Preface

The global changes of rapid population growth, urbanization and market liberalization impact directly on farming, making it more market-oriented and thus more competitive. These trends have an effect on farmers who need to develop stronger management skills and competencies to cope with the ever changing farming environment. For farmers to be better managers and to run their business for profit they need assistance from those working at various levels in agricultural extension.

This series was developed as a response to this need and is intended to help extension workers provide support to farmers in dealing with the new challenges that arise from market-oriented farming. The aim is to contribute to building their capacity and skills in farm management and through them, the capacity and skills of the farmers with whom they work. The intention is to help farmers understand why they make the choices they make and how they can improve their decision-making skills.
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Introduction to the series
FARM MANAGEMENT

Farm management, for many extension workers, presents a challenge as their experience and practice is largely on production and technology transfer. This requires advice in marketing and business management as a way to increase farm income. What do we mean by farm management? Briefly it is a process of decision-making that includes planning, implementation and monitoring the farm as a business. This assumes an objective of making profits. Central to the process is an analysis of farmers’ resources and markets.

This collection of materials has been assembled to provide extension workers with the support they need in farm management and a source of information and knowledge relevant as to promote market-oriented farming.

It compares the differences between traditional and market-oriented farming, reviews the changes rapidly taking place in farming systems today and it looks at some of the resulting management challenges facing farmers. It includes a review of the broad range of responsibilities of extension workers at all levels and supplies relevant concepts and practices that can be applied in meeting those challenges.

The series consists of six guides addressed to what has been identified as major issues in the development of market-oriented farming. Each is outlined and briefly described here.
The global changes of rapid population growth, urbanization and market liberalization, impact directly on farming making it more market-oriented and competitive. These trends have an effect on farmers who need to develop their management skills and competencies to cope with this changing farming environment. For farmers to be better managers and to run their businesses for profit, they need assistance from extension workers. For many extension workers, however, business management is often a challenge as their experience and practice has largely been focused on agricultural production and technology transfer. To provide support it is critical that extension workers understand some of the concepts and practices of farm business management as applied to their day-to-day extension work.
2
ECONOMICS for farm management extension

Introduces agricultural extension workers to some of the key principles and concepts of economics that are relevant to smallholder farming

Economics plays an important part in the lives of all people. Farm management requires an understanding of economics as it relates to the production and marketing decisions that are needed for the selection and combination of enterprises. The timely and proper allocation of resources is necessary in order to provide an understanding of how market-oriented farming functions and this in turn suggests how economics can be used to increase efficiency and profitability. This guide aims to provide extension workers with an understanding of some of the principles underlying economic thinking as applied to farming.
3 MANAGING RISK in farming

Presents the concept of risk, situations where risk occurs and management strategies that can be used to reduce or at least soften its effect.

The intention of this guide is to enable extension workers and farmers to recognize and understand the risks that they are likely to face and assist them in making better farm management decisions that reduce the negative effect of the risks encountered in farming. It describes the main sources of risk categorized under the functional headings – production risk, marketing risk, financial risk, legal risks and human resources risk. The sources of risk influencing these categories include climate change, price volatility, the global financial crisis and personal health and wellbeing.

* * *
Benchmarking looks at collecting information about farms that are recognized as ‘successful’ businesses. With this information comparisons can be made with other farms and useful insights can be gained in understanding how production, marketing and management practices can be improved. These insights and discoveries can be used to improve farm performance. The guide provides a step-by-step approach on how to conduct benchmarking in the field.
This guide is intended to provide extension workers with a better understanding of the concept and practice of entrepreneurship in farming. Reference is made to the entrepreneurial environment of farmers, group entrepreneurship and some of the barriers and challenges facing smallholder farmers to become more entrepreneurial. It examines some of the ways entrepreneurial skills can be developed, how entrepreneurial farmers respond to the challenges of their business and the kind of support that extension can provide farmers in developing their capacity. The guide highlights the role of extension workers in encouraging farmers to be more strategic in their planning while creating an environment for innovation and risk taking.

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6
The role of the
FARM MANAGEMENT SPECIALIST
in extension

Deals with specialization in farm management
to highlight the potential for
farm business management and marketing

This, the final guide in the series, is intended to raise awareness among extension policy makers, programme managers and field staff of the need to create positions within their extension systems to support this specialized function. It provides an understanding of the role of the extension specialist in this new technical area of work and their tasks as brokers of information and value chain facilitators. It goes on to detail the range of technical responsibilities that need to be covered including investigation, planning, marketing, training and extension.

* * *
CONCLUSIONS

The changes in farming caused by the changes in the world’s economy have wide implications for extension workers. Farmers increasingly find themselves making fundamental decisions about the nature of their farming activities. For many farmers – especially small-scale farmers – farming has been about producing food for their families. But now, as the world around them changes and requires them to have cash, these farmers are faced with the need to become more entrepreneurial and market-oriented and run their farms as businesses.

To make this transition they need more than technical solutions to production questions. They need information about markets, farm management and finance. They need to develop their capacity as entrepreneurs. They need the knowledge and skills to manage competitive and profitable farming, including managing input, managing production and managing marketing. All of these changes for farmers imply changes for extension workers. To support ‘entrepreneurial farmers’ extension workers need to acquire this same knowledge and skills.

Farm management extension can have a significant impact on helping farmers walk the pathway from traditional production-driven farming to market- and profit-driven farming. It involves helping farmers learn how to analyse, interpret and define their farming businesses in terms of the changes taking place around them. And it helps farmers identify and implement appropriate managerial action for themselves.
Chapter 1

The context
Market-oriented farming: An overview

MAIN POINTS IN CHAPTER 1

**Changes affecting farming**
Market liberalization, globalization, changes in demography and income, urbanization, information technology, climate change and the global financial crisis are all affecting small-scale farmers around the world. Some of these changes create challenges and some create opportunities. In all cases, these changes are a signal to farmers to give serious consideration to the future of their farming livelihoods.

**Traditional farming**
For thousands of years many families have followed a programme of traditional farming. These farms have served the primary purpose of providing food for the farm family. The traditional farm is not a business, but the main livelihood of the family. Decisions on the farm are closely interlinked with decisions of the farm household. Similarly, the objectives of the farm are mostly driven by the objectives and goals of the farm household. The decisions and objectives of the farm household are often governed by the phase in which the household finds itself—prior to having children, while children are growing up or post-children.

**Market-oriented farming**
Market-oriented farming is driven by making profits through selling farm products in the market on a regular basis. Market-oriented farms can still
be strongly linked to a farm household, but the goals and decisions for the farm are less directly influenced by the goals and decisions of the farm household. They are more influenced by markets, prices of produce and the costs of farm inputs.

The farm as a business
In market-oriented farming the farm is run as a business buying inputs, using them to produce agricultural products, marketing those products and selling them for cash. The main goal is increased profits – where profit is the difference between income and costs. The farm business is part of a larger value chain – a system of organizations, processes and transactions involved in transforming raw materials into products that are sold and consumed. To be successful in market-oriented farming, farmers require knowledge of farm business management.

Farm management
Market-oriented farming requires that farmers are knowledgeable about farm management. Farm management is a process of decision-making that involves setting objectives, planning, implementing the plan and monitoring its outcome. The main areas of concern in farm management are production, finance and marketing. The objective of making profits is central to the idea of farming as a business.

Extension workers and small-scale farmers need to be familiar with and knowledgeable about the changes that are occurring in farming and the opportunities and risks that the new farming environment offer. These farmers have to begin to farm as a business if they are to prosper in the future.
CHANGES AFFECTING FARMING

Over the last three decades, agriculture has undergone rapid changes in most developing countries as a result of changing policies, urbanization, population growth, climate change, the technological revolution and the financial crisis. All impact on farming and redefine many of the issues and concerns that farmers face.

Market liberalization and globalization
Over the last three decades policies have changed to reduce the role of government in the economy and increase economic liberalization. This has led to new opportunities for farmers in developing countries to participate in the economy. Globalization and the increase of trade between nations have also offered some farmers opportunities to enter regional and international export markets.

More freely operating markets require farmers to make more efficient use of scarce resources. But while economic liberalization and globalization have produced opportunities, they also carry risks. The challenge facing farmers is to adjust their farm-household systems to these changing market conditions and opportunities.

Demography, urbanization and income
Another global change is demography. While rural populations continue to grow, more people are migrating and settling in towns and cities. This change has resulted in an increasing number of people in urban areas being fed by smaller numbers of farmers. The emergence of an urban wealthier middle class in many countries has created increased demand for safe, high-value, high-quality fresh and processed foods such as vegetables, fruit, meat, eggs and dairy products. In addition, the availability of new technologies for production, post-harvest and transport have also changed demand by
enabling the delivery of products in new forms. These changes provide challenges for farmers to adapt their farming systems.

With rapid population growth, urbanization and economic development, the demand for food and raw materials has increased remarkably. Prices of agricultural produce are rising as part of a long-term trend, largely as a result of limited supplies and increasing demand for food.

**Information technology**
The use of information technologies such as mobile phones and the internet have expanded extensively over the last decade. Together with radio and television they provide new opportunities for information exchange. These technologies are very powerful and need to be used by extension workers for the benefit of farmers. Farmers, on their side, need to exploit these opportunities and strengthen their capacities. Extension workers have an important role in educating farmers who have access to these new information technologies.

There are challenges, of course, facing agricultural extension workers that need to be addressed. A common problem is how to effectively use the power of information technology for the benefit of farmers while maintaining the personal connection with them.

**The environment**
The combination of climate change, the growing world population, economic growth and the limited natural resource pool are creating serious long-term problems of environmental sustainability. During the past 20 years, the worldwide expansion of arable cropland has decreased considerably; soil nutrient depletion is occurring in many tropical and subtropical countries, and land degradation and desertification continues to accelerate in fragile areas. Water scarcity is also a serious problem that threatens the livelihoods of farmers in semi-arid and arid areas.
The changing farming environment is pressuring farmers to shift from subsistence farming to farming suitable for marketing ...

... this calls for a change in farming methods, in farmer skills and in farmer capacities.

Evolving farming systems requires better methods such as improved field preparation

A tractor jointly owned by a farm community is a step toward market-orientation through the introduction of improved technology
Market-oriented production starts with an understanding of markets and their demands and involves the selection of suitable enterprises and procedures that can supply these demands and generate profits.

Selling farm produce in a ‘spot market’

A regularly scheduled farmers’ market

Supermarkets must be supplied regularly and reliably and demand fresh, safe, high-value, high quality products
In most countries there is an urgent need for farmers to respond to changes in the environment by adapting their farming system to ensure that productivity and income increases can be sustained over the long term. As farmers become more market-driven they have to recognize that short-term productivity, profitability and income achievements are often unsustainable because inadequate attention is given to the management of the natural resource base. Income growth has to be viewed as a longer-term objective.

Global financial threats
The current global recession and financial crisis has resulted in a reduction in the availability of capital for farmers. Farmers increasingly complain of lack of access to finance; money required to operate the farm and money required to invest in such things as farm tools, machinery and fencing. There are more and more instances of farmers finding it difficult to raise capital. Where a possibility of getting finance does occur, banks are often reluctant to lend to small-scale farmers. It often takes a long time to assess a loan application from a small-scale farmer and it may even cost more to administer it. As a result farmers face difficulties in expanding the size of their farm businesses and taking up new opportunities that arise.

While farmers may regard the shortage of capital as their main or only problem, most often this is not the case. The farmers’ lack of skills to manage their capital resources is often a far greater problem.

* * *

The following sections compare traditional farming with the concept of farming as a business; shifting from a ‘production first’ approach to producing higher value products for the market. It is intended to highlight some of the decisions that farmers have to make and the skills that they require in market-oriented farming.
TRADITIONAL FARMING

What is traditional farming?
Traditional farming is based on the use of simple technologies that are geared to both the production and consumption needs of the farm family. Farm decisions such as what to produce and what technologies to use are closely linked to household decisions such as what to eat and how to spend time. The traditional farmer combines managing the production side of the farm with the consumption needs of the farm family.

Traditional farming is commonly called subsistence farming because there are no surpluses generated or those that are generated are consumed by the family. As traditional economies and cash economies have become more intertwined, there are now many traditional farmers who produce mainly for home consumption, but who also sell surpluses of food production – they are becoming more market-oriented. These are often referred to as ‘semi-commercial’ or ‘emerging commercial’ farmers.

Semi-commercial farmers have limited market power. They rarely have regular supplies that can be marketed with any predictable consistency, the volume of production is often low and they tend to be insufficiently organized to be in a position to negotiate better prices. These farmers are characterized as ‘price-takers’; that is, they must accept the going prices set by the market. There are many farmers selling to few buyers. The individual farmers have no power to influence prices.

Farms characterized by purely subsistence production are rarely found these days in developing countries. There is more commonly a range of levels of market orientation from pure subsistence at one extreme to full commercialization at the other.
Farm-household decisions
In traditional farming, decisions are often made jointly by family members and shared in various ways. In some situations, however, there may be a division of responsibility. An example is that food crops are often produced by women, while cash crops are tended by men. Similarly, in some cultures large livestock is the responsibility of men and boys, while small stock is the responsibility of women. Frequently, individual members of the household may have independent control of some plots of land or groups of livestock.

Traditional farming recognizes the role of the farmer as producer and manager. As a producer, the farmer is a worker and has to deal with all aspects of farming and carrying out field operations. The traditional role of the farmer has been to take care of plants and livestock but with greater market orientation, technical know-how is not enough.

As a manager, the farmer has to make complex decisions or choices between alternatives. The decisions each farmer must make include choosing between different crops that might be planted in each field, choosing what livestock are to be kept on the farm and deciding how to distribute available labour among different tasks. They involve choices, for example, as to what and how many draught animals need to be kept for work in the field.

Farmers, even in traditional farming, are concerned with making efficient use of the resources available to them and in achieving their family-household goals. Very often traditional farmers do not have the knowledge or skills to make informed decisions. They tend to rely on intuition or simply copy the decisions that other farmers make. Farmers, for example, often apply fertilizer at rates of application that are used by other farmers cultivating the same crop. The decision-making process is often very basic and intuitive.

Farm-household objectives
The farm family is nearly always resident on the farm. On most subsistence and semi-commercial farms, the
relationship between the farm system and the household system is very close and the objectives for the farm are almost inevitably tied to the objectives of the family or household. The objectives are often complex including meeting societal standards, ensuring food security, generating income and avoiding risk.

While different farm families and individuals within the same family may have different objectives, in general most farmers pursue some combinations of the following:

- Securing an adequate and assured food supply.
- Earning cash income to meet other material needs.
- Avoiding risk and survival in an uncertain environment.
- Leaving time for leisure and other non-agricultural activities,
- Providing for the future, for old age and the welfare of dependents.
- Achieving status and respect within the community.

Many of these objectives need to be balanced and competing objectives reconciled by farm families. There is often conflict between the farm and family goals. An example is the clash between the objectives of food security and income. In practice, farmers’ choices with respect to income are limited or constrained by the need to secure at least the minimum quantity of food required by the family. Once this quantity is assured the farmer is free to pursue the income goal. Looking at the list of goals above, any or all of them can be viewed as constraints. Often farm households take decisions within the constraints of the objectives and resources available. One of the hardest tasks of the traditional farmer is to develop an appropriate balance between the production and consumption activities.

Traditional farm households frequently have a number of competing goals. Often circumstances lead them to be primarily concerned with more immediate short-term goals than they are with longer-term
The traditional smallholder farm, as it relies on family labour, is often changing over time...

...the heads of the family die, children become older and consumption needs of the family never remain the same...

...these changes could make farming more risky but could also provide opportunities

strategic goals. The challenge they face is how to meet their immediate needs while taking steps toward more sustainable, market-oriented, profit-focused farming.

Farm-family changes
In addition to the multiple and competing goals that farm families pursue, they often change over time. For example, as households are organized along kinship lines, the labour it supplies is not fixed. A number of distinct phases in family development can be traced:

- Early phase. There are no children yet or all the children are young.
- Middle phase. Some of the children are of working age, live at home and work on or off the farm.
- Late phase. The children may have left home or have families of their own.

These phases are not precise but reflect the dynamic nature of the farm family that shifts because of aging family heads and changing family needs. In the early phase of the cycle, typically when the adults and children are young, consumption demands of the family will be high and although the parents are likely to be young and energetic, only their labour will be available for work on or off the farm.

In the middle phase there are high family demands. This occurs as family labour supply increases. This is also a time when the objectives of family members may conflict with the needs of the younger members to become independent and earn a living. Family members may seek off farm employment and develop new enterprises during this phase.

The late phase of the family cycle is likely to be marked by lower family consumption needs coupled with declining vigour of the household heads. There is a decline in physical and mental energy and greater reluctance to take risks. As these traditional farmers become older they tend to save more and their role as efficient farmers declines. In some cases the remaining children may take
over some farm responsibilities. Higher priority may be given to leisure and farmers may be motivated to reduce working hours and make life easier.

More recently the family dynamic has been greatly affected by the HIV/AIDS pandemic. Often elderly couples must look after their ailing children or their grandchildren who have been orphaned as a result of HIV/AIDS.

* * *

MARKET-ORIENTED FARMING

As countries become more market-driven in response to the opening up of local, regional and international markets, farmers need to be able to adapt to changing market conditions and to do so profitably. Farm produce sold on the market must be of sufficient quantity, quality and appearance to be able to compete with similar products from other areas or countries. To be market-oriented farmers will need to produce what the market wants and what satisfies the consumer.

As countries become more market-driven, the input and marketing systems become more complex and sophisticated. Farmers are often affected by fluctuations in the prices of inputs and outputs. Small-scale farmers are particularly vulnerable to these changes. Farmers relying on exports are also influenced by competition from farmers in other countries; sharp increases in exports can drive down world prices. The greater market orientation of farm production often has other implications as well. Farmers have to shift from mixed farming to greater specialization.
Government policies are directed towards encouraging farmers to produce not only the quantity and quality to satisfy consumer demands but to remain competitive and continue farming in a sustainable manner.

The new farming environment has brought about a profound change in management and outlook. In addition to making decisions about marketing their products, farmers will have to make decisions about the choice of products and inputs based on ensuring a commercially viable farm business.

When a farm is run as a business the multiple goals of traditional farming are replaced by the single goal of profit. The main link between the household and the farm is economic – to generate income. The household production and consumption goals become separate from the farm goals. Furthermore, as farming becomes more commercially oriented the decision-making roles within the farm family also change. Farming as a business calls for greater individualism with farmers as entrepreneurs.

The desire to increase income by taking advantage of market opportunities and to compete in this new environment requires farmers to become better decision-makers. It is not enough for farmers to learn on-the-job from their day-to-day experience. This would be too risky. They can’t afford to make mistakes. To be more competitive they need to have better farm management skills.

As farming has become more market- and profit-oriented, better farm management skills become more relevant and important.

**Input-output markets**

Traditional farming most often uses inputs and materials that originate from the farm itself, such as livestock feed, compost and farmyard manure. Market-oriented farmers tend to purchase inputs that are manufactured and
Market-oriented farming requires an understanding of both input and output markets...

What type of inputs to purchase? From where to buy the inputs? Which markets to sell to? What are the differences in prices and costs?

...these are some of the decisions that farmers need to consider.

Market-oriented farming calls for farmers to be aware of the different market channels and input suppliers, the differences in prices and costs, and other conditions of buying and selling. For example, when buying inputs, farmers need to be conscious of prices, delivery costs, transport, storage, expiry dates and a range of other technical factors that influence what, where and when to buy inputs.

Producing for the market depends on the nature of the market. Some markets cater for fresh, unprocessed foods. Others are structured and more formal such as selling to agro-industries under contract. Still others may require good packaging and an assured quality. The more formal and structured the market and the more marketing conditions demanded, the more the farmer must be a farm manager instead of a producer.

Figure 1
The flow of products and money in the marketing cycle
Markets can be simple, complex and sophisticated. But they all operate on the same basis; they all involve a process of sellers (farmers) offering a product to buyers in exchange for money. More complex markets involve more intermediaries between the seller and the buyer. The more complex the market, the more the farm must be run as a business.

The farm as a business
The modern farm is increasingly being run as a business. Farming as a business covers a broader range of functions than traditional farming. These functions involve not only production and marketing but decisions about purchasing inputs, technology, labour and transport among others.

A farm business is an enterprise with linkages to input suppliers and output markets. It consists of activities which, if operating together efficiently and effectively, create value and, at the end of the process, create more profit. Profit (sometimes called the margin) is the difference between the total value and the costs of carrying out the activities. Margins are indications of profit.
The farm as a business can be understood in terms of the functions and activities described in the following figure*.

*This representation has been adapted from Porter’s book the Competitive Firm to better understand the farm as a business.

Every activity uses purchased inputs, labour, natural resources, finance and technologies to perform its tasks. The activities can also create financial surpluses or cause financial losses. The activities, according to the figure, are divided into primary and support activities. Primary activities are the activities involved in the physical creation of the product and its sale to buyers. The primary activities involved in modern farm management fall into three categories: organizing, farming operations and marketing.
PRIMARY ACTIVITIES

Organizing. Activities associated with sourcing, purchasing and storing inputs and materials used in production. Activities associated with collecting, storing and distributing produce to buyers.

Farming operations. Production activities associated with transforming inputs into final outputs.

Marketing. Activities associated with providing a means by which buyers can purchase farm produce. These include, among others, market channel selection, negotiating with buyers and pricing.

SUPPORT ACTIVITIES

Managing farm infrastructure. A farm cannot operate without infrastructure. It needs to be managed and maintained.

Managing labour. This involves making better use of family and hired labour throughout the year.

Choosing technology. For farmers to be engaged in choosing technology it requires innovativeness and capacity to identify problems, formulate solutions, design trials for testing, and evaluating results.

Buying inputs. Procurement requires identifying reliable and input suppliers, procuring the inputs — often through bulk buying — and monitoring the performance of suppliers.
These activities provide the building blocks for profitable and sustainable farm businesses; they are not a collection of independent activities but are closely interdependent.

**The farm as part of a value chain**

The farm is one part of a system of organizations and enterprises involved in transforming raw materials into products that are bought by consumers. This system is called a value chain. It consists of all stakeholders involved in linking production to final consumption including input suppliers, processors, service providers and buyers to name a few. The functions of value chain stakeholders can be direct or supporting. Direct functions include primary production, collection, processing, wholesaling and retailing. Support functions cover input supply, financial services, transport, packaging, promoting and advisory services.

<table>
<thead>
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<th>Direct functions</th>
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<tr>
<td>• Production</td>
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<td>• Retailing</td>
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Value can be created or added at each and every link along the chain as the product progresses from the primary producer to the final consumer. For farmers to be profitable they need to be part of a
Value can be created or added at each and every link along the chain from the primary producer to the final consumer.

competitive value chain. They can start by improving the performance of the farm business. But they need to be mindful of the entire value chain to satisfy consumer demands, ensure quality and safety and enhance their farms’ profitability.

WHAT IS VALUE?

Value is measured by the amount buyers are willing to pay for what a farm can produce; its total revenue. This is a reflection of the price that they can get for produce sold and the volume of sales. The farm is profitable if the value created exceeds the costs involved in producing the product. Creating value for buyers, efficiently and profitably is a goal of modern farming.

* * *

FARM MANAGEMENT

Farm management involves three principal functions: planning, implementation, and control. It also involves three key areas of activity: production, marketing, and finance. These functions and areas of activity show that the farm business is really a system that consists of component parts designed to accomplish the goals and objectives of the farmer.

The process involves setting objectives, planning, mobilizing resources, implementing and controlling or monitoring implementation. Farm management covers a
broad scope. It is concerned with production, combining resources and marketing all at the same time. Each of these is closely linked to the other.

Market-oriented farm management is mostly about making and carrying out decisions. Farmers differ considerably in their ability to do this. Successful management of the farm requires the farmer to have the following competencies:

- The ability to organize and achieve specific goals and targets set by the farm household.
- A good understanding of technical issues involved in the production and marketing of farm products.
- The ability to communicate with people to obtain good information.
- The capacity to make informed and relevant decisions.

Farm management decisions
For farmers to run their farms as a business, they need to find solutions not only to the production challenges that they face but also to problems of marketing, finance, input supply, farm infrastructure and labour.
Key among these is market-related decisions because, in reality, it is the market that dictates what they should produce.

The range of management decisions include where, how and to whom to sell; how to compete in local or export markets; how to finance and how much to invest in diversifying production; how to organize the farm enterprises in a way that increase profitability; and in some cases how to link up to markets such as through a producer cooperative or association. The key feature of good farm management is the very broad scope of decisions to make – especially decisions related to markets and marketing.

As a result of the dynamic nature of farming, farmers need to make longer-term strategic decisions. These decisions are often complex, referring to the whole farm. Many of the decisions include:

- What technologies can be used profitably within resource constraints regarding land, capital, labour and knowledge?
- How can you better operate the new technologies and make optimal use of new inputs?
- How and when should you change the farm enterprise combination (e.g. diversifying from crop production)?
- Which products have a high demand in the market?
- What quality specifications do you needed to ensure good prices for produce?
- How, when and where should you buy inputs and sell products?
- How can you make decisions collectively on resource use and marketing?
- How do you quickly find the most relevant and reliable knowledge and information?

The ability to address these questions and make informed decisions is critical for farmers to respond to the rapid changes that are taking place in farming.
Production
Decisions are taken by farmers to increase the production of their farm enterprises. Among smallholder farmers these enterprises often include crops grown and livestock reared to satisfy the household food security needs. As farmers become more market-oriented, production decisions are concerned with reducing the costs of production while trying to maximize profitability.

For market-oriented farmers, production related decisions have to consider market demand for their produce, the resource costs involved and the profit they expect to receive. This is fundamental for more commercially oriented farming as production decisions need to be cost effective and farmers have to earn profit to remain in business.

In effect the management problem facing the market-oriented farmer can be broken down as:

• Discovering the best way of organizing the enterprises to reduce cost.
• Finding the best way of fitting the enterprises together into the farming system to generate profits.

These aspects of farm management decisions are intended to ensure that the farm and its individual enterprises are profitable.

PRODUCTION DECISIONS

• Deciding what to produce from among the alternatives open to the farmer.
• Deciding how to produce (i.e. the method of production).
• Deciding how much to produce.
• Deciding what resources will be used and when.
• Deciding on how to cut back on the risks of farming.
Farm management involves collecting and using information to make better production and market related decisions to better attain the goals that the farm household sets.

Farm planning advice on what to grow

Farm management decisions taken for any single farm enterprise have an impact on the entire farming system.

Deciding on what quantities to sell
Similarly many of the decisions regarding buying inputs, production and marketing also have effects on other aspects of management of the farm.

For farming to be both profitable and competitive, farmers need the skills and knowledge to make better and more informed decisions ... ... this requires a better understanding of economics.
Marketing and input supply
To maximize profit and survive over the long term, farmers must not only produce the crop or livestock product efficiently but they must also buy inputs and sell products at prices that result in a profit.

MARKETING DECISIONS

- Deciding on what inputs to use and where to get them.
- Deciding what quantities to sell and when.
- Deciding where and to whom to sell the products and at what prices.
- Deciding how to get premium prices.
- Deciding which marketing channel to use

Decisions related to buyers, marketing channels, forms of delivery, costs of marketing and time of selling impact on prices that farmers receive for produce sold. In addition to this, the type and quality of inputs and equipment used is also an important part of market-oriented farm management. There are two major decisions involved. One is the choice of inputs and equipment, and the other is the choice of the supplier.

The most important information farmers require is knowledge of input suppliers and manufacturers. Farmers need to know which suppliers and manufacturers are reliable and trustworthy. Farmers also need information on prices, quality of items, reliable sources of spare parts for manufactured items and maintenance supplies.

When deciding on inputs and equipment some questions that farmers should ask are:

- Is it technically efficient?
- Is it of dependable quality?
- Is its price reasonable?
- Is it available locally, in particular when farmers need to use it?
- Is it offered for sale in appropriate sizes or amounts?
Market-oriented farm management requires a more rigorous decision-making process and follow-up by farmers.

Short-, medium- and long-term decisions
Decisions can be categorized as either short-, medium- or long-term. Short-term decisions refer to the daily organization of the farm work. Medium-term decisions are about the cropping plan, the purchase of machinery and equipment for immediate use, whether to employ more or less hired labour, new crop varieties and new livestock feeding methods, to name a few. Long-term decisions relate to the nature of the farm, its size, construction of buildings and other longer-term investments.

FARM MANAGEMENT DECISIONS

Production decisions involve basic questions as to what to produce, how to produce it, and which combinations of inputs and outputs to use. In farm management these decisions must be integrated with basic marketing decisions as to where, when, and how to buy and sell inputs and products. Finally, the what, where, when, and how of production and marketing decisions must be integrated with the financial decisions of where the funds will be obtained, with what terms they will be acquired, how they will be repaid, and for what they will be used.

Interrelationships
Many of the farm management decisions are interrelated as the farm is often part of an integrated system. Management decisions taken for any single enterprise are likely to affect the rest of the farm. Similarly many of the decisions regarding buying inputs, production and marketing have an effect on other functions. For example, a farmer may decide to change the cropping pattern to take advantage of new market opportunities. But the introduction of the new crop will have implications on the farming system as a whole. The area of land for the other crops under cultivation will be reduced and the income lost. There could also be implications on soil fertility and the availability of feed for livestock. The cash flow for the farm will change as well as the marketing strategy for produce sold. Decisions on the production
of an individual crop or livestock enterprise must be seen after considering the implications on the other farm enterprises individually and on the farm as a whole. The range of considerations that have to be taken into account is wide.

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Chapter 2

Challenges facing farmers
The challenge
Small-scale, traditional farmers world-wide face the challenge of transforming their farms. They face the challenge of making their farms generate more income to support their families instead of just producing food. They face the challenge of transforming their traditional farms into market-oriented, profit-driven farm businesses.

Economics and management decisions
In order for farming to be both profitable and competitive, farmers need the skills and knowledge to make better and more informed decisions. This requires a better understanding of economics. Economics covers decisions relating to marketing and production – decisions about the allocation of farm resources, selection of technologies and enterprises, and about markets.

Managing risk
Farmers live in an environment that is risky. There are risks associated with all aspects of their work. Farmers cannot make decisions without considering the future and the risk that the future holds. Because the future is unpredictable, risk cannot be eliminated. Successful market-oriented farm management depends on taking the right risks and managing them and to balance a farm’s risk exposure with increasing profits.
Competitive and profitable farming

In this changing world farmers compete with their neighbours and farmers in nearby locations and with farmers around the world. Farmers must continually examine their competitive position. Their farms need to be profitable, but they also need to be competitive. They have to be able to sell at prices lower than their competitors and still make a profit. To do this they must become more efficient in the use of resources and inputs and through the introduction of improved technologies, developing human capital, upgrading their own skills and capacity and making efficient use of hired labour.

Entrepreneurship

Many small-scale farmers face financial and economic threats as a result of global and local changes in the farming environment. These farmers try not just to survive but for their farms to be viable and sustainable over the long term. They need to be not only good managers but ‘entrepreneurial’ – innovative, risk taking and with a longer term perspective of their business. They need to be leaders and active and able to respond to changes in the future. They need to be strategic, with a long-term vision of how they wish the business to evolve in the future.

Extension efforts should be directed towards developing the skills and strengthening the capabilities of small-scale farmers to become more competitive and profitable. This calls for a better understanding of economics and an understanding of the risks involved in market-oriented farming and ways that these risks can be managed.
Farmers face new challenges every day that result mainly from changing market signals and changes in the weather both of which effect the use of their productive resources.

Farmers cannot make decisions without considering the future and the risk that the future holds.

**THE CHALLENGE**

Market-oriented farming is a dynamic business. Farmers have to be proactive; they have to be aware of the likely changes that could occur and be in the position to adapt and respond to them. A conscious effort is needed by farmers to organize and control the farm and find ways to reduce the risks that they face.

There is no doubt that small-scale farmers face challenges that are unique, even if not totally new. In many countries, farmers face the huge challenge of producing enough food, feed and fibre (and possibly even fuel) in a context of rapidly rising urban and rural populations; and at prices that are as low as possible, as most of the domestic demand originates from the poor.

Market-oriented farm management requires a more rigorous decision-making process and follow-up by farmers. They can no longer rely on intuition or copying the farmer next door to take a decision. They need information to make rational and sound choices. This calls for greater rigour in their actions. They need to:

- Set objectives to have some idea of what they want to achieve.
- Make sound choices as to what to produce, what methods to use, how much to produce and where and when to sell.
- Be competent and skilful in implementing their decisions by organizing and allocating resources in an effective and efficient manner.
- Develop the skills to monitor and evaluate their farm operations.

These managerial tasks are not done just once but must be carried on continuously as circumstances change. Farmers require the skills to undertake these
In order to compete in farming in the future farmers have to have the capacity and skills to make more informed management decisions.

Some of the questions that modern farmers need to ask themselves are:

- How can I make sound management decisions?
- How can I cope with market changes and the challenges and risks that they pose?
- How can I remain profitable and competitive?
- How can I manage my farm as an entrepreneur?
- What specialized support do I need from extension services?

Farmers of all scales, and their support institutions, are becoming more convinced that there is little future for them unless they become more entrepreneurial in their approach to farming. This means that they must produce increasingly for markets, have the capacity and skills to make informed management decisions and treat profit as the main goal of their farming operations.

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**ECONOMICS AND MANAGEMENT DECISIONS**

In order for farming to be both profitable and competitive, farmers need the skills and knowledge to make better and more informed decisions. This requires a better understanding of economics, which lies at the heart of improved decision-making.

What is economics? Economics is the science of making choices to achieve an objective in a situation where the resources available to the farmer are
limited and the opportunities available are uncertain. The resources that farmers use for producing crops and livestock are *inputs*; they are not available in unlimited quantities. Resources are scarce; there is not an unlimited supply of seeds, fertilizer and water. This means that resources that are limited have to be used carefully and farmers will have to economize in their use. The study of using limited resources is called *economics*.

There are no decisions to which economics cannot be applied. Economics can be used to select the most profitable farm enterprises, to make the most efficient allocation of resources and to select the most profitable market channels. The marketing decisions of farmers are just as important as decisions about production. In practice the production and marketing decisions of farmers are closely linked.

Economics covers decisions relating to marketing and production. With respect to production the most important decisions that farmers make relate to the use of inputs, choice of technologies and selection of enterprises.

Most farmers have to take decisions such as:

- What quantity of a single input should be used to maximize farm profit?
- What combination of inputs results in the lowest cost and can maximize farm profits?
- What technology should be used to maximize profits?
- What to produce?

*These questions refer to allocation of resources, selection of technologies and choice of enterprises.*
**ALLOCATION OF RESOURCES.**

The problem facing the farmer is the quantity of inputs that should be used to maximize profits. This is concerned with the efficient use of seed, fertilizer and labour to produce a product. The problem can also be expressed in terms of output. What level of production per hectare, per animal or for an entire farm is most profitable?

**SELECTION OF TECHNOLOGIES.**

The problem of choice is to know what methods of production or technology are most profitable. There are many technical ways of producing a product. Farmers have to choose the most economical method if they are to effectively compete. Less profitable methods must be dropped even if they are more familiar, and more profitable ones adopted.

**SELECTION OF ENTERPRISES.**

Farmers often have to choose between enterprises that compete for land and other resources. An expansion of one enterprise is accompanied by a reduction in another. The choice should be made based on which enterprise is more profitable.
As resources available to farmers are limited and the opportunities are uncertain, farmers need to take informed decisions to select the most profitable farm enterprises; to make the most efficient allocation of resources; and to select the most profitable market channels.
Informed decision taking by farmers aimed at achieving the objectives that farmers set calls for some understanding of the principles and concepts of economics. There are no decisions related to farming to which economics cannot be applied.
Farmers live in an environment that is risky. There are risks associated with all aspects of their work. Market prices of agricultural produce change constantly and the demand for produce can also rapidly change. If prices decline too far, the farmer may lose money and be unable to reinvest in their farm. The farmer may be forced out of business.

Farmers also face the risks of climate change. There is a risk that rains may not come or that they do come, but at the wrong time. There is also the risk of floods. These consequences may be catastrophic.

The greater the opportunities that exist for market-oriented farming, the higher the risks. Farmers face dynamic and diverse markets and there are enormous risks involved. One example is the risks that exist in developing links with buyers. For example, what can be done when suppliers or buyers do not live up to their promises? How can they negotiate when they have little access to information and unequal power relationships? In addition, some risks may also come from interactions among producers, for example, excessive rivalry between individual growers or between different producer groups.

Prices at the time of harvest, availability of hired labour, machinery breakdown, technological change, government policy and weather conditions are all examples of factors which affect the level of profits and income on the farm.

Farmers cannot make decisions without considering the future and the risk that the future holds. Because the future is unpredictable, risk cannot be eliminated. Eliminating risk would also eliminate the potential profits.
Successful market-oriented farm management depends on taking risks that are consistent with the goals of the farmer and the financial position of the business.

The key to successful management is to take the right risks. Identifying which are the right risks requires better understanding of their sources, their chances of happening and their implications on the performance of the farm business. In the end, each farmer must decide if the potential loss is sufficiently high to warrant a risk-management strategy which will have financial costs to the farm business. This is a practical management decision weighing up the expected loss and the costs of risk management. Decisions sometimes call for a trade-off between maximizing profit and ensuring stable returns after accounting for risk.

The goal of risk management is to balance a farm’s risk exposure with increasing profits. This balancing is done after considering the sources of risk, the methods of reducing risk, the ability and the willingness to take risks, and the income potential of alternative strategies. The goal of risk-management is not to reduce risk only. Careful risk management can help farmers choose how to best use their resources to achieve personal and business objectives.

The key to effective risk management is working with factual information. An important source of this information is an adequate set of farm records to provide data on past performance. Only with such data can accurate estimates of risk be made. Risk management strategies are also affected by a farmer’s ability to take risk and the farmer’s attitude about taking risk. Simply stated, risk taking is related to the amount of money that farmers have available to them and the demands in terms of cash. The higher these demands the less likely the farmer will be to absorb risk.
Farmers face risks and challenges to produce enough food to feed their family while ensuring that the farm business is both profitable and sustainable ...

... this requires that they develop the skills to make sound strategies to mitigate the likelihood of risk.

Intercropping of papaya and coffee as a risk reduction strategy

Hedgerow intercropping – another way to spread risk
Challenges facing farmers

Intercropping and drip irrigation

Even very basic watering methods can help avoid risk
A farm as a business can enjoy a competitive advantage when farm activities and their linkages are efficiently managed.
To be competitive, farmers must properly assess the degree of competition.

The introduction of improved technologies in both production and post-production is particularly important for farmers to raise their competitiveness. Developing human capital, upgrading the skills and capacity of the farmer and members of the household, and making efficient use of hired labour improves the competitive position of the farm.

Farmers often see themselves as having little control over the prices they receive for their products and this often limits their competitiveness. But in the changing market economy farmers are offered opportunities to diversify, to develop specialised and branded products, and to produce for ‘niche markets’. Instead of producing commodities that are undifferentiated, farmers produce commodities that are differentiated such as organic fruit or a unique type of meat found only in a certain region. Farmers can differentiate their produce by producing specialized products for a limited niche market. A niche market can also be created when produce is produced at a specific time of the year when few other farmers can compete.

When farmers take these steps they become ‘price-makers’. They have more control over the prices they can get for their produce. Being price-makers gives farmers greater advantage when negotiating with traders. But in these markets the competition between producers is high and farmers need the business skills to compete.

Finally, the farm as a business can enjoy a competitive advantage through an effective system of linkages that is well coordinated and efficient. Timely sales require coordination of inputs, production and marketing. The ability to coordinate these links with input dealers and buyers will reduce cost. For example, by reducing the need for stocks of inputs or products stored.

Good management of all of these aspects of the farm business can result in giving the farmer a competitive advantage over others. The performance of each activity determines whether a farm has high or low
costs relative to its competitors. The competitiveness of a farm is influenced by the farmers’ management strategy, skills of implementation and the viability of the farm enterprises.

To be competitive, farmers must properly assess the degree of competition. Farmers must assess the level of production costs – trying to minimize them – while striving for good quality and high market prices.

SIGNOS OF COMPETITIVE STRENGTH

• Strong farm management and technical skills in organization, farming operations and marketing.
• Sound strategies for production, marketing and finance.
• Products sold in a niche market.
• Lower costs than competitors.
• Higher profit margins than competitors.
• Stable and ‘good’ market outlets.
• Efficient and effective use of resources.
• Wise and appropriate technological choices.

These parts of the business have to be compared with those of their competitors. Farmers need the skills to analyse the characteristics of the strongest and the weakest farms in the area. This could provide insight into better understanding the competitive aspects of different farms. Some of the characteristics that should be considered include size, location, production methods, age and condition of farm equipment, degree of specialization and diversification, and the form and strength of market linkages.

In order to assess the performance of a farm business, a comparison is made with ‘benchmarks’. Indicators of profitability, efficiency and technical performance are selected and compared against a better performing farm or group of farms to identify strengths and
weaknesses and ways of improving performance. A major part of benchmarking is striving to understand why some farms are profitable and efficient and in some case have sustained competitive advantage and how that can be continued and replicated on other farms. (A step-by-step guide for extension workers to carry out a benchmarking exercise is included in this series.)

**SIGNS OF COMPETITIVE WEAKNESSES**

- Inconsistent farm management and technical skills.
- Higher costs than competitors.
- Lower profit margins than competitors.
- Inconsistent marketing strategies.
- Producing without regard for market demands or requirements.
- Not able to take advantage of opportunities.
- Poor or uninformed technological choices.

* * *
ENTREPRENEURSHIP

Many farmers face significant financial and economic stress as a result of the changing farming environment. Farmers try not just to survive during times of volatile prices and escalating costs but to be viable and sustainable over the long term. Farmers need to be not only good managers but ‘entrepreneurial’ by being innovative, taking risks and having a longer term perspective of their business. They need to be active and able to respond to the threats that they face in the future. To prosper in this ever-changing environment, farmers must be able to respond to change.

Many people think that entrepreneurship is something that cannot be learned; that it is part of the farmers’ personality and character and something that cannot be taught; entrepreneurs are born. Others believe that innovativeness and a management approach to farming can be developed and improved. These are two very distinct views. But while personality and character are determinants of entrepreneurship, they by no way reflect all that can be done. Entrepreneurial success can be improved by skills and competencies training.

A long-term perspective for managing a farm begins with creating a vision and identifying ways to expand resources to carry out the mission and solve problems. These require not only good management skills but leadership. And as a leader, the farmer must develop strategic plans for farm operations.

Questions that entrepreneurial farmers may ask are where will the farm business be in five to ten years:

- Will it pass on to future generations?
- What are the long-term goals for growth in profit?
• What types of livestock and crop enterprises will the farm produce?
• How will land, labour, and capital resources be acquired or reassigned over the years to meet long-term goals?

THE ENTREPRENEURIAL FARMER

Entrepreneurial farmers need to be strategic in their planning and implementation. They have to look at their farm business from a broader and longer time perspective. Ways need to be found to strengthen the competitiveness of the farm business. This can be done through satisfying buyers, achieving performance targets and realizing the long-term goals. Entrepreneurship is forward looking and successful farm businesses in the future require new attitudes and skills.

Entrepreneurial farmers see the need to move beyond production goals and issues. As we have shown in this guide, marketing is critical and needs to be improved; more effort is also needed in managing risks and finances. As farms expand in size, labour or personnel management becomes important also. Hiring the wrong labourer (permanent or casual) can quickly impact on productivity and the costs of the business. Strong management in all these areas is needed to ensure both profitability and competitiveness.

Farmers in this new business environment have to fulfil both roles – manager and leader. These roles do not exist in a vacuum. Spouse, children, employees, input suppliers, buyers, consumers, extension workers and others make up the farmer’s team. Farmers are better leaders and managers when they include these people in decisions. Although farm leaders and managers are ultimately responsible, decisions that reflect collective input and shared responsibility are far likelier to succeed.
LEADERSHIP SKILLS

- Create the vision and identify ways to expand resources to carry out the mission.
- Focus on strategic planning.
- Determine where they want to be.
- Do the right thing.
- Focus on the long run.
- Find the best ladder to success.
- Do not stop thinking about tomorrow.
- Begin with the end in mind.

The successful farmers of the future will possess both leadership and management skills. They will determine where they want to be and how to get there. They will not only do things right, but they will do the right things to enhance their chances for business success and prosperity. Understanding how leadership and management skills differ is essential for farmers to effectively master these skills.

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Chapter 3
Extension responses
Market-oriented farming

Extension is also affected by the changes in farming. Farmers increasingly find themselves making fundamental decisions about the nature of their farming activities. Many farmers are faced with the need to become more market-oriented and to run their farms as profit-oriented businesses. Extension services can help with this transition.

Farm management extension

Extension efforts need to be directed towards strengthening the capabilities of small-scale farmers to become more competitive and profitable. Extension should support farmers in building capacity and making better resource management and marketing decisions. Extension workers must also have the competencies required by farmers. They will need to redefine their role and the content of their extension messages to better reflect the reality that these farmers are not only producers but are entrepreneurs with farm businesses.

The role of the farm management specialist

Farm business management support is highly specialised and is a scarce resource. Farm management specialists work closely with front-line extension workers who work with farmers; they support front-line extension workers by providing
training, technical backstopping and coaching. They provide relevant information, help organize farmers into groups, help diagnose farm performance, and provide a vital two-way link between policy-makers, the extension service, the farmer and other actors in selected value chains. Farm management specialists need a range of knowledge and skills to fulfil their unique role in the provision of extension support to farmers walking the pathway to entrepreneurial, market-oriented farming.

**The role of the front-line extension worker**
Front-line extension workers are usually generalists with a background in agriculture, crops or livestock management but are increasingly being involved in management and marketing tasks. The main role is to collect data to support the decisions that farmers make and to communicate information to farmers so they can make good management decisions. To do this, front-line extension workers have a multi-faceted and expanded role including: creating and collecting data; data dissemination; training, mentoring and coaching; extension support for groups; and organizing farmers.

As farming has become increasingly competitive, farm management extension is an important area of specialization that should be incorporated in all extension services. Front-line extension workers, as they communicate with farmers individually and in groups and organizations, also need to possess some of these specialist skills.
The role of extension services has to change from technology transfer towards farm enterprise diversification and commercialization. This implies a shift from providing technical solutions to production problems towards a better understanding of the broader challenges that farmers’ face.

**FARM MANAGEMENT EXTENSION**

Farmers increasingly need the knowledge and skills to compete in the new farming environment. They may need to develop or adopt new technologies, diversify their production and identify and exploit new market opportunities. In this context, extension has a significant role to play. Extension efforts need to be directed towards developing the skills and strengthening the capabilities of small-scale farmers to become more competitive and profitable.

The changes occurring in farming have also had wide implications for extension workers. There has been a shift from merely providing technical solutions to production problems towards a broader approach of understanding farmers’ goals and market opportunities. Improvement in farmers’ technical knowledge alone is not sufficient. It needs to go hand-in-hand with the development of entrepreneurial capacity and managerial ability. For extension workers to effectively respond to the new challenges that farmers are now facing, they require knowledge and competencies in farm management and entrepreneurship.

Extension services must also redefine their role and the content of their extension messages to better reflect the reality of small-scale farmers not only being producers but business managers. Extension services need to revisit the production-oriented farming systems and assist farmers as they adopt a more market-oriented approach.

Support provided by extension services should also be available to other value chain stakeholders including traders, agro-processors and other small- and medium-scale entrepreneurs. This further implies that
extension workers need to be adequately trained and informed about the entire value chain process.

- **Input supply.** In addition to knowing what inputs are best, extension services need to be aware of the impact of prices and encourage collaboration between farmers and input suppliers.

- **Production.** In addition to knowing the best technologies and production systems, extension services need to understand the concept of profitability and be alert to opportunities for achieving economies of scale through growth strategies (i.e. capacity expansion, replication and modernization).

- **Marketing.** Extension services need to be alert to changes in the market place and their impact on production systems and post-harvest operations.

- **Profit.** Extension services need to be conscious of the factors that influence the profitability of a farm business and alert to the opportunities to diversify, supply farm produce at lower cost, expand the size of the business, add value to the enterprise and differentiate the product.

  All of this capacity in the extension service needs to be tempered with an understanding what is often called the ‘human’ side of farming: the farmer; the family situation; and ultimately their goals and preferences.

  Further, facilitating farmers to become more entrepreneurial will require careful nurturing of grassroots initiatives and farmer learning. It involves facilitating, establishing and supporting networks.

  Much of this ‘new’ work in extension can be captured through ‘farm management extension’. This approach to extension helps farmers to make the right choices depending on the finance, labour, land resources and markets available to them. The
Market-oriented farming: An overview

Farm management extension is needed to support farmers in building their capacity to make better resource management and marketing decisions.

The farm management worker provides information for front-line extension workers and farmers alike.

Extension services need to incorporate specialized farm management expertise as an integral part of their technical support.

Farm management specialists facilitate market linkages (strawberries ready for export)

Extension workers and farmers at a demonstration (newly introduced vegetables)
Extension responses

Farm management specialists have a critical role to play in providing extension workers and farmers with information on business opportunities, assisting in diagnosing farm performance and proposing ways to increase the income of farmers and the profitability of the farm enterprises and the business as a whole.

Farm management extension involves helping farmers to learn how to analyse, interpret and define their appropriate strategic managerial action for themselves. In this way, extension workers have the important functions of information gathering, interpretation and dissemination, and are the conduit feeding information to farmers and the rural community.

However, as we have seen, facilitating farmer entrepreneurship needs to go well beyond this. It should include building capacity among farmers and support to lobbying and advocacy to create an environment in which this becomes possible.

In creating the right environment for farmers to develop and grow as entrepreneurs, they need to be made aware of the market opportunities, the alternatives offered and the different practices and technologies that can be applied for market-oriented farming. They also need to be better organized in producer groups or cooperatives and as part of networks with linkages to other value chain actors. The role of the extension worker is critical in assisting farmers to address these issues and organize themselves in ways that result in greater competitiveness. In short, the support provided by extension workers who specialize in farm management and front-line extension workers is aimed at assisting farmers to better address these challenges.

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Extension has a significant role to play with farmers in the transition to market-oriented farming.
THE ROLE OF THE
FARM MANAGEMENT SPECIALIST

The ‘farm management specialist’ plays a multiple role contributing to policy decisions, providing more effective extension support to farmers and facilitating linkages between farmers, input suppliers and market outlets. The qualities required of the farm management specialist call for higher standards of recruitment and better training especially in aspects of economics, marketing and business.

The ‘extension role of the farm management specialist’ is to inform extension workers and farmers on the best use of farmer resources – by analysing the efficiency of farm resource combinations – and identifying profitable new enterprises and market channels.

The ‘farm management extension practitioner’ has several functions in addition to the more traditional role in providing guidance around production technologies as for example enabler, networking facilitator, communicator and negotiator, change facilitator, consultant, learning facilitator.

FARM MANAGEMENT EXTENSION FUNCTIONS

**Enabler.** Developing the competencies of farmers and creating a conducive environment that enables them to achieve high performance.

**Networking facilitator.** Creating linkages and relationships among farmers and other stakeholders to strengthen the farmers’ position in the value chain.
FARM MANAGEMENT EXTENSION FUNCTIONS
continued...

Communicator and negotiator. Informing farmers of opportunities and, where necessary, negotiating and lobbying on their behalf.

Change facilitator. Preparing farmers individually and as members of groups for the constant process of change that production and organizational flexibility require.

Consultant. Providing individuals and producer groups with advice and assistance in problem-solving and effecting improvements.

Learning facilitator. Building the capacity of farmers to take command of their own learning so that capacity building is self-sustaining.

The farm management specialist also has the job of providing farmers with relevant information which broadens the decision-making perspective and facilitates their choices. The specialist only assists in the search, leaving the ultimate choice of strategy to front line extension workers and the farmers as decision-makers.

Another role relates to identifying market opportunities and facilitating linkages between producer groups and market outlets. This requires that the farm management specialist possesses the skills to organize farmers into groups, associations and cooperatives and has knowledge of contracting necessary to facilitate both formal and informal linkages.

The farm management specialist assists extension workers and farmers in diagnosing weaknesses in their farming systems and to evaluate the likely effects of change. They provide information and advice to farmers to facilitate choices to improve competitiveness and profitability.
BENCHMARKING

Benchmarking is among the various tools available to the farm management specialist to help farmers improve their efficiency, profitability and competitive position.

Benchmarking is a practice of identifying those farmers who are best at doing something and understanding how they do it in order to learn from them to improve farm performance. Their performance is set as a standard or benchmark for other farmers.

It involves studying the actual performance of a selected farm and comparing it to other farms of similar size and farming system. The intention is to identify strengths and weaknesses and steps to improve the performance of the farm. Benchmarking provides a standard for comparison. It can be used to:

- Examine the performance of the farm compared to another farm.
- Compare production levels to check if the farm is technically efficient.
- Compare production costs to check if the farm is economically efficient.
- Examine if the production and marketing processes are sound.
- Generate new ideas by learning from the experience of other farmers.

Benchmarking allows farmers to learn from themselves and other farmers and improve performance of the farm business. It encourages farmers to look critically at both costs and income.

Furthermore, the farm management specialist provides a vital two-way link between policy-makers, the extension service, the farmer and other actors in selected value chains. In this investigative role he or she feeds information back from the farmers to policy-makers assist extension workers and farmers in diagnosing weaknesses in their present farming systems and to evaluate the likely effects of change.
Market-oriented farming: An overview

makers and researchers where it can contribute to pro-farmer policies and to research agendas. The link also extends between extension and research staff helping to translate research results into recommendations which are economically viable and more readily compatible with the existing farming system.

There are four key aspects in the work of the farm management specialist:

- Selecting enterprises and production techniques.
- Improving sales and achieving better prices.
- Reducing costs and losses.
- Setting a framework for extension.

**Figure 6**
The network of the farm management specialist

Enterprise selection and production techniques
The specialist needs to provide extension workers with information as to which enterprises generate better profits and how production choices can affect the profitability of individual enterprises.
**Improve sales and achieve better prices**
The specialist should be in the position to learn what farmers consider to be their main marketing problems and what ideas they have for solving those problems.

**Reducing costs and losses**
The specialist also needs to be aware of the costs and returns of farm enterprises both at farm level and along the value chain.

**Framework for extension**
The specialist should also have a role in providing a framework for the activities of general extension workers. They provide a perspective outside the technical subject areas, considering all aspects of the farm business.

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In summary, farm management specialists need a range of knowledge and skills to fulfil their unique role in the provision of extension support to farmers walking the pathway to entrepreneurial, market-oriented farming. They need to be well versed in the key capabilities of a successful farmer entrepreneur. This means they must be sufficiently trained and experienced in input management, production management and marketing management. They must be familiar with the key managerial functions of diagnosis, planning, organizing, leading and controlling. And they must have the unique knowledge and skill to facilitate the acquisition of these capabilities among extension workers and farmers alike.

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The role of the front-line extension worker

In addition to providing technical support, extension workers are increasingly being involved in management and marketing tasks. The challenge in this area of work is to integrate these skills into their regular tasks of extension. This requires strong support from farm management specialists.

What is the extension worker’s role in farm management and marketing? Broadly it is to collect data to support the decisions that farmers make and to communicate information to farmers so that they can make good management decisions about production, markets, inputs and equipment.

The role of extension workers falls into six areas of responsibility:

- Collection of data
- Organizing farmers
- Identifying successful farmers
- Extension support for groups
- Information dissemination
- Training, mentoring and coaching
In traditional extension work, the focus of learning is on diagnosis. In contrast, extension among more entrepreneurial farmers should be directed towards planning for the future. Attention should be given to support farmers to develop an enquiring mind, become more creative, cultivate insight, communicate effectively and solve problems while identifying and taking opportunities that arise. The culture of the farmer as an entrepreneur calls for a shift in the learning approach.

**Collecting data**

To make good decisions, farmers need information from different sources and help to utilize the information effectively. Extension workers can help farmers collect the information they need on agricultural technologies market information (prices and quantities demanded), costs of production and input use. Some of this information could be provided by the management specialist. But in addition to this front-line extension workers have a role to play in brokering information collected locally.

Extension workers can generate and collect on-farm information through many sources in the course of their duties (e.g. data generated from demonstrations and on-farm trials). They can also encourage farmers to keep records of their enterprises and to share that information. Market information can also be collected including product prices, market outlets, input suppliers and from an assessment of the volume of produce demanded.

Extension workers have a role to identify sources of data, assist farmers in price data analysis and assessing the cost of marketing produce. They should also be able to advise farmers on reliable sources of input supplies and equipment. Farmers should be shown how market information can help them to get better prices and support their farm planning activities.

In addition to collecting data and information, extension workers need the skills to analyse the data collected and identify the constraints and opportunities for farmers. The ability to analyse the market, select market...
channels and respond to changing market conditions is an essential component of profitable farm management. Farming data can commonly be collected through demonstrations, on-farm trials and record keeping.

**Demonstrations and on-farm trials.** Part of the regular work of extension workers is to be responsible for setting up on-farm trials and facilitating demonstrations, often with the support of specialists. They may also be responsible for organizing and managing the trials and demonstrations.

### DATA REQUIREMENTS FOR TRIALS AND DEMONSTRATIONS

**Background data.** Land use or field history that include farming practices for the crop or livestock enterprise (methods of land preparation, yields, fertility management, crop rotations, residue management, soil type, texture, slope, terrain, slope, vegetation, system of water control, fallow periods).

**Technical input data.** The type of inputs used; the rate of application; the method of production and family and hired labour requirements.

**Input-output response data.** Data on the performance of the crop under different technologies (crop stand establishment, live births, incidence of disease, crop yields or weight gain of livestock).

**Product price and input cost data.** Data on input and output prices. Sources of data include individual farmers, groups of farmers, input suppliers, and buyers among others.

**Farmer assessment data.** Data based on farmer’s own observations especially on crop growth and the quality of the produce.

As more and more farmers produce for the market, trials and demonstrations are becoming increasingly important to test new enterprises as a way of making the
Encourage farmers to take the lead in technology development as part of building their capacity as entrepreneurs.

Extension workers have responsibility to provide leadership in accessing the sources of data collected and to assist farmers in making more informed decisions and getting higher returns for their enterprises. For example, farmers need to know the cost of the inputs that they require when applying new practices. Data on the type of inputs to use, the quantity and cost, and the sources of supply is essential for entrepreneurial farmers to make changes.

The active participation of farmers in the process of technology development and transfer is crucial. In fact, extension workers should encourage farmers to take the lead in technology development as part of building their capacity as entrepreneurs. Further, feedback from farmers during demonstrations minimizes the possibility that technically and financially inappropriate practices are promoted.

Record-keeping. Record-keeping is a vital part of generating and collecting data. Some farmers are reluctant to keep records for all their enterprises on a regular basis. But entrepreneurial, market-oriented farmers soon see the benefits of recording data, especially as they diversify their system and introduce higher value commercial enterprises. It helps them when calculating profits and efficiency.

In all situations extension workers should develop simple record-keeping systems which enable farmers to record, monitor and analyse results of enterprises and technologies which they have tried. Instead of developing them on their own, they should work with farmers in developing these systems and keep in mind the level of literacy and numeracy of the farmers who will use them. Farmers who are less literate may need
Conduct demonstrations, on-farm trials and benchmarking exercises to help farmers identify constraints, weaknesses and areas for improvement.

In developing and implementing recording systems, care should be taken to ensure that farmers understand that only really vital information required should be collected. There is no value in spending time on records and calculations of profit and production for individual enterprises if no use is made of them.

Further, farmers should be encouraged to record material inputs, labour and their costs promptly as they are used. This avoids having to later rely on memory, which is often inaccurate. Finally, they should make regular monitoring visits to farmers to support them with their record-keeping and to collect the data recorded by the farmers.

By conducting demonstrations, on-farm trials and benchmarking exercises, extension workers can help farmers identify constraints, weaknesses (and their causes) and the potential to develop the farming system as a whole or in part. Once issues have been singled out and prioritized, they can help farmers develop strategies for overcoming the constraints and weaknesses and building on opportunities. In short, they should be in the position to facilitate discussions among farmers, and, together, observe the results of demonstrations and field trials to diagnose the situation of the farm or selected enterprises and use this information to strengthen the position of farmers as entrepreneurs.

Information dissemination
Extension workers play a vital role in information dissemination. They are responsible for providing the knowledge and information that should enable farmers to make informed decisions. In this way they have a role in facilitating farmers in the use of this knowledge.

While it may not be necessary for them to process data into information, conveying the information that has
been collected and analysed is vital and an intrinsic part of their work. Their task is to communicate and provide farmers with information from which they can form sound opinions and make good decisions. Considerable thought must be given to this, and they need the skills to do so.

The findings of farm diagnoses and investigations conducted by farm management specialists are only useful and of value if the results are shared among farmers. It is not enough for the service to identify solutions to problems; the solutions need to be effectively disseminated to farmers and appropriate ways developed to ensure broad outreach in a cost-effective way. This calls for a two-way process in information exchange. The farm management specialist has to convey the information to extension workers as they are responsible for disseminating the message among and between farmers. The kind of information that should be communicated includes farm management information on new technologies, new enterprises and the expected profit they could make from introducing them into the farming system.

Another aspect of information dissemination is farmer-to-farmer sharing of information. As noted earlier, one of the keys to being successful in the changing economy is developing effective partnerships between farmers (and other role-players along the value chain). A key partnership is information sharing. The more capable farmers are in generating, recording, interpreting and sharing information, the greater their chances for success. The extension worker will want to foster this among farmers, train them in this work and support in applying it.

In addition to building capacity among farmers, the sharing of information has the added benefit of adding capable partners (farmers) to the extension work. As this capacity grows, so the capacity for extension will grow thereby strengthening the overall agricultural sector; with previously disenfranchised farmers being a significant factor in this strength.
Training, mentoring and coaching
Extension workers also have a role to play as trainer, facilitator and catalyst. In this capacity they are involved with generating and conveying knowledge and with promoting the personal development of farmers. A part of this work is helping farmers gain confidence and the skill and ability to communicate results of studies conducted by and with the specialists.

While formal training provides farmers with the tools (competencies) to do the job, at the end of the training, the farmers may not have reached the standard necessary to work independently. In fact, true learning does not take place until the farmer transfers what has been learned from the training into practice. Training needs to result in a change in behaviour. This is where coaching is needed; to translate learning into sustained action.

The process of coaching involves providing support to farmers to enhance and improve performance after formal training has been conducted. Coaching is, thus, a vital part of extension work. It is about developing farmers beyond where they currently are. Coaching is necessary to help consolidate and reinforce the knowledge and skills and to put them into practice with confidence and competence. Part of coaching is to assist farmers to reflect on their performance and to identify and implement steps to improve it.

But training and coaching may overlap. Sometimes when coaching someone it may become apparent that he or she does not have the necessary skills or background knowledge; at this point the coaching stops and training begins. Training and coaching are part of the continuum of development. The key to building capacity is fostering a pattern of acting, reflecting and learning.

Extension support for groups
The group method of extension offers the possibility of greater extension coverage, and is therefore more cost-effective. Using the group method, extension workers can reach more farmers and in this way make
contact with many more farmers who have had no previous contact with extension activities. It also fosters farmer-to-farmer learning which is a very powerful tool for building capacity.

Group-based extension requires active participation by farmers. It becomes even more relevant as extension workers grapple with the management needs of different actors along value chains. Group extension can provide:

- Greater coverage and cost-effectiveness.
- A more effective learning environment through mutual reinforcement and group pressure.
- A focal point for joint action and collaboration.

Forming farmer groups gives extension workers the opportunity to use group meetings for extending advice, demonstrating techniques, disseminating information, fostering partnerships and facilitating farmer-to-farmer learning. In a single visit, many farmers can be reached, mobilized and supported.

Group extension also offers a more reflective learning environment in which farmers can listen, discuss and decide upon their involvement in the extension activity. The support of the group helps the individual farmers to make decisions and determine a course of action. The group creates a supportive atmosphere, and individual farmers can gain greater self-confidence by joining others to discuss new ideas and try out new practices.

Organizing farmers
As farmers are under pressure to provide reliable supplies of raw material, in large quantities, to buyers they are having to organize themselves, often in producer groups. At local level farmers are increasingly turning to extension services to assist them in getting organized and registered. Many agricultural extension workers, however, may not have the skills and knowledge on how to organize farmer groups and the time to do so. In
Those groups that are organized by the farmers themselves and are not artificially created are likely to be more sustainable.

some countries NGOs facilitate this role. Once groups are organized, they may then work with the extension officer who provides training, technical and management support.

Farmer groups have generally been slow in developing because they experience problems such as poor leadership, low literacy levels, lack of financial accountability, dependency on external financing, lack of business expertise and lack of a sense of ownership. To make their groups sustainable, farmers will require knowledge and skills in more effectively managing their organization.

When facilitating group development, front-line extension workers are well placed to:

- Assist groups to formulate a group development policy and strategy.
- Facilitate contacts between groups and other external organizations and individuals.
- Train group members on group management processes.
- Assist groups to implement, monitor and evaluate group business plans.
- Advise groups on how best to reduce problems on group dynamics.
- Accompany and mentor groups until they are able to function independently.

Extension workers must have adequate facilitation skills to ensure that the demand for advisory support is genuinely recognised by the group members themselves. They also need to have adequate knowledge of external networks, service providers and financial actors and the capacity to link them up to the farmer groups. This is particularly the case when farmers have demands for services that are not immediately available. The extension workers have a role to bring specialised service providers in contact with the farmers.
The need for facilitation in group organization and development depends to a great extent on the starting point that producer groups are at. There may be a need for external facilitation in strengthening the organizational capacities of the groups themselves or alternatively, linking the producer organizations with other value chain stakeholders and service providers.

External facilitation by extension workers can assist these processes. Experience shows that this is most likely to succeed if farmers have a common interest and can see a common benefit from working together as a group. Ultimately, all actions should be directed towards ensuring that the group members are able to work by themselves in a sustainable way.
<table>
<thead>
<tr>
<th><strong>Glossary</strong></th>
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<tbody>
<tr>
<td><strong>Benchmarking</strong></td>
<td>The practice of identifying best performing farms and farmers and learning from them.</td>
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<tr>
<td><strong>Contract linkage</strong></td>
<td>Formal or informal agreement between a buyer, for example a processor, and seller, for example a farmer, which defines such matters as price of produce at time of sale, quantity of produce delivered, quality of produce, etc.</td>
</tr>
<tr>
<td><strong>Diversifying</strong></td>
<td>A strategy that provides for producing different farm products that enable farmers to have a set of different products to sell.</td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td>The study of using scarce resources to produce and exchange produce in order to create wealth.</td>
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<tr>
<td><strong>Economies of scale</strong></td>
<td>Savings (economies) achieved by spreading costs over a large scale of operation.</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td>The wise use of scarce resources.</td>
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</tbody>
</table>
Entrepreneurial farmer

A farmer who thinks of the farm as a business that has a potential to grow, diversify and develop. A determined and creative leader, constantly looking for opportunities to improve and expand the business, take calculated risks and assume responsibility for profits and losses.

Expanding the farm size

A strategy that focuses on increasing the size of the farm business.

Farming business

A farm business is an as a enterprise with linkages to input suppliers and output markets. Functions involve production, marketing as well as decision-making in terms of purchasing inputs, technology, labour and transport among others.

Farm business management

The process of decision-making which involves the identification, planning, evaluation and implementation of farming and business strategies. It involves three key areas: i) Production; ii) Marketing; and iii) Finance.
<table>
<thead>
<tr>
<th><strong>Farm business management decisions</strong></th>
<th>Complex decisions that are strategic and long term focused.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance</strong></td>
<td>The study of money and matters related to money. For example loans, savings, buying farm equipment (investments), etc.</td>
</tr>
<tr>
<td><strong>Financial management</strong></td>
<td>Planning, organizing and controlling money resources for the farm business.</td>
</tr>
<tr>
<td><strong>Input decisions</strong></td>
<td>Farmers’ decisions on how to use farm inputs to grow crops and/ or raise livestock. Market-oriented farmers commonly ask themselves the following questions: Who to buy input supplies from? Where to buy input supplies from? What quality is required? What prices do input suppliers sell at? What quantities are required?</td>
</tr>
<tr>
<td><strong>Input markets</strong></td>
<td>Inputs that are manufactured and specifically prepared for farmers to purchase.</td>
</tr>
<tr>
<td><strong>Long-term decisions</strong></td>
<td>Decisions related to long term investments. For example buying a tractor, putting up fences for livestock, irrigation systems, farm building development, expanding land use, etc.</td>
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<tr>
<td><strong>Lowering costs</strong></td>
<td>A strategy that focuses on producing and/or marketing produce at the lowest possible cost.</td>
</tr>
<tr>
<td><strong>Managerial</strong></td>
<td>The ability of a farmer to competencies perform the functions of diagnosis, planning, controlling and leading in managing inputs, production and marketing.</td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td>A location where produce is exchanged for money.</td>
</tr>
<tr>
<td><strong>Marketing</strong></td>
<td>A series of activities that enables farm produce to reach buyers.</td>
</tr>
<tr>
<td><strong>Marketing decisions</strong></td>
<td>Decisions that a farmer takes when selling farm produce. Questions include: how much to sell? Where and to whom to sell? What prices to sell at? What marketing channels to use?</td>
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<td>------------------------</td>
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<tr>
<td><strong>Market-oriented farming</strong></td>
<td>Farming that is based on market demand and uses improved production technologies, commercial inputs and provides consistent quantity and quality farm produce for sale.</td>
</tr>
<tr>
<td><strong>Niche market</strong></td>
<td>A market where specialized produce, for example, organic produce, is exchanged for money. Commonly such markets have a limited number of buyers.</td>
</tr>
<tr>
<td><strong>Output markets</strong></td>
<td>Markets where consumers, processors, retailers and other players in the value chain can buy farm produce.</td>
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</tbody>
</table>
Price-maker: Farmers that have control over the prices they can get for produce sold. The produce is differentiated.

Price-taker: Farmers whose buying and selling actions do not affect the market price. The produce is uniform and often referred to as a commodity.

Primary activities: The activities involved in the physical creation and selling of farm produce. These include organizing, operating and marketing functions.

Production decisions: Decisions regarding what to produce, how to produce, how much to produce, what resources to use and how to reduce production risks.

Profit: The money left over after all costs have been paid. The difference between money that comes in from produce sales and money that is spent producing and marketing the produce.
<table>
<thead>
<tr>
<th><strong>Profitability</strong></th>
<th>The ability of the farm business to generate profit.</th>
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<tbody>
<tr>
<td><strong>Short-term decisions</strong></td>
<td>Decisions that relate to the near or immediate future of the farm business.</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td>A long term plan for the farm business.</td>
</tr>
<tr>
<td><strong>Support activities</strong></td>
<td>Activities that support primary farm operations. These include managing farm infrastructure, managing labour, selecting technology and buying inputs.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>The uncertainty associated with the expected outcomes for the farm business.</td>
</tr>
<tr>
<td><strong>Risk management</strong></td>
<td>Ability to anticipate risks and identify measures to mitigate them.</td>
</tr>
<tr>
<td><strong>Traditional farming</strong></td>
<td>Farming utilizing traditional production technologies and largely aimed at increasing food production for the needs of the farm family.</td>
</tr>
</tbody>
</table>
Value

The amount buyers are willing to pay for products produced on a farm.

Value chain

The players and stakeholders involved in linking production to final consumption. These include input suppliers, farmers, processors, wholesalers, retailers and consumers.
Notes
The following is a list of the publications included in the FARM MANAGEMENT EXTENSION GUIDE series:

1  
MARKET ORIENTED FARMING:  
An overview  
2013, 90 pp.

2  
ECONOMICS for farm management extension  

3  
MANAGING RISK in farming  

4  
FARM BUSINESS ANALYSIS using benchmarking  
2010, 142 pp.

5  
ENREPRENEURSHIP in farming  

6  
The role of the FARM MANAGEMENT SPECIALIST in extension  
2013, 127 pp.