer's standards.
- Cleaned crops delivered by the farmers, stored produce in the warehouse and prepared product for delivery to the buyer.

The SIGA, with their SILC members, met to agree upon an asking price for their crops. The asking price was then used to negotiate the actual price with traders. Most groups did not use cell phones to collect information on prevailing market prices before setting their asking price. This lack of knowledge of current prices led to some frustration and lack of trust between the farmer groups and traders, particularly as the prices traders paid often fluctuated on a daily basis.

CRS and the Mwanza Rural Housing Project were instrumental in developing relationships with the traders on behalf of the farmer groups. As the farmer groups gained experience, they took on the responsibility of maintaining relationships and undertaking direct negotiations with traders.

SIGAs and their financial management function

The other primary function of the SIGAs was financial management. With farmers demanding credit throughout production and marketing cycles and their inability to access loans from commercial institutions, SILC and SIGAs acted as informal financial intermediaries for savings and internal lending activities. Under this model, SIGA members contributed to operating, input, insurance and education funds.

Operating fund

At the beginning of each marketing season, SIGA committees estimated the costs that would be incurred for collective marketing. All SILC group members were obliged to contribute equally to the operating costs at a rate that was

determined by the SIGA committees. The size of the operational fund differed from one SIGA to another, ranging between 30,000 and 45,000 Tanzanian shillings (approximately US\$23 to US\$35) for each SILC group.

The operating costs included anticipated local government taxes per kilogram sold, packaging materials, allowances for the secretary and those that clean and sort the chickpea, storage space rental and cleaning facilities.

Education, insurance and input funds

In addition to the annual operating fee, SILC groups were required to contribute monthly to an insurance fund, an input fund and an education fund. The availability of these funds enabled households to access loans to meet their immediate needs without having to sell their crop in the field or immediately after the harvest. Farmers could then afford to wait and sell their product through their SIGA to receive a higher price.

SILC members could apply for loans from the input and education funds through their SILC group as needed. These loans incurred a 10 percent fixed interest rate per month, of which 5 percent went to the SIGA and 5 percent went to the SILC group. The term for loans from the input fund varied according to the specific crop production cycle. Loans from the education fund had a one-month term.

The insurance fund was also available to SILC groups in the event that a member passed away. It was used to repay any outstanding loan balance of the SILC member that may have originated from either the SILC group or the SIGA.

Traders' advances for procurement

Procurement financing at the SIGA level was another important component of the financial arrangements for marketing. Buyers advanced funds to the SIGAs to pay for chickpea delivered by members, non-members and middlemen. These regular cash advances were required by SIGAs as they did not have enough capital to pay farmers for the purchase of chickpea.

The processes involved in handling cash advances and product inventory were recorded on special forms. The forms were used to control the use of advances and the physical inventory of grain that came in and out of the collection centers. The advances were collected by SIGA leaders—usually the treasurer—from the traders. Cash advances were accounted for by comparing the

cash advance balance with the actual value of the products collected by the trader's agents from the SIGA collection centers each day.

Trade commission paid to the SIGA

The commission paid by buyers for each kilogram of chickpea supplied was another important revenue source for SIGAs. During the first year of SIGA operation in 2007, Afrisian Ginning Ltd. paid a commission of 12 Tanzanian shillings per kilogram. The following years, SIGAs switched to the Export Trading Company, which paid a commission ranging from 12 to 20 Tanzanian shillings per kilogram, depending on quality.

Many SIGAs chose to keep 25 percent of the commission aside to capitalize the input fund. In some cases, the fund was also used for short-term loans to farmers once they had delivered their production to the SIGA, but for which the SIGA had not yet received payment. Later, when the commission was paid to the SIGA, it forwarded the remaining 75 percent to the SILC groups on a prorated basis (volume sold), and the SILC groups in turn distributed it to their members (also on a prorated basis).

Successes and challenges

Outcomes of the 2007 and 2008 chickpea production and marketing seasons

In 2007, the first full year of collective sales, the SIGAs negotiated chickpea sales with Afrisian Ginning Ltd. In total, 9,150 farmers (1,048 SIGA members and 8,102 non-SIGA members) sold 1,352 MT of chickpea through SIGAs.

For the 2008 season, the SIGAs negotiated sales with Export Trading Company. However, with the introduction of a new buyer came several challenges. The Export Trading Company payment advances were not available on a regular basis and were channeled through the Export Trading Company agents located in various production areas. Most of the company's agents also collected products from middlemen, who were in direct competition with SIGAs, and therefore reduced the volumes that were marketed through SIGAs. This problem was exacerbated by the global economic crisis, which caused a wide fluctuation in commodity prices during 2008 and 2009 and prompted Export Trading Company to stop providing advances to SIGAs. This also affected the number of farmers willing to sell through the SIGAs. In the 2008 season 2,380 farmers (946

SIGA members and 1,434 non-SIGA members) sold 482 MT of chickpea.

Despite the reduced collective marketing activity, farmers continued saving and lending activities in their SILC groups. Many of the SIGAs reconvened in 2009 and collective sales were extended to include additional crops.

Challenges with the SIGA model

Limited marketing skills

Many of the SIGA committees were composed of the leaders of the SILC groups. Since SILC groups are primarily for microfinance and social services, few leaders had sales and marketing experience, especially when it came to quality assurance and price negotiation. This led to a greater emphasis on microfinance activities than on marketing functions within SIGAs.

Financial management concerns

Setting aside funds for production and marketing activities was useful for a SIGA; however, the necessity of managing the education and insurance funds at the SIGA level was questionable. Since the education fund was being used primarily for school fees of SILC members' children, and not to improve knowledge on agriculture technologies, it would have been better managed at the SILC level.

There was a danger that demands on the insurance fund could exceed the resources available. It may have been wise to begin discussions with a national insurance company so that the premium could be paid to that company, which would have the fund reinsured as required by law, thereby reducing risks to the SIGA and its farmers.

The management of multiple funds at the SIGA level posed a challenge for bookkeepers who did not have adequate skills to capture data or an appropriate management information system to store and analyze the data.

SIGA governance

The SIGA structure was complex. One of the key considerations for sustainability and possible replication was how to ensure a structure that is both robust and manageable. The primary purpose of the SIGA was to facilitate collective marketing. The structure and role of the SIGA subcommittees should therefore have reflected this purpose. Those activities that have little to do with collective marketing and production should have been removed from the SIGA level.

Transparency

One of the benefits of the SILC model was that a group is accountable to its members with respect to finances and how they were being used. In the SIGA model, it was not clear if SILC group members knew how much money was being managed at the SIGA level and how it was being used. One of the reasons for this was the management of multiple funds, which could lead to potential abuses if there are few controls in place.

Best practices and insights

Despite these challenges, the SIGA model holds significant promise. SIGAs were a good entry point for linking smallholder farmers to traders so they could aggregate production and maximize profits, which would not have been otherwise possible under individual sales. Lessons from the SILC model include:

- **Understanding what holds the SIGA together.** One of the challenges highlighted under the initial producer marketing group model was the lack of cohesion among the farmers at the time of sale. Under the SIGA model, greater cohesion of groups has been achieved despite the challenges experienced in 2008 and 2009. If money management is the glue that holds SILC groups together, it might be expected that the same will be true for the SIGAs. In this sense, SIGAs should maintain and strengthen their financial functions but avoid competing with SILCs.
- **Understanding the core benefits of the SIGAs for participating farmers.** A SILC farmer can find tremendous value in participating in a SIGA for the purposes of collective marketing. Some traders, such as the Afrisian Ginning Ltd. also saw value in working with the SIGAs, especially if there was a potential to include more farmers. At the time of the study, the volume of goods that Afrisian Ginning Ltd. purchased from the SIGAs represents only about 1 percent of their general portfolio. This confirmed that groups the size of SILC are unlikely to be viable units for collective marketing.
- **Understanding how to leverage the group's finances.** The focus of SIGAs was to facilitate the collective sale of a commodity, while financial intermediaries such as savings and credit cooperatives can design appropriate financial mechanisms to support the needs of SIGAs. SIGAs were designed to act as social

collateral or a guarantee for its members. Group collateral is a favored alternative to physical collateral for many microfinance institutions that engage with poorer communities.

Making the SIGA model work better

Parts of the SIGA model need to be modified and strengthened to make it sustainable and replicable after external assistance has ended. Among the most important are:

- Simplify the structure, activities and funds to focus on the core purpose of the SIGA model—to mobilize farmers for more effective collective marketing.
- Reinforce the skills necessary to record and maintain the balances of the funds deemed essential at the SIGA level. While the techniques used at the SILC level were

transferable, the demands at the SIGA level were greater and required better skills.

- Ensure sufficient assistance is given to SIGAs to develop their negotiation and quality management skills, particularly as they work to develop long-term sustainable trading relationships.
- Work with groups over a number of cycles to determine when SIGAs can manage marketing and financial management activities on their own.

Further information

Charles, E. (2009). Savings groups and marketing associations in the Lake Zone, Tanzania. In: Ferris, S., Mundy, P. and Best, R. *Getting to market. From agriculture to agroenterprise* (pp. 184–196). Baltimore, Maryland, USA: Catholic Relief Services. <http://static1.1.sqspcdn.com/static/f/752898/9984008/1296500345453/getting-to-market.pdf?token=SR0jpkHDRmmup@TRDU0CcimjE6c%3D>

CASE STUDY 5.2

Facilitating Financial Linkages for Smallholder Producers in Nicaragua

By Wendy-Ann Rowe and Jefferson Shriver, Catholic Relief Services

Access to affordable finance is critical for smallholder producers to successfully engage in value chain initiatives. However, in many cases financial institutions are reluctant to lend to smallholder producers as they lack the collateral needed to secure a loan and assure the lender of their ability to repay. In many situations, the role of an external intermediary is important to bridge the gap between smallholder producers and financial providers. This case study highlights the role of Catholic Relief Services and its implementing partners to create effective linkages between financial providers and smallholder producers.

The ACORDAR project

In September 2007, CRS took the lead in implementing a global development alliance project funded by the U.S. Agency for International Development. The project, Alliance to Create Rural Business Opportunities through Agro-Enterprise Relationships (ACORDAR), was designed to increase the income of poor families, ensure permanent employment and strengthen the commercial capacity of 6,000 poor rural families in 44 municipalities in Nicaragua. The project was carried out in alliance with municipal governments and the private sector. It provided technical assistance to small- and medium-scale Nicaraguan farmers to produce agricultural goods based on market demand. It was implemented by CRS, Lutheran World Relief, the Aldea Global Association of Jinotega and TechnoServe.

The project aimed to strengthen 85 smallholder cooperative enterprises and 8 cooperative associations—90 percent of the 6,000 targeted producers were organized in these cooperatives. The goal was to increase sale of harvests and increase income by US\$57 million. This work generated more than 12,000 permanent jobs

through specific interventions designed to improve value chain engagement, post-harvest management and commercialization. The crops involved were fruits, vegetables (including roots and tubers), red and black beans, coffee and cocoa.

Project activities were centered on investments in infrastructure, development of commercial capacity and the transfer of appropriate technology. Investments in infrastructure included the establishment of packing centers for vegetables and coffee, cold rooms, community storage centers, a bio-fertilizer processing plant, a dry coffee mill, ecological wet coffee mills, systems for the drying and fermentation of cocoa and infrastructure for water. The intention was that small- and medium-scale farmers would be the owners of the production and post-harvest infrastructure, thus increasing their ability to compete more effectively in the market. The development of commercial capacities aimed to strengthen the access of the cooperative enterprises to market intelligence, enhance their abilities to manage their businesses, and increase their exposure to opportunities in regional and international markets.

In addition to these investments, access to finance to support sustainable production activities was a focal point of the project. Because farmers experienced great difficulty in accessing finance for their production activities, CRS and partners worked hard to establish strategic alliances with microfinance institutions and international investors. Relationships were established with organizations such as Root Capital, Oikocredit, Rabobank and other providers of wholesale loans to these microfinance institutions. This has allowed many cooperative associations in the coffee sector to borrow at more favorable rates and thus make better loans to their member cooperatives.

Alternative sources of financing under the ACORDAR project

Financing for the farmers was sourced from a range of financial mechanisms, including microfinance institutions. It was often advantageous for smallholder producers to diversify their financial streams so that they could assess the most appropriate financial mechanism for their production activities. Financing for the ACORDAR project came from a number of mechanisms, several of which required the support of an intermediating organization, such as CRS.

Financial sources

Financing from social investment funds

Most traditional investors look for a financial return on their investments that is on par with market rates, which often makes financing inaccessible and unaffordable for smallholder producers when combined with standard collateral requirements. A social lender, unlike a traditional lender or commercial bank, provides an investor with a dual return on their investments—financial and social gains. Loans are not interest-free but are provided at low rates, as the primary goal is the social return. The social gain for the investor is defined by their ability to support underserved groups in need of financing, while still earning a small financial return on their investment. Root Capital and Oikocredit are examples of such lenders. In the ACORDAR project, there was a large increase in the numbers of coffee producers accessing second-tier loans (also known as wholesale loans) from social investment funds.

In the case of Root Capital, financing provided to cooperatives was dependent on the cooperative's ability to successfully market their coffee to international buyers and roasters. As part of its social mission, Root Capital was also concerned that the cooperatives they supported were engaged in ecologically sound cultivation and post-harvest practices, combined with a focus on quality and market access. Cooperatives that met these criteria were in a better position to negotiate for funding from Root Capital. Loans provided by Root Capital were focused on pre- and post-harvest activities that enabled coffee cooperatives and their members to produce the optimal yield and quality of produce at appropriate levels of scale. In partnership with ACORDAR, Root Capital expected to extend up to US\$4 million in credit services to small- and

medium-scale farmers associated specifically with coffee cooperatives. This credit was provided for the purposes of pre-harvest loans and trade credit for the two coffee harvests targeted for the remainder of the project.

Loans provided by Root Capital were given directly to the second-tier cooperatives in the project, which had well-established credit programs and complex accounting software to manage the loan portfolio. The cooperatives also had well-trained credit promoters and loan portfolio managers on staff. Once funds were received from Root Capital, they were on-lent or offered to the base cooperative or directly to the farmer. The second-tier cooperative earned nominal interest on this loan. The duration of the loans ranged from 6 to 18 months.

In-kind/non-cash investments from other value chain actors

In addition to financing from socially minded investors, a number of smallholder producers were able to find alternative and creative sources of financing. For example, there were a number of bean and vegetable producers accessing in-kind (non-cash) investments and co-investments from commodity buyers, as well as investments from input suppliers for production and post-harvest processing and storage. These types of investments helped jumpstart the production activities of smallholder producers, particularly if the up-front investment needed to support production activities was so great that it became an obstacle to the producer's ability to meet market demand.

Many producers who succeeded in harvesting their crops often lacked the proper cleaning, packing and storage facilities to ensure that their crops successfully made it to market; these farmers required additional support. In-kind investments for post-harvest activities assisted smallholder producers when they were unable to invest in these facilities themselves. However, there were times when the dependency on these in-kind investments compromised the negotiating power of the farmer and their ability to secure an ideal price for goods.

Encouraging farmers to secure financing from other value chain actors was a mechanism that supported their sustainable participation in the value chain, especially in situations where there were few opportunities for significant external investments such as those provided under the ACORDAR grant. However, as with any financial

service, it was imperative that the farmer understood the terms of the loan and was able to evaluate the appropriateness, affordability and limitations of the resource being offered.

Working with microfinance institutions

Many of the microfinance institutions that partnered with the ACORDAR project had prior experience in designing agriculture loan products and operated an active agriculture portfolio. Despite their experience in this area, the creation of agriculture loan products using alternative forms of collateral has yet to occur. This was especially the case when smallholder producers lacked the traditional collateral requirement, which resulted in bottlenecks and delays in loan processing and affected the farmer's ability to meet key production targets or time frames.

In some cases, microfinance institutions were more willing to expedite the loan origination process when they were aware of technical assistance from organizations, such as CRS, Lutheran World Relief and TechnoServe, to support production and post-harvest management activities. In the case of the social investment funds, the main concern with qualifying for a loan was the need for coffee cooperatives to demonstrate market demand and their ability to meet this demand and find a buyer. This was not a problem for the coffee cooperative associations operating under ACORDAR because they already had a track record of forward contracts for export to international buyers.

Primary uses of loans

The loans sourced by the farmers under this project were used to finance inputs (seed, fertilizer and labor) for production in almost all of the crops. In the case of coffee production, loans were used to finance labor costs associated with the harvest, storage and rental of processing facilities and, to a lesser degree, inputs during the year to maintain the perennial crops. For cocoa producers, credit was provided for production (pruning and weeding) and processing. Farmers that were producing fresh fruits and vegetables used their loans primarily for production technologies (row covers and plastic), inputs and labor.

Producers of other crops, such as beans, did not use credit primarily because they cultivated small

plots and used minimal inputs. Financing such small-scale activities was often seen as costly and a risk for financial institutions, especially given that productivity for this commodity was generally low. Bean farmers were some of the poorest farmers in the ACORDAR project. In response to the unmet demand for financing bean farmers, CRS earmarked project funds to be used as an advance to bean farmers for storage and processing. Funds for these activities were generally allocated at the cooperative association level. This mechanism was similar for coffee and cocoa and plays a commercialization function in the end, as more storage equaled greater volumes eventually sold to create economies of scale.

Establishing links with financial providers and the role of intermediaries

CRS and its partners established strategic relations with microfinance institutions, donors of the microfinance institutions, and socially minded investors. Many of these relationships existed before the ACORDAR project, whereas others took effect during its implementation.

In the case of socially minded investors, such as Oikocredit and Root Capital, having the integrity and technical support of partner organizations, such as CRS, was helpful in securing the relationship between the lender and the cooperatives. In many instances, the goodwill of an organization and the resources invested in capacity building for smallholder producers served as an implicit guarantee for the investments made to these cooperatives.

It is important to note that the role of intermediation—in cases where it is deemed essential—should be viewed as temporary. Supporting organizations such as CRS should seek to build the capacity of smallholder producers to understand financial mechanisms and their appropriateness for various phases of the production cycle, rather than provide financial support. Farmers must also be aware of the limitations of each financial solution so they can make informed decisions.

Finally, helping farmers build strong negotiating skills was critical to ensure that they could advocate not only for affordable financing, but also to establish mutually agreeable terms to support production and marketing activities with core value chain actors.

Successes and challenges

Approximately 15 percent of producers supported in the project received loans from microfinance institutions before the project began, which increased to approximately 30 percent by the end of the project. Some farmers diversified their financing sources by accessing loans from cooperative associations or base cooperatives. The number of farmers who accessed loans through their cooperatives increased to around 65 percent during the project. Average loan sizes varied as the project worked with a diverse number of crops. In the case of fresh fruits and vegetables, loan sizes were as high as US\$7,000 to US\$8,000 per hectare, whereas loans provided for coffee in the form of an advance were in the range of US\$150 to US\$2,400 per hectare.

Best practices and insights

The following key elements were necessary to ensure a well-functioning relationship with financial institutions that was beneficial to both farmers and lenders:

- An agreement between the financial provider and the cooperative institution representing the farmers is necessary to clearly express the demand for credit and agreed-upon terms for loan use and repayment.
- The lender must understand the relationships between key stakeholders and other value chain actors. The lender should have field-level knowledge of those responsible for assisting in production, processing, post-harvest management and commercialization in order to assess the potential for profitability and the producers' ability to repay loans.
- Microfinance institutions and other financial institutions need to have the technical competency and agricultural knowledge to develop loan terms that are suitable for the

specific needs of each commodity, especially because production cycles and associated cash flows vary by crop.

- Microfinance institutions and other financial institutions need to accept a broader range of collateral substitutes rather than requiring only traditional collateral (properties and other physical assets), which is unlikely to exist for most smallholder producers. This needs to be further developed and is essential for lenders to make a deeper impact on smallholder production activities.

Best practices and insights

Win-win relationships

Smallholder producers established win-win relationship with many microfinance institutions and other financial institutions as they worked to support the financial needs of smallholder farmers. The social performance movement became an increasing focus for many microfinance institutions in Latin America as they work to align their social mission with their financial performance.

Key role of an intermediary to facilitate linkages between farmers and finance providers

ACORDAR's ability to reach a substantial number of farmers and successfully link them to markets was dependent on the role played by CRS and its partners in catalyzing and facilitating linkages with a range of financing mechanisms. Agricultural development projects, which aim to progress from pilots to programs with a wider impact, have to ensure that both technical and financial support is available, and that the two act in tandem to meet the specific production and marketing needs of farmer groups.

CASE STUDY 5.3

Establishing a Warehouse Receipts Program: The Experience of the Eastern Africa Grain Council



By Sophie Walker, ACDI/VOCA, Kenya

Throughout most of sub-Saharan Africa, the production, purchase and storage of commodities is based on cash, not through formal financing institutions. For example, in East Africa a conservative estimate of the value of the maize harvest is US\$1.2 billion. At least 30 percent of this maize is sold onto the market at harvest. This translates to expenditure by traders of approximately US\$400 million for just the maize harvest, which will take up to 11 months to sell. The same pattern is reflected in every other staple commodity. The immense amount of cash tied up in commodities means there is little cash available for investments that might help make trading more efficient, such as newer trucks, dryers and warehouses.

It also means that without financing there is limited cash available for buying commodities, which causes prices to dip proportionally to the volume produced. One solution is to finance commodities in certified storage through a warehouse receipts system to increase the cash available for purchasing commodities. This enables traders to compete with each other to buy from smallholder farmers, which tends to reduce the dip in the price at harvest and reduces very high prices later in the season.

In a warehouse receipts system, individual depositors place their harvested crop in warehouses offering storage services (they are known as “public warehouses” in contrast to “private warehouses,” which do not offer storage services to the public). Public warehouses can be owned by the government, private companies or individuals. The depositors receive a warehouse receipt document, which represents their title to the commodity. The contractual agreements

represented by this warehouse receipt enable control over the commodity and because the document can be used as collateral, it allows the depositor to access services, such as financing and commodity exchanges.

This case study describes the experience of the Eastern Africa Grain Council (EAGC), which was established by the private sector with support from the U.S. Agency for International Development to build the grain trade around structured processes: grades, contracts and arbitration, among others. To address aggregation, storage and finance issues, the EAGC started a warehouse receipts program. The council saw its role as the independent trusted regulator, bringing together warehouse facilities, depositors, financial institutions and buyers. It ensures a transparent system that links the sectors together.

How the warehouse receipts system works

Warehouse receipts systems are complex, involving many players working alongside each other but handling different areas. An effective system needs:

- A regulated warehouse offering public storage.
- Professional warehouse operators with reputable skills in handling and storing grains.
- Insurance policies covering a variety of risks.
- Depositors willing to pay a premium to store graded commodity in formal warehouses.
- Buyers willing to purchase graded commodity.
- Market intelligence (e.g., analysis of production, consumption, trade flows from other surplus areas that will affect prices).

- Financial institutions willing to develop loan products to finance commodity in storage and contribute significantly to the program's potential success.

Initially, EAGC held several stakeholder meetings with commercial banks, traders, farmers and maize processors to ascertain interest and establish parameters for the system. The project received support from the Financial Sector Deepening Trust of Kenya.

EAGC plays two roles in the system: (1) As the regulator, it has to be seen as competent at regulating the system. (2) It plays the complicated role of promoting, training and publicizing the system so it can grow. The EAGC has to balance smallholder inclusion with commercial viability (i.e., looking first to the large traders and processors to bring increased volume into the system).

As the regulator, EAGC receives applications and payment from warehouses to be certified. EAGC contracts outside specialists from international inspection companies such as Bureau Veritas, the Audit Control and Expertise Group and Société Générale de Surveillance to assess the warehouses against a predetermined set of criteria, including physical structures, management systems, staff competence, insurance policies and financial records.

If a warehouse passes the certification process, it then enters into binding contracts with EAGC on how it will operate, handle goods being deposited and manage the EAGC-provided warehouse receipts.

A warehouse that has been certified and has goods in storage needs to be inspected every 3 to 5 weeks. This entails ad hoc visits from the independent inspection companies to each site. Inspectors reconcile stocks with records and test commodity quality parameters.

The EAGC stipulates the minimum tonnage each for each warehouse receipt—this represents a balance between the commercial sectors' desire to increase efficiency and the smallholder farmer's capacity to deliver volume. It can take several loads from smallholders to aggregate the warehouse receipt tonnage—as each load is delivered, a goods received note is issued until the volume meets the minimum tonnage for the warehouse receipt. Depositors can keep their

commodities in goods received notes or convert them to warehouse receipts when they need to access finance. It is possible for a number of smallholder farmers to deposit their smaller tonnages, which can be aggregated into one warehouse receipt that has to be in the name of one organization or individual.

EAGC charges the following fees:

- A per-metric-ton fee to each warehouse for any goods deposited (whether a warehouse receipt is issued or not). This fee mostly covers the ongoing inspection costs and is payable when the goods are lifted from the warehouse at the end of the storage period.
- An obligatory registration charge for the warehouse receipt issued, which is collected by the warehouse from the depositor.
- Warehouse receipt verification fees, which are generally collected from the bank.

Based on the fees being charged, the administrative costs of the warehouse receipts program should break even at about 120,000 metric tons (MT), subject to the warehouses being mostly above 5,000 MT and running at 75 percent capacity. EAGC estimates that when the system covers an increased volume, it will need one full-time manager and assistant with the occasional assistance of other staff.

The certified warehouse charges depositors handling fees (one-off costs, Table 3) and monthly storage and fumigation fees (Table 4). These add up on a monthly (or partial-month) basis. Ideally, these fees should be charged prior to lifting the goods from the warehouse rather than at the end of the month. However, this has running cost implications for the warehouses, which need operating capital. The cost of financing per month depends on the harvest price and the percentage that the bank will finance. For example, if the harvest price is 1,400 Kenyan shillings for a 90-kilogram bag and the bank advances 80 percent of that value, the finance will be based on the loan at 1,120 Kenyan shillings for a 90-kilogram bag. Equity Bank in Kenya initially charged financing fees of 12 percent annually on 80 percent of the harvest price. Equity Bank has subsequently reduced the rate to 11 percent. The rate is determined by a number of factors in the financial markets.

Table 3. One-off costs charged by warehouses to depositors.

Cost item	US\$ per metric ton (MT)
Eastern Africa Grain Council costs	2.20
Warehouse operating costs	4.00
Weighing and bagging	1.00
Total cost per MT	7.20

Table 4. Monthly costs charged by warehouses to depositors.

Cost item	US\$ per metric ton (MT) per month
Storage	0.47
Fumigation	0.80
Financing at 12% annually	0.15
Total cost per month per MT	1.42

The system is expensive to establish—warehouses need upgrading, warehouse staff need to improve their storage management skills and insurance needs to be paid. These additional expenses are rarely balanced with significant increases in income or tonnages in the first years of operation. During this initial period sufficient funds are required to subsidize these costs and the collateral inspection visits. Furthermore, depositors need training, and the integration of the banking sector into the process requires considerable work.

Performance of the system and the challenges that are being faced

Low production, government policies and low prices that inhibit growth

In the first crop year 2007–2008, more than 1,000 MT of produce passed through the system. Seven of the 10 warehouse receipts were financed. The warehouse receipt holders realized a profit after costs of around US\$88 per MT. However, the two subsequent crop years (2008–2009 and 2009–2010) experienced significant deficits in maize—more than 1 million MT per year, which is 30 percent of the total consumption. In the first of these years, government interference in the maize market made investment in formally stored commodities too risky. The market price then stabilized around import parity and did not move significantly for 18 months. Millers were able to buy or import maize at around the same price from month to month. Therefore, the costs of formal

storage and finance in Kenya was not covered by significant price increases in the marketplace.

Banks are wary of investing

The majority of banks in Kenya have been reluctant to develop financial products against warehouse receipts. Their concerns revolved around whether the central bank would accept warehouse receipts as collateral and whether contract law was enforceable. An in-depth analysis—which provided evidence to the financial sector that contract-based warehouse receipts and collateral in the form of a commodity were acceptable to the central bank and enforceable legally—was not sufficient to encourage banks to offer financing to controlled commodities in storage. Many of the large international banks reported privately that they were waiting to see the system work. They wanted to be assured that disputes can be resolved and that the EAGC can survive as a professional regulator before participating. Equity Bank so far is the only bank to have developed a financial product to serve the EAGC warehouse receipts.

Changing banks' loan requirements

Equity Bank has evolved from a microfinance institution. It has been aggressive in trying to move new financial products toward the previously un-served clients, in particular the smallholder farmer, but it has at times struggled to adapt to the concept of having valuable collateral to protect a loan. There is still an inclination to want an individual's banking history rather than accept the asset value.

Belief in and availability of insurance policies

The probity of the system is important. EAGC has put in robust systems to investigate operators' capacity to participate in a warehouse receipts system and check that everything is running as planned through the season. Additionally, the EAGC requires that the certified warehouses have specific insurance policies in place prior to certification. However, financial institutions are still wary. They often do not see the insurance policies on the stock as sufficient indemnity. In part, this is because of limited experience in trade finance within the banking sector. Banks are unable to judge risks on commodity lending, which increases their reluctance to participate. This is further complicated by government interference in marketing, making price signals hard to read.

Competitiveness of the warehouses

Getting the warehouses to a standard of professional management equivalent to international collateral management is costly. Furthermore, the profit warehouses receive on handling and storage is minimal, and often the storage will be empty for a number of months each year. Elsewhere in the world, loans on these structures would take 10 to 15 years to repay, but in Africa most loans are expected to be repaid in 3 to 5 years. Most private sector investment in warehousing therefore targets speculative profit on commodities as a method to repay loans, rather than offering public storage services.

Participation of regulator

EAGC has a wider role than just regulating or promoting the warehouse receipts system. At times it has been difficult to commit the necessary staff resources, particularly in two nonperforming years, to build the overall systems required to make the system function effectively.

Minimum tonnages and aggregating smallholder production

Most financial institutions do not want to take on many small loans, each requiring the same time to administer as a much larger loan. Good practices in banking indicate that a loan against commodity collateral should not be on an asset worth less than US\$15,000. However, smallholder farmers cannot achieve these minimum tonnages alone.

Many implementers try to persuade groups to aggregate their tonnage for sale to achieve better value. However, in order for a group of people to deposit collectively into a warehouse receipts system and receive one receipt, they have to be in total agreement as to:

- How long they will store the commodity until they sell.
- What other sell/buy triggers they will react to.
- Who will be responsible to watch the market and make the sale.
- How they will distribute costs, losses and profits.
- The fact that once the commodity has been deposited in the warehouse, regardless of whether they may have all received 60 to 80 percent of its harvest value, they cannot access the balance until it is sold with the group's agreement.

Minimum tonnage for the warehouse receipt has still to be resolved. Whereas the large commercial players want larger tonnages to enable simplified and reduced cost procurement, there is considerable push by donors to accommodate the smallholder farmers' much smaller volumes. Kenya has reduced its warehouse receipt minimum tonnage from 100 MT to 50 MT.

Best practices and insights

Investment in time and money

The time required for developing a warehouse receipts program depends on a number of factors:

- The existing market systems.
- Infrastructure for suitable warehousing already in place.
- Whether crop production is relatively stable from year to year.
- Whether markets are destabilized by public sector interference.

It is recommended that an initial pilot program should be for at least 5 years with a budget of approximately US\$5 million to US\$10 million. The budget will need to cover: (1) setting up the regulator; (2) providing grants to warehouses to improve their facilities, which should be matched with private sector funds; (3) subsidizing increased insurance costs; (4) inspection costs (possibly international collateral management until the systems are in place); (5) the regulator costs until such time as the volumes make it affordable; (6) significant support to certain financial institutions to develop warehouse receipt financing products; and (7) the understanding of the financial or trade risks they are exposed to.

It is relatively easy to establish a pilot warehouse receipts program managed by a donor-funded project. The real challenge is building long-term trust in the systems and the scale of operations within tight project funding horizons.

Trust and confidence

Trust and confidence in the systems can be built if large-scale traders and processors achieve quick wins and volumes grow significantly each year. This helps establish strong private sector support for both the system and the regulator, and encourages the financial sector that this is a profitable financial opportunity.

Volume and scale

A warehouse receipts program needs volume to be viable. The only way to build to significant scale that generates its own momentum in a short time is to concentrate on large-scale commercial buyers who have the logistic or financing needs addressed by commercial storage. The regulator faces a significant challenge if it becomes involved in training smallholder farmers and being responsible for their inclusion in the system. It is easy for the regulator to become distracted by the needs of the smallholder farmer, while ignoring the need to build to scale quickly.

Benefits for smallholder farmers

Initially, most of the benefits for smallholder farmers from a warehouse receipts system are indirect. Regional studies show that 2 to 3 percent of smallholder farmers sell 50 percent of the total maize sold by smallholder farmers, a further 20 to 35 percent sell the remaining 50 percent, 10 percent of those farmers buy back later in the season and 40 to 60 percent are buyers of staple grains (Jayne et al., 2010). Therefore, support to the market by warehouse receipts systems indirectly increase smallholder farmer income at harvest and reduce some of their later expenditure. If prices are very low, the system allows farmers to deposit into stores (if they can meet the minimum requirements) and wait for prices to increase. This reduces the surplus of crops on the market and enables prices to plateau rather than continue to drop.

Donors often want quick results that address poverty and social issues simultaneously while establishing sustainable warehouse receipts systems. In practice, this is difficult to achieve. The first five years of a warehouse receipts program should concentrate on getting the system to work effectively and efficiently with large-scale commercial buyers and to benefit smallholders indirectly. The following years can then focus on the challenges associated with integrating smallholder farmers.

Integration of smallholder farmers

If there is already a warehouse receipts program in operation, development organizations should

work with farmer groups to understand the advantages and constraints of group marketing. The groups should build their understanding of how markets work so they can judge whether delivering and receiving warehouse receipts is in their interest. They should also build long-term relationships with trading partners who will buy their commodity either directly from the farm or from the warehouse receipts.

Market intelligence

Sufficient market intelligence is needed to enable depositors, financiers and buyers to anticipate market movements.

Consider alternative options

Warehouse receipts programs are complex. They should be developed through dedicated projects or as well-funded components of a project with wider development objectives that address minimum standards, the use of contracts and development of the regulator. In some situations, inventory credit schemes are more likely to succeed and continue beyond the life of a project. However, they too need sustained effort.

Further information

- Coulter, J. Warehouse receipting, loss reduction and the development of value chains for grains. (2010). In: *FAO/World Bank workshop on reducing post-harvest losses in grain supply chains in Africa: Lessons learned and practical guidelines* (pp. 16–17). Rome, Italy: Food and Agriculture Organization of the United Nations. <http://www.fao.org/3/a-au092e.pdf>
- Jayne, T. S., Mason, N. M., Myers, R. J., Ferris, J. N., Mather, D. Beaver, M., ...Boughton, D. (2010) *Patterns and trends in food staples markets in eastern and southern Africa*. MSU International Development Working Paper No. 104. East Lansing: Michigan State University.
- Sargis, B. (2009). *Role of agricultural commodity exchanges in price discovery and risk management for grains; Implications for East Africa*. Washington, DC, USA: World Bank.
- Walker, S. (2010). *ICT to enhance warehouse receipts systems and commodity exchanges in Africa*. USAID Briefing Paper. <https://www.microlinks.org/sites/microlinks/files/resource/files/FACETWRSCEXv2.pdf>

CASE STUDY 5.4

Inventory Credit Improves Farmers' Incomes and Food Security in Niger



By Jonathan Coulter, NR Group, United Kingdom

Niger has a single rainy season, which is typical of many African countries. Farmers that practice rain-fed agriculture have only one harvest to satisfy home and market requirements for an entire year. They often lose out in marketing their crop due to seasonal price variations, lack of liquidity and lack of market knowledge. They sell at low prices and sometimes have to buy back food products for home consumption at higher prices in the lean season.

An inventory credit approach seeks to increase producer prices, help farmers store more food for the lean season and usher in a virtuous cycle of crop intensification and marketing, while improving food security for local families. The approach makes agricultural markets work more efficiently, mitigates seasonal price variability and results in greater production and self-sufficiency in food. Hence, inventory credit can be seen as a hybrid “private-public good.”

In Niger, the Food and Agriculture Organization of the United Nations (FAO) promoted this approach under the Belgian-funded “Inputs Project” (1999–2007) and continued to do so under a successor project funded by the European Union (“Project for the Intensification of Agriculture through Reinforcement of Community Input Stockists”), which started in mid-2009. The main participants in the project were individual producers (male and female), producer organizations, microfinance institutions (MFIs), commercial banks and supporting agencies, principally FAO. The total cost of the “Inputs Project” was around US\$7 million over three phases; it was estimated that roughly one-third can be attributed to the inventory credit component. Additional unquantifiable sums were spent by a range of projects and nongovernmental organizations (NGOs) that supported the development of

inventory credit. A rough estimate of the total expenditure by FAO and collaborators to promote this innovation was US\$4.7 million. An estimated that 12,500 male and female farmers have made use of the inventory credit system.

How the inventory credit system works

Producers deposit products in secure warehouses where they are subject to quality inspection, store hygiene and pest control. MFIs provide the producers with financing against the security of this stock, allowing them to sell the product later in the season when prices have risen. Credit is normally provided as a fixed “advance rate” (i.e., a percentage of the collateral value of the stock at the time of lending). In effect, the producers finance the remaining 30 percent, and this provides a cushion to protect the MFI if prices drop and producers lose on the operation. Producers pay interest in the range of 2 percent to 2.5 percent per month, and the MFIs must pay about 1 percent a month for refinancing by commercial banks.⁷ FAO strongly encourages producers to invest the credit in income-generating activities to repay the loan, and the warehoused commodity acts as a guarantee of last resort. In practice, however, producers use much of the credit for consumption purposes.

Producers participate in the system through their producer organizations. The producer organizations build and manage the crop stores, handle relations with the MFIs, distribute the

7. These rates are low by the standards of most African countries and reflect the special circumstances of countries belonging to the West African (Francophone) Monetary Union, where the currency is pegged to the Euro. MFIs sometimes have difficulty breaking even when they charge less than 2.25 percent per month.

credit to members and collect funds required to repay the credits. Producer organizations typically have 20 to 30 members and come together in unions, and many unions are further joined to form federations. While producers adopt a collective approach to warehouse management and credit relations, the approach to ownership and sale of goods is individualized. Producers deposit their products in individually marked sacks and once the credit has been repaid and the stores opened, they are responsible for disposal of the goods, for example selling them or consuming them at home or at social events like weddings. There are cases where producer organizations market goods collectively, but this has so far been rare. This individualized approach is not only evident in Niger, but is used in some other schemes, for example in the village granary system in Madagascar.

Producers are encouraged to use the inventory credit system with non-perishable crops that have a strong seasonal price pattern, which enables them to make a profit in most years. In Niger, these include grains, pulses, oilseeds and dehydrated horticultural crops. Some producer organizations already possess warehouses, typically structures holding about 500 bags each (equivalent to 50 metric tons of millet and sorghum), and on occasions they rent them from private individuals. Often, however, producer organizations do not possess sufficient warehousing capacity, and FAO or another donor-funded institution helps build them, with the support ranging from the provision of designs, key construction inputs and labor, to a full turnkey operation.⁸

Steps in establishing an inventory credit system

Ideally, MFIs should take the lead in promoting inventory credit schemes. It is in their own self-interest to develop and promote inventory

8. The Malagasy Village Granary system in Madagascar contrasts with that of Niger and other countries because it developed without significant donor support in warehouse construction. The granaries are usually domestic rooms or stores that farmers have fitted out at their own expense for storage of paddy, and each granary holds the stock of a few collaborating farmers. However, in contrast to Niger, there has been much more external support to establish viable cooperative rural finance networks, through which the village branches ("caisses rurales") provide the necessary finance. This external support has proved more successful in the case of Madagascar.

credit, which is a relatively low-risk product, to build up their clientele and revenue in rural areas. In practice, however, MFIs are often young institutions with limited presence in rural areas and international organizations like FAO, development projects and NGOs have taken the lead in promoting inventory credit. There is some logic in this, given the "public good" aspect of the product, but it is vital in project design that an MFI is capable of picking up a project when it is winding down and driving it forward. Whoever promotes the practice needs to form a promotional team and develop a manual of good practice along the lines of the one developed in Niger (FAO and PDSFR, 2006).

Given the convergence of private and wider societal objectives, the practice of inventory credit should be introduced to producers using a social marketing approach, which is defined as "the systematic application of marketing concepts and techniques to achieve specific behavioral goals for a social good." There is an important distinction between social marketing and marketing for a purely commercial nature—social marketing is a collaborative effort between various MFIs and publicly funded institutions that are prepared to invest more than the MFIs would want to invest on their own because of the wide range of societal benefits.

As with conventional marketing operations, a marketing strategy needs to be developed and adapted to the needs of producers. The strategy must include details of the inventory credit system itself, how it will be priced and promoted, and how it will be extended geographically. The marketing process is not a linear one. The credit system and other elements of the marketing strategy are modified according to lessons learned.

Before introducing the system to producers in a particular locality, the team needs to assess the demand and feasibility for the targeted crops and communities concerned, with the full participation of the producers and the financiers. The team first analyzes available price series data and calculates the costs involved to determine whether the operation is likely to provide a reasonable financial return in average years, and whether the producers can bear the risks in years when prices move unfavorably. Chapter 4 of the report by Coulter and Mahamadou (2010) illustrates the type of analysis required in the case of millet and cowpeas.

The team must systematically test the inventory credit concept among producers and determine their needs by presenting relevant costs. This helps project design teams understand the producers' perception of the credit system and teases out the main benefits and obstacles that may be encountered. For example, profit and food security motives may not be the only factors for producers adopting inventory credit. They may value it as a form of forced saving, and as a way of locking up produce away from prying relatives or reducing temptation to dispose of them at weddings or funerals. Some producers are unlikely to adopt the practice because of its centralized nature and the discipline it demands (i.e., the need to store produce under lock and key at a central location and to agree to a single calendar for constituting the stock, financing, repayment and opening the store).

Regardless of such concerns, the team should inquire about the producers' willingness, as well as prospective profitability and risk. Provided that the producer organizations can deal with matters of quality and security, price constitutes the main risk factor. Seasonal price movements can vary widely from year to year and can cause producer organizations to lose money and make it difficult for them to repay their loans. For example, an analysis of past price data might show that:

- In an average year, prices increase by 25 percent, net of weight loss, warehouse amortization, financial and other costs.
- The average return on capital employed (i.e., on assets that are not loan financed) is 60 percent.
- In 2 out of every 5 years, returns are likely to be negligible.
- In 1 out of every 5 years, the sales price will be 90 percent or less of the costs incurred (including amortization, financial and other items).

Producers will need to indicate whether they can accept such risk scenarios and not default on their credits in any of the years.

The introduction of inventory credit needs to be accompanied by regular quantitative and qualitative monitoring to determine the volume and type of products stored in each locality, the value of funds lent, the repayment record, reasons for adoption and non-adoption of the credit system by men and women, and other features. Occasionally, there should be a more in-depth review of social impact in terms of equity and gender. While social control is largely

a local matter, extreme circumstances need to be guarded against (e.g., where land-owning male farmers with trading interests monopolize the use of donor-funded storage facilities, thereby crowding out other players, such as women and youth). However, monitoring should focus mainly on adoption as it is a good, albeit imperfect, proxy for the socioeconomic benefits producers derive. To put it another way, if producers are increasingly using inventory credit, they are almost certainly benefiting from it.

Successes and challenges

In Niger, the inventory credit system has been operating for 10 years. In 2008–2009, lending rose to nearly 600 million CFA francs (about US\$1.4 million), representing an estimated 5,000 metric tons of products. The main crops stored were groundnuts and millet, followed by cowpeas, paddy rice, sesame, tiger nuts, sorghum, dried paprika and hibiscus leaves. According to FAO's monitoring, there were 125 producer organizations (some of these appeared to be unions rather than local producer organizations), and 12,500 "pratiquants" (i.e., individual depositors, often with more than one depositor per household). Men tend to dominate the activity, but women are important participants with some crops, notably groundnuts. Significantly, the leading producer federation (Fédération Mooriben) found that women outnumbered men as depositors—2,822 women (62 percent) compared to 1,764 men (38 percent).

There was a major hiatus in 2002–2003, resulting from the poor performance of mutual MFIs that FAO initially sought to promote inventory credit. Unlike some other francophone countries, Niger's mutual MFIs were very weak, with a near absence of effective cooperative networks to provide financial services within reach of rural producers. After 2003, volumes continued their upward trend thanks to the emergence of three direct credit MFIs. These were credible private entities enjoying refinancing facilities with domestic banks and the support of international investors. However, they still exhibited some limitations: they offered little in the way of savings facilities, were urban-based and therefore did not have day-to-day contact with producers and did not enjoy the direct regulatory oversight of the Central Bank of the West African States.

When successful, inventory credit provides real benefits to participating producers and nearly

100 percent reimbursement of loans, making the activity sustainable. Technically, it is simple and allows producers to better manage their physical and financial resources, which facilitates the adoption of higher-yielding production technologies. In southern parts of Niger, it has proved a more viable means of promoting local food security than cereal banks, which have been promoted with scant success over the past 35 years. Moreover, the introduction of inventory credit appears to be a viable way to encourage cooperation among producers, which may bring other positive benefits, such as helping them access agricultural extension or other financial services through the producer organization.

The initiative proved the viability of the inventory credit product but is far from achieving its true potential. The volume stored represents little more than 1/1,000 of Niger's annual production of grains and pulses, and it is small in terms of what individual producers, particularly more prosperous smallholders, already hold back for local consumption and sale in the lean season. One of the main constraining factors has been producers' inability to get their stock in to store according to the schedule agreed upon with MFIs. Certain rural communities have achieved exceptionally high levels of adoption due to good practices that could have a major impact if generalized across the country. Among the most important of these good practices are advanced planning to get their crop in store and a conservative advance rate, which minimizes the risk of producers having difficulty repaying their loans. In view of this potential, a donor-funded five-year promotional campaign has been proposed to multiply the volume of inventory lending sixfold, and the value of stock stored to around US\$10 million.

Best practices and insights

Financial institution performance

The performance of the financing institution (MFI or other) is of critical importance. Before promoting inventory credit, professional and solvent MFIs must drive product introduction as a matter of self-interest and provide for long-term sustainability beyond the project period. It is preferable to have MFIs that offer savings facilities and are physically close to the

producers, but the Niger case shows this is not always achievable in the short or medium term.⁹

Support by government and nongovernmental organizations

In view of wider socioeconomic benefits, NGOs and publicly funded projects may provide valuable complementary support in the form of promotion, training (including basic financial literacy), organizational development, management and accounts, warehouse construction, monitoring and evaluation. In doing this, they should adopt a social marketing approach, working closely with the MFIs and other participants.

A long time horizon

Experience in Niger and Madagascar suggests that it will require up to 10 years to fully prove the system, and as much 15 to 20 years to make a substantial impact at the national level. If strong and committed MFI networks are already in place, it may be possible to speed up the process.

Individual versus collective marketing

Do not assume that producers will want to market their crops cooperatively, particularly in the early stages. As noted above, producers in Niger often prefer their commodities to be stored in individually marked sacks and to individually dispose of the commodity, even though they make use of a community warehouse.

Management of price risks

Three measures are particularly recommended to improve the management of price risks:

- Producers should be encouraged to see inventory credit as a means of inter-seasonal savings, such that they gain simply by having crop available in the lean season, even if they do not achieve a speculative gain. Advance rates should be set conservatively, for example as a given percentage of the lower of the

9. Whereas savings and loan cooperatives have not performed well in rural areas of Niger, there are some effective urban-based organizations with a strong savings functions. These might be prepared to extend their services to certain rural areas, particularly if they can build up a strong inventory credit portfolio that enables them to achieve a high level of reimbursement. These cooperatives are liquid and can access members' savings at a maximum of 3 to 4 percent annually, which is very low compared to approximately 1 percent per month that the "direct credit microfinance institutions" must pay on funds they borrow from the banks.

current market price and a historical average at the same time of year.

- Some sort of market intelligence should be arranged to minimize “crass errors” (e.g., producers taking large advances against a product when regional and international data suggest that a price fall is imminent). This was the case of groundnuts in some parts of Niger at the end of 2008.
- Policy dialogue with the government to minimize public interventions that increase price risks faced by producers when storing.¹⁰

Caution in subsidizing construction of village stores

Any element of subsidy should be matched by an equity contribution on the part of producers, while transfer of warehouse ownership should be conditional upon performance. Failure to do this largely explains why there are many thousands of unutilized village stores in Africa. At the same time, producer organizations should build up share capital and reserves in names of individual members, so they feel a greater stake in the business and can undertake further investments.

While major benefits can flow from a rural inventory credit system of this kind, promoters should be mindful of the limitations. Producers are not the most adept players in foreseeing price movements. To minimize speculative risks, MFIs will normally require all loans to be repaid by a fixed date far in advance of the next harvest, even when that harvest is expected to be poor.

10. An example of this in Niger is the former President’s Special Program for Cowpeas. Intervention prices were set far in excess of market prices, while restrictions were placed on private exports, both of which discouraged private storage activity.

While such inventory credit can mitigate price instability within single marketing seasons, it cannot finance stocks carried over from one season to the next, nor can it mitigate the large inter-annual swings that often occur in African grain markets. To address this problem, one needs other types of market institutions open to different kinds of players, such as commercial warehouse receipts systems.

Despite the limitations of rural inventory credit systems such as those in Niger and Madagascar, it is important to recognize their advantages of simplicity and low cost. Notably, there is less concern about security than in larger-scale commercial warehousing operations. Security is ensured by a combination of local social pressures and independent monitoring by the MFI, and the stock is widely distributed in small lots throughout rural areas. So far, neither the Niger nor Madagascan system has required any form of insurance, independent collateral managers¹¹ or regulatory regimes, such as those found necessary to ensure the viability of commercial warehouse receipts systems. The very simplicity of the system and its governance has provided considerable cost savings.

Further information

Coulter, J.P. & Mahamadou, S. (2009). *Revue du Warrantage Paysan au Niger*. Report prepared for the French Development Agency. <http://www.fao.org/3/a-as606f.pdf>.

11. Independent collateral managers are normally inspection companies that manage stores and ensure the security of the bank’s collateral. They operate in large-scale storage locations, and their monthly charges are normally US\$1,500 or more plus insurance.

Annex 1. New Business Model Components

The Sustainable Food Lab, through its New Business Models for Sustainable Trading Relationships project, and Oxfam identified these principles that underpin sustainable trading relationships and ensure value creation for both corporations and smallholder farmers:

- **Chain-wide collaboration** with shared goals and identified champions is at the heart of the new business model principles. Collaboration between chain actors facilitates the identification and resolution of problems, in terms of commercial, social and environmental performance. This approach stretches the traditional firm-based view of a business model to an approach that encompasses chain-wide processes involving multiple actors.
- **Market linkages** connect the various players in a supply chain. These links can often be weak when it involves smallholder farmers, especially long chains in modern markets, which are led by distant corporate buyers. In the past, large corporate buyers were more focused on business linkages with produce aggregators rather than farmers. Inclusive business models provide an opportunity to re-align the linkages throughout a chain. Experience has shown that market linkages for smallholders are improved when there is a strong intermediary buyer within the chain. The intermediary firm can play an important role in providing farmers with services that help them to plan their production, aggregate produce and meet the food standards of modern markets. Much can be done by working with intermediary firms and their market agents to support ways that improve benefits for smallholders within modern markets. Strengthening market linkages may involve upgrading existing linkages or working with a new generation of specialized intermediaries. Examples include raising the business skills of cooperatives, improving relations between farmers and first-level aggregations firms, supporting trade associations or establishing companies that provide multiple services to smallholders. It is our vision that specialized intermediaries can provide a critical link between informal smallholders and formal corporate buyers, by ensuring that exporters

or buyers receive the quantity and quality of supply needed and that smallholders receive the support and inputs they need to grow quality produce on a consistent basis.

- **Chain governance** of the supply chain is important in ensuring better quality and consistency of production, and more stable benefits for producers. The agreed terms of trade, quality standards, and pricing structure (such as premiums for high quality and penalties for poor quality) must be clear throughout the chain from the outset. Clear on-farm management standards and incentives are important to promoting sustainable social and environmental practices on the farm. When farmers are hindered by a lack of business expertise, organization and market information, they are highly susceptible to exploitative contracts or trade. Contracting with organized groups of farmers is one way to bring about more transparent governance, as groups of smallholders are better able to negotiate prices and the terms under which both parties should operate. Finally, dispute resolution mechanisms—either formal or informal—are hallmarks of well-functioning governance structures. As understanding and knowledge improves, supply chains tend to work better. Strategies to ensure that risks (such as bad weather, transport losses and last-minute changes in customer demand) are shared more equitably throughout the chain include better communication about supply and demand and financial risk management schemes.
- **Equitable access to services** is critical for smallholders to enter and continue to evolve with changing markets. Smallholders need access to technical equipment, inputs (e.g., high-germinating seed) and appropriate financing to participate in modern markets. Financing is a particular problem in enabling smallholders to participate in modern markets, and microfinance has not filled this gap. Nongovernmental organizations (NGOs) often identify gaps in services and can fill them. However, this type of support is often temporary, as project resources are finite. Exit strategies to hand over

responsibility to local service providers are rarely successful, and in many cases smallholder participation declines with no alternative service provision in place.

- **Inclusive innovation** harnesses the full potential of the supply chain to innovate products and reduce costs. Currently, innovation tends to be the preserve of larger players, who are nearer to the market and better resources, and smallholders are often unable to take advantage of innovations due to poor chain-wide communication. Innovation can occur at all nodes in the supply chain for all sorts of reasons, and innovation from smallholders, particularly in production and

post-harvest, should be considered as integral parts of any supply chain upgrading process.

- **Measurement of outcomes** is key to maintaining long-term sustainable trading relationships. Where commercial and social outcomes are measured and data is gathered on a regular basis, a value chain is better placed to negotiate its way through challenges and to adapt appropriately. This is achieved through reporting, regular chain-wide discussions and jointly solving problems and blockages.

Source: Vorley, B., Ferris, S., Seville, D., & Lundy, M. (2009). *Linking worlds: New business models for sustainable trading relations between smallholders and formalized markets*. Sustainable Food Lab. <http://sustainablefood.org/images/stories/pdf/nbm%20linking%20worlds%20.pdf>

Annex 2. About the Partners



Catholic Relief Services was founded in 1943 by the Catholic Bishops of the United States. Our mission is to assist the poor and disadvantaged and promote development of all people and to foster charity and justice throughout the world. CRS operates on five continents and in more than 90 countries. CRS aids the poor by providing both direct assistance and working with communities in their development.



The International Center for Tropical Agriculture is a nonprofit organization that conducts socially and environmentally progressive research aimed at reducing hunger and poverty and preserving natural resources in developing countries. It is one of the 15 centers funded by the 64 countries, private foundations and international organizations that make up the Consultative Group on Agricultural Research.



ACDI/VOCA is a private, nonprofit organization that promotes broad-based economic growth, higher living standards and vibrant communities in low-income countries and emerging democracies. ACDI/VOCA has always had a food security focus. ACDI is an industry leader in value chain-oriented poverty alleviation and enterprise development. We have hard-won experience in conflict-affected and fragile states and proficiency at managing the transition from relief to development. Our innovative approaches to food aid and financial services contribute to economic development and meet the test of the market.



Since 1981, Land O'Lakes International Development has applied an integrated approach to international economic development that capitalizes on our company's 93 years as a leading farm-to-market agribusiness. We use our practical experience and in-depth knowledge to facilitate market-driven business solutions that generate economic growth, improve health and nutrition and alleviate poverty. We believe in the value of people and ensuring our work is rooted in honesty, integrity and respect. Our vision is to be a global leader in transforming lives by engaging in agriculture and enterprise partnerships that replace poverty with prosperity, and dependency with self-reliance.



AT Uganda Ltd. is involved in provision of agricultural extension services, agro-processing promotion, agro-input distribution facilitation, collective marketing linkages and business development services to some of the poorest and most remote districts of Uganda, which desperately lack services. Our mission is to empower rural households in northern and eastern Uganda by facilitating access to support services needed for productive, sustainable agriculture and related profitable enterprises.



The Sustainable Food Lab is a global network of organizations working together to facilitate market-based solutions to key issues necessary for a healthy and sustainable food system to feed a growing world. From peer-to-peer leadership networks, to global learning events, to supply chain innovation projects, to measurement tools, the Sustainable Food Lab brings organizations together to help them accelerate progress toward a more sustainable food system.



The Natural Resources Group, theNRgroup, is an association of independent development professionals who collaborate to undertake and contribute expertise to natural resources projects and activities. The group provides high-quality solutions to today's natural resources management problems in a cost-effective and timely manner.

Chris Wheatley is an independent consultant with expertise in the design, implementation and evaluation of processes linking farmers to markets, value chain strengthening, agro-enterprise and business development services across a wide range of agricultural and horticultural crops. He has a specific interest in the development of market-based mechanisms for natural resource sustainability and biodiversity conservation, and he has hands-on experience with program cycle (design, management, M&E), strategic planning and resource mobilization. He also provides capacity building and facilitation services.



Fineline Rural Reach Ltd. is a leading economic development consulting firm with specialization in institutional appraisal, market research, organizational development, capacity building and institutional strengthening, product development, microfinance, and business development services. Established in Kenya in 1997, Fineline is a leading consulting firm in Africa that is dedicated to the development and growth of the microfinance industry and the smallholder and microenterprise sectors in the region. The company is increasingly providing market-driven business development services with a focus on market linkages, training and technical support to NGOs, savings and credit cooperatives and the private sector microfinance and business development services.

Agribusiness Management Associates

Uganda Ltd. was formed in 2003 by Ugandan professionals who had served in the highly successful Investment in Developing Export Agriculture project funded by the U.S. Agency for International Development and the International Institute of Tropical Agriculture. It has continued to provide short-term consultancies to various projects in Kenya, funded by the U.S. Agency for International Development, mainly in the field of business development for smallholders and farmer organization institutional setup and development. In Uganda, Agribusiness Management Associates has worked with a large number of small-scale and large-scale farmers.

Annex 3. About the Donors



The Canadian International Development Agency's mandate is to support sustainable development in developing countries to reduce poverty and contribute to a more secure, equitable and prosperous world. The agency's work is concentrated in the poorest countries in Africa, Asia and Latin America. The agency's program is based on the Millennium Development Goals, to which it contributes through four key areas: social development; economic well-being; protection, conservation and management of the environment; and governance.



The U.K. Department for International Development is the part of the government that manages Britain's aid to poor countries and works to reduce extreme poverty. Its work aims to bring people out of poverty through programs that settle conflicts, increase trade, and improve health and education.



The work of the German technical agency, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) provides international cooperation for sustainable development. GTZ operates on a worldwide basis, providing viable, forward-looking solutions for political, economic, ecological and social development in a globalized world. GTZ supports complex reforms and change processes. All our activities are geared to improving people's living conditions and prospects on a sustainable basis.



The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to help developing countries use science and technology to find practical, long-term solutions to the social, economic, and environmental problems they face. Support is directed toward developing an indigenous research capacity to sustain policies and technologies that developing countries need to build healthier, more equitable and more prosperous societies.

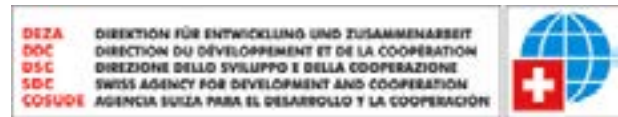


The New Zealand Aid Programme (NZAID) is the government's international aid and development agency. The agency is responsible for delivering New Zealand's Official Development Assistance and for advising ministers on development assistance policy and operations. NZAID places a high priority on building strong partnerships and concentrates its development assistance on activities that contribute to poverty elimination by creating safe, just and inclusive societies, fulfilling basic needs, and achieving environmental sustainability and sustainable livelihoods. NZAID supports projects in the Pacific region, Asia, Africa and Latin America.



The U.S. Agency for International Development is an independent federal government agency that aims to further America's foreign policy interests in expanding democracy and free markets while improving the lives of the citizens of the developing world. The agency supports long-term

and equitable economic growth and advances U.S. foreign policy objectives by supporting economic growth, agriculture and trade; global health; and democracy, conflict prevention and humanitarian assistance.



The Swiss Agency for Development and Cooperation is organized and funded by the Swiss government and operates by financing programs both directly and in partnership with other agencies to countries around the world.

The information and conclusions reported in this document do not necessarily reflect the position of any donor agency.

References

- Action for Enterprise. (2014). *Value chain program design: Promoting market-based solutions for MSME and industry competitiveness*. Paper to USAID/EGAD/MD. Arlington, Virginia, USA: Action for Enterprise.
- Benin, S., Nkonya, E., Okecho, G., Pender, J., Mugarura, S., & Kato, E. (2005). *Quantifying the impact of the National Agricultural Advisory Services in the Uganda rural livelihoods. Household Survey*. Washington, DC, USA: International Food Policy Research Institute.
- Benin, S., Nkonya, E., Okecho, G., Randriamamonjy, J. Kato, E., Lubadde, G., ...Byekwaso, F. (2011). *Impact of Uganda's National Agricultural Advisory Services program*. Washington, DC, USA: International Food Policy Research Institute. <http://cdm15738.contentdm.oclc.org/utils/getfile/collection/p15738coll2/id/126798/filename/126994.pdf>
- Bramel, P., Remington, T., & McNeil, M. (Eds). (2004). *CRS seed vouchers & fairs: Using markets in disaster response*. Nairobi, Kenya: Catholic Relief Services.
- Bright, D., Seville, D., & Borkenhagen. (2010). *Thing big. Go small. Adapting business models to incorporate smallholders into supply chains*. Oxfam Briefing for Business, 6. <https://www.oxfam.org/sites/www.oxfam.org/files/b4b-think-big-go-small.pdf>
- Catholic Relief Services. (2007). *The clustering approach to agroenterprise development for small farmers: The CRS-Philippines experience. A guidebook for facilitators*. Davao City, Philippines: Catholic Relief Services. http://www.pinoyme.com/b2b/wp-content/uploads/2008/07/part_1.pdf.
- Catholic Relief Services. (2014). *Moving together to the market: The clustering approach to agroenterprise development for small farmers*. Baltimore, Maryland, USA: Catholic Relief Services. <http://static1.1.sqspcdn.com/static/f/752898/25350064/1408713852200moving-together-to-the-market-the-clustering-approach-to-agroenterprise-development.pdf>
- Charles, E. (2009). Savings groups and marketing associations in the Lake Zone, Tanzania. In: Ferris, S., Mundy, P. and Best, R. *Getting to market. From agriculture to agroenterprise* (pp. 184–196). Baltimore, Maryland, USA: Catholic Relief Services. <http://static1.1.sqspcdn.com/static/f/752898/9984008/1296500345453/getting-to-market.pdf>
- Christen, R. & Anderson J. (2013). *Segmentation of Smallholder Households: Meeting the range of financial needs in agricultural families*. Consultative Group to Assist the Poor (CGAP) Focus Note, 85. <http://www.cgap.org/sites/default/files/Focus-Note-Segmentation-of-Smallholder-Households-April-2013.pdf>
- CIAT rural agroenterprise development: Good practice guides. International Center for Tropical Agriculture (CIAT) website. http://webapp.ciat.cgiar.org/agroempresas/ingles/good_practice_guide_series.htm
- Coulter, J. Warehouse receipting, loss reduction and the development of value chains for grains. (2010). In: *FAO/World Bank workshop on reducing post-harvest losses in grain supply chains in Africa: Lessons learned and practical guidelines* (pp. 16–17). Rome, Italy: Food and Agriculture Organization of the United Nations. <http://www.fao.org/3/a-au092e.pdf>
- Coulter, J.P. & Mahamadou, S. (2009). *Revue du Warrantage Paysan au Niger*. Report prepared for the French Development Agency. <http://www.fao.org/3/a-as606f.pdf>.
- Cruz, J. A. (2009). Fostering agribusiness development centers in El Salvador. In: *Ferris, S., Mundy, P., & Best, R. Getting to market: From agriculture to agroenterprise* (pp. 152–162). Baltimore, Maryland, USA: Catholic Relief Services. <http://static1.1.sqspcdn.com/static/f/752898/9984008/1296500345453/getting-to-market.pdf?token=SR0jpkHDrmupQTR-DU0CcimjE6c%3D>
- Dorward, A., & Kydd, J. (2005). *Making market systems work better for the poor (M4P): Promoting effective, efficient and accessible coordination and exchange*. Presented at Making Markets Work for the Poor, February 15–16, Manila, Philippines.
- Ferris, S. & Robbins, P. (2004). *Developing marketing information services in Eastern Africa: The FOODNET experience*. ASARECA Monograph 9. Ibadan, Nigeria: International Institute of Tropical Agriculture. http://www.iita.org/c/document_library/get_file?uuid=a44e210d-2ec5-4ebf-94fc-63af52706595&groupId=25357

- Ferris, S. (2012). *Information and communication technologies for development*. International Institute for Environment and Development and the Sustainable Food Lab. <http://pubs.iied.org/pdfs/16510IIED.pdf>
- Ferris, S., Paschall, M., Seville, D., Dadi, L., & Kumsa, G. (2012). *Dried beans in Ethiopia: Increasing food security through trade*. International Institute for Environment and the Sustainable Food Lab. <http://pubs.iied.org/pdfs/16035IIED.pdf>
- Ferris, S.; Robbins, P.; Best, R.; Seville, D.; Buxton, A.; Shriver, J., & Wei E. (2014). *Linking Smallholder Farmers to Markets and the Implications for Extension and Advisory Services*. MEAS Discussion Paper 4.
- Food and Agriculture Organization of the United Nations (FAO) & Programme de développement des services financiers ruraux (PDSFR). (2006). *Guide de Bonnes Pratiques du Warrantage au Niger*. FAO and PDSFR.
- Haight, A. (2005). *Reaching low-income women with enterprise development services: Challenges and opportunities*. SEEP Network. <http://www.seepnetwork.org/reaching-low-income-women-with-enterprise-development-services--challenges-and-opportunities-resources-340.php>.
- Jayne, T. S., Mason, N. M., Myers, R. J., Ferris, J. N., Mather, D. Beaver, M., ... Boughton, D. (2010). *Patterns and trends in food staples markets in eastern and southern Africa*. MSU International Development Working Paper No. 104. East Lansing: Michigan State University.
- Kleih, U., Odwongo, W., & Ndyashangaki, C. (1999). *Community access to marketing opportunities: Options for remote areas. Uganda case study*. National Resources Institute.
- Lundy, M. (2007). *Assessing smallholder participation in the French bean supply chain in Guatemala: Summary document*. Sustainable Food Lab Annual Meeting, Antigua, Guatemala. International Center of Tropical Agriculture. <https://cgspace.cgiar.org/handle/10568/56143>
- Miehlbradt, A. O. & McVay M. (2003). *Seminar Reader. Business development services: Testing the guiding principles*. Turin, Italy: International Labour Organization. http://www.ilo.org/empent/Publications/WCMS_143127/lang-en/index.htm
- Miehlbradt, A. O., McVay, M., & Tanburn, J. (Ed.) (2005). *The 2005 Reader: From BDS to Making Markets Work for the Poor*. International Labour Organization. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_143184.pdf
- Mungai, N. (2009). *Factors hindering business development services provision in small scale horticulture enterprises in Mt. Kenya Region*. Paper presented at the Regional Workshop on Delivering Business Development Services to Rural Areas, Nairobi, Kenya, September 21-25, 2009.
- Porteous, D. (2005). *The access frontier as an approach and tool in making markets work for the poor*. U.K. Department for International Development. <http://bankablefrontier.com/wp-content/uploads/documents/access-frontier-as-tool.pdf>
- Remington, T. (2008). *CRS Burkina Seed Fair Experience*. Baltimore, Maryland, USA: Catholic Relief Services.
- Sargis, B. (2009). *Role of agricultural commodity exchanges in price discovery and risk management for grains; Implications for East Africa*. Washington, DC, USA: World Bank.
- Sebstad, J., & Snodgrass, D. (2008). *Impacts of the KBDS and KHDP projects in the tree fruit value chain of Kenya*. microREPORT 129. U.S. Agency for International Development. http://pdf.usaid.gov/pdf_docs/PDACN958.pdf
- Shepherd A. W. (1997). *Market information services: Theory and practice*. Rome, Italy: Food and Agriculture Organization of the United Nations.
- Sperling, L., Cooper, H. D., & Remington, T. (2008). Moving towards more effective seed aid. *Journal of Development Studies*, 44(4), 586-612. DOI: 10.1080/00220380801980954
- Ssango, F. and Kavuma, J. (2009). *Market-led business development services delivery to smallholder farmers in Central Uganda*. Paper presented at the Regional Workshop on Delivering Business Development Services to Rural Areas, Nairobi, Kenya, September 21-25, 2009.
- Svensson, J. & Yanagizawa, D. (2009). Getting prices right: The impact of the market information service in Uganda. *Journal of the European Economic Association*, 7(2-3), 435-445.
- Tripp, R. (2002). *Seed provision and agricultural development: The institutions of rural change*. London: Overseas Development Institute.
- U.K. Department for International Development (2000). *Making markets work better for the poor: A framework paper*. <http://www.value-chains.org/dyn/bds/docs/detail/684/6>
- Uy, J. 2009. Collective marketing of calamansi in the Philippines. In: Ferris, S., Mundy, P. and Best, R. (Eds). *Getting to market. From agriculture to agroenterprise*. Baltimore, Maryland, USA: Catholic Relief Services.

Vorley, B., Ferris, S., Seville, D., & Lundy, M. (2009). *Linking worlds: New business models for sustainable trading relations between smallholders and formalized markets*. Sustainable Food Lab. <http://sustainablefood.org/images/stories/pdf/nbm%20linking%20worlds%20.pdf>

Walker, S. (2010). *ICT to enhance warehouse receipts systems and commodity exchanges in Africa*. USAID Briefing Paper. <https://www.microlinks.org/sites/microlinks/files/resource/files/FACET-WRSCEXv2.pdf>

Wood, M. *Agent approach to extension services*. PROFIT Project Zambia. <https://www.ncba.coop/zambia-profit>

The World Bank. (2007). *World Development Report 2008: Agriculture for Development*. Washington, DC, USA: The World Bank. http://siteresources.worldbank.org/INTWDR2008/Resources/WDR_00_book.pdf



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Tel: 410.625.2220 • www.crs.org

ISBN 1-61492-157-1