

Market-oriented farm management for trainers of extension workers

TRAINING
MATERIALS FOR
AGRICULTURAL
MANAGEMENT,
MARKETING
AND FINANCE

6

AFRICA



Module 2 UNDERSTANDING THE FARM SETTING



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Module 2
UNDERSTANDING
THE FARM SETTING

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UNDERSTANDING THE FARM SETTING

It is useful to look at farm management from two aspects. One aspect is the farm, the farmer and the input–output relationships of farming. The second aspect deals with the resources used by the farmer on the farm. The participants will gain a detailed understanding of farm resources and the concept of the five capitals: natural, human, physical, financial and social. All of these affect the decisions to be made and by studying them we will begin to define the complex decision-making boundaries of farming. Whereas most extension officers are trained in technical (production) decision-making, here they will come to understand the overall system. This includes many complex elements both within and outside the farm boundaries. We will learn that even small farms are highly complex. To assist in the learning process, the participants working in groups will develop virtual farms to visually plot the farm enterprises, the decision-making boundary and the factors that impact on them.

The farm and its enterprises

In this session the participants will build the foundation for exploration of market-oriented farm management. They will learn the basic concepts needed for the study of farm management by looking at the farm as a production unit with various enterprises. They will also look at the farm in terms of its function as the source of household food and income. This will set the stage for reviewing the central importance of farm management and the kinds of decisions required for farmers to be successful farm managers.

Opening statement

As our studies in this module begin we will briefly examine the essential features of a farm. This will help us to recognize the various boundaries of a farm that are key elements in the application of farm management principles. Now let us review Handout 2.1A (The farm and its enterprises). Feel free to ask questions if there are any points you may not understand.

The outline on the following pages is provided to help the facilitator conduct the review.

Farming for cash and farming for food

- Many farmers use their farms to provide food for their households. If this is the case, they will grow crops that they normally eat.
- Some farmers use their farms to generate cash income for their households. If this is the case, they may grow food crops that they will sell for cash or they may grow other crops such as cotton, coffee, or tea. Alternatively, they may grow a combination of food and 'cash' crops that they can also sell on the market.
- In some cases, farmers will use their farms to provide food for their family as well as cash.
- Principles and tools of farm management help farmers decide how to use their farms to meet their food and cash needs.

Market orientation and the need for improved farm management

- Life is very difficult for many farmers. There are often shortages of cash and food in the household. Decisions about the household and about the farm often conflict with each other.
- There is more and more need for cash to buy the things the household needs. So many farmers need to farm for cash. Most food farmers do not have the knowledge and skills of farm management and therefore they find it difficult to farm profitably.
- Basic training in the principles and tools of farm management can help these farmers organize their farms to make them more profitable and to meet the objectives of their families.

Outline of Handout 2.1A (The farm and its enterprises)

In order to apply the principles and tools of farm management the farmer must establish the boundaries of the farm. The first type of boundary is the physical enterprise boundary.

- A farm is a portion of land on which a particular household undertakes agricultural activities as a part of its livelihood. Some or even all of the land may include common property
- The agricultural activities on the land may include cultivating crops, tending livestock, managing fruit trees, exploiting forestry resources or a combination of these.
- In terms of farm management each activity is called an enterprise.
- A farm often consists of more than one enterprise, although there may be one main enterprise.
- Farms may also have a number of physical structures such as fences, animal paddocks (kraals) and crop storage. These exist to support the chosen farming enterprises.
- Each enterprise on a farm is based on an input–output relationship.
 - (i) Inputs are items required for the production process. These include land, labour, implements, seed, fertilizer.
 - (ii) Outputs are the goods that are produced, such as harvested crops, milk, meat, eggs.
 - (iii) In many cases, the enterprises of a single farm are interlinked. This means some of the outputs of one enterprise are used as an input of another.
- Farm management is the work done to organize the input–output process effectively to generate profits from the farm.

Learning points

To develop the basic concept of a farm from a number of different aspects by looking at it:

- as a production unit with its physical boundaries;
 - as a production unit that includes cultivated land and common property resources;
 - in terms of the supply of inputs required to produce;
 - in terms of the markets required to generate income;
 - in terms of the various kinds of decisions to be made by a farmer;
 - in terms of market orientation and improved farm management.
-

Exercise introduction

In Exercise 2.1A (Identifying and mapping a virtual farm) we begin by building a learning space that will be used frequently in this module and to some degree throughout the course.

We shall identify some of the kinds of small farms that we are familiar with and based on these, map a number of virtual farms that can then be used.

This will allow us to visually explore the factors that affect farms and in particular those that affect decision-making on the farm.

Exercise 2.1A

Identifying and mapping a virtual farm

Purpose: To create a visual learning space for the programme. To help participants visualize the physical boundaries of a farm and the farm household, and the basic spatial arrangements of a typical farm with which they are familiar. (Participants should have read Handout 2.1A prior to this exercise.)

Method: Paper construction diagramming, group discussion.

Materials: (i) Handouts 2.1B (Worksheet – Description of three smaller-scale farms) and C (Diagram – Physical boundaries of the farm and household), (ii) large flip chart paper or newsprint, (iii) thick marking pens, (iv) heavy paper or light cardboard, (v) prestik, (vi) scissors.

Allow 60 minutes for this exercise

Procedure

Part one Identifying farms

1. Ask the participants to take out Handout 2.1A (The farm and its enterprises).
2. Divide them into teams of 5–6. (These will be their 'farm teams' where they will spend most of their time learning. Therefore give careful thought to how the groups should be formed. What groupings will encourage the best learning?)
3. Ask each farm team to use their own extension experience to identify and describe three different small-scale farms that are typical of the farms they know in their area. Each farm should have a different main enterprise. (For example: a 2 ha smallholder farm with 1.5 ha of cotton, 0.2 ha of potato, 0.3 ha of wheat and goats kept around the homestead.)

Exercise 2.1A (continued)

The farm teams should consider the following:

- What is the area (in hectares or acres) of the whole farm?
- What are the enterprises of each farm?
- How are the different enterprises interrelated?
- Do these farms mainly produce food, or cash, or both?

Based on their discussions each team should complete the table in Handout 2.1B (Worksheet – Description of three smaller-scale farms). A copy is provided below for ease of reference.

Allow 25 minutes for team discussion and completing the table

	Farm 1	Ac/ Ha	Farm 2	Ac/ Ha	Farm 3	Ac/ Ha
Main enterprise						
Other enterprises						
Inter-relationship between enterprises						
Farming for food, cash, or both						

4. Ask each team to briefly share their results. (This portion of the session is not for discussion, so questions should be limited to clarification only.)

Exercise 2.1A (continued)

Part two
Mapping the farm

5. Ask each team to choose one of these three farms as the example they will work with for the rest of the programme. The farm they choose must meet the following requirements:
 - at least two, but not more than four crops of which at least one must be for household food production;
 - one livestock enterprise (can be very small scale).
6. Each team will need to draw a map outlining the physical boundaries of the farm they have chosen. The paper they use should be large (a flip chart sheet or newspaper) to provide ample work space for the exercises that follow in this module. The physical map of the virtual farm itself should not take up more than about one-third of the paper used and should be drawn in the centre of the sheet.
7. Now ask each team to use coloured marking pens and heavy paper or cardboard to create symbols or labels to represent the different enterprises, resources and the farm household. Then they are to build a detailed virtual farm by fixing these to their maps. See the example in Handout 2.1C (Diagram – Physical boundaries of farm and household).
8. The physical boundary that has been represented here is based on the natural capital, land. Discuss the following: Is this the real boundary of the farm? What about the household located in the homestead? Shouldn't the farm household and family be considered as an integral part of the whole?
9. Discuss these points with a view to understanding that the farm is more than land and crops. The household is very much involved with the activities of the farm. It is therefore very hard to separate them. Farm management principles and tools will help farmers decide when and where to demarcate the elements of their farms.

*Space for notes
and questions
for the facilitator*

The farm and its enterprises

The essential features of a farm are the productive resource base (usually land), farm inputs and outputs, and the farmer as decision-maker and manager.

In order to apply farm management principles and tools the farmer must establish the boundaries of the farm. The first type of boundary is the physical boundary. A farm is essentially a portion of land on which a particular household undertakes agricultural activities as a part of its livelihood. The land — or any part of the land — may be privately owned, hired from another owner, or used as a part of a common property arrangement.

The agricultural activities on the land may include cultivating crops, tending livestock, managing fruit trees, exploiting forestry resources, or a combination of these. In terms of farm management each activity is called an enterprise. A farm often consists of more than one enterprise, although there may be one main enterprise.

Farms vary in size from smallholdings of less than a hectare involved in subsistence production to large plantations covering thousands of hectares. In this manual we will focus on small- to medium-sized family farms that are partially or fully integrated into the market.

In Africa, farms are generally interwoven within the (extended) family structures of which the farms are a part. Within the same household different farms can be found, constituting more or less independent production units. The common feature of the farm is its 'unity of management'.

Farming may also involve social/community factors. For example, in many regions of Africa, livestock production enterprises largely depend on using common (shared) land for pasture.

The farm and its enterprises (continued)

In addition to the land itself, a farm may include structures erected on the land: wells, irrigation channels, fences, animal paddocks or kraals to control livestock, granaries to store farm produce and a homestead with a house or houses in which the farm family live. These exist to support the chosen farming enterprises.

Generally a farm is made up of several enterprises. Each enterprise on a farm requires inputs and produces a specific output. This is called an input—output relationship. Inputs are things put into the production process, such as land, labour, implements, seed, mechanization (tractors), fertilizer and pesticides. Outputs are the things that are produced, such as harvested crops, milk, meat, eggs.

In many cases, the enterprises of one farm are interlinked. This means some of the output of one enterprise is used as an input on another. For example, the stalks and bran, which are by-products of a maize enterprise, are used as feeds for a livestock enterprise.

Farm management is work done to organize the input—output process effectively to make profits from farming.

Cash and food crops

Many farmers use their farms to provide food for their households. If this is the case, they will grow crops that they normally eat. Some farmers use their farms to generate cash income for their households. If this is the case, they may grow food crops that they will sell for cash or they may grow other crops such as cotton, coffee, or tea. Or they may grow a combination of food and 'cash' crops. In some cases, farmers will use their farms to provide food for their homes and for cash.

The farm and its enterprises (continued)

In the last 30–40 years, there have been many changes in the way local, regional, national and international economies work. More and more farming families find they need cash. Thus, they find they need to grow farm products specially for the markets (perhaps in addition to growing food crops).

In addition, these changes in the economies have also created new opportunities to market current and new enterprises. For example, with rapid population growth, urbanization and economic development, the demand for food in the market has increased remarkably. Consequently, a much greater number of farmers have entered into the market offering food products for sale.

A notable outcome of this increased demand for food is the increasing number of farms that specialize in market gardening around towns. In such cases, farmers produce bulk food crops, such as maize or cassava in specific areas and livestock products, such as milk, eggs, beef, chicken, pork and mutton.

Deciding whether to farm for food or for cash or for both is a difficult decision to make. The principles and tools of farm management help farmers decide how to use their farms to meet their food and cash needs.

**Market-orientated production
and the need for improved management**

Life is very difficult for many farmers. There are often shortages of cash and food in the household. Decisions about the household and about the farm often conflict with each other. There is more and more need for cash to buy the things the household needs. Thus, many farmers need to farm for cash. Most food farmers do not have the knowledge and skills of farm management, and therefore they find it difficult to farm profitably.

The farm and its enterprises (continued)

Farmers must make decisions about running their farms. Essentially they must decide:

- what to produce
- how to produce
- how much to produce

Each of these three decision areas involves decisions about inputs, decisions about production and decisions about marketing.

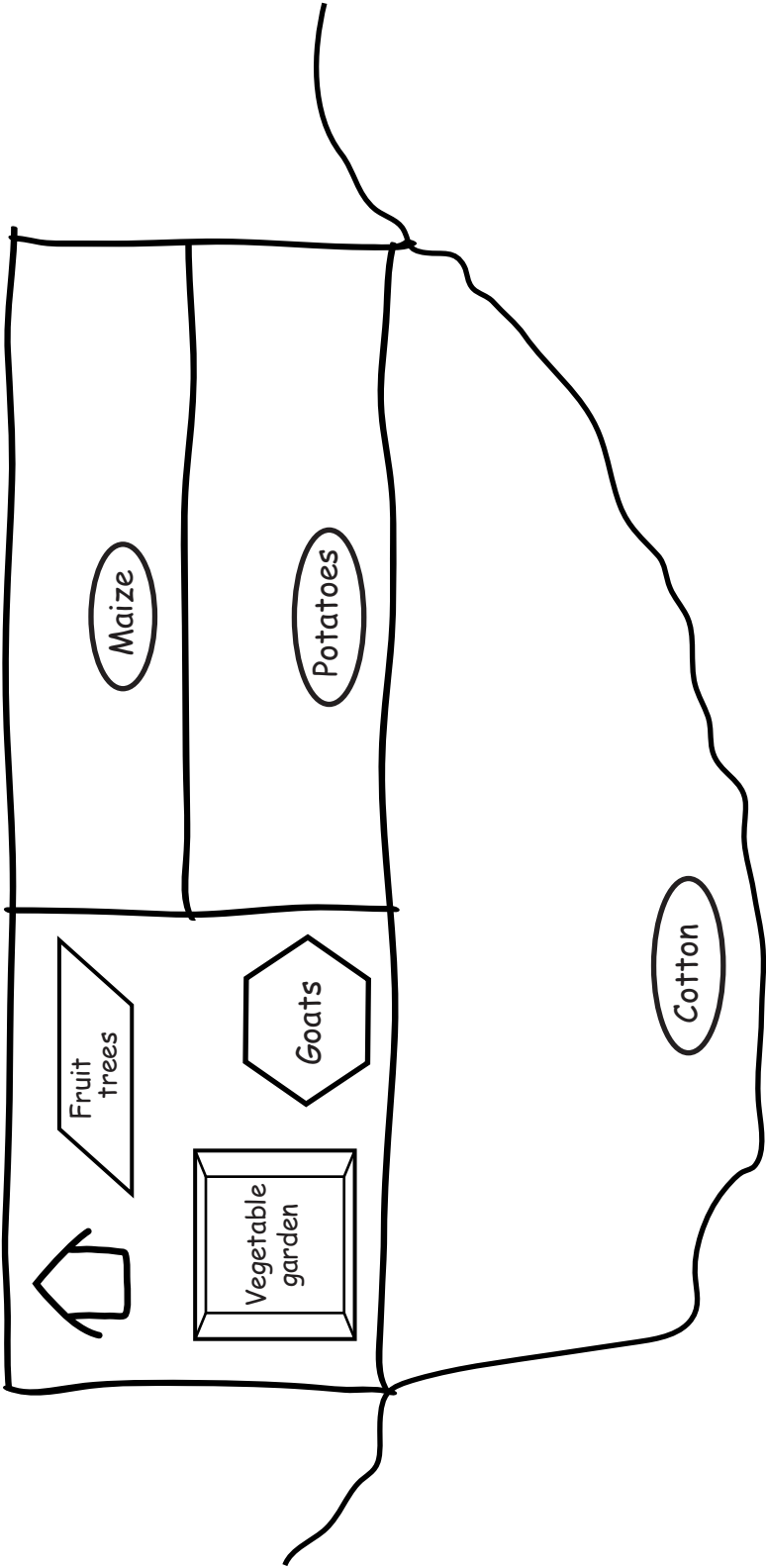
When farmers decide what to produce, they are deciding what enterprises they will have. Deciding what to produce, how to produce and how much to produce is influenced by many factors including food requirements, income requirements and a range of technical factors.

Basic training in the principles and tools of farm management can help farmers organize their farms and to make the necessary decisions to make them more profitable and to meet the objectives of their families.

Worksheet – Description of three smaller-scale farms

	Farm 1	Ha	Farm 2	Ha	Farm 3	Ha
Main enterprise						
Other enterprises						
Inter-relationship between enterprises						
Farming for food, cash, or both						

Diagram — Physical boundaries of farm and household



The farm and its resources

In this session you will help the participants explore and understand the range of resources used by farmers on their farms. The resources will be studied in a livelihoods framework of natural capital, human capital, physical capital and financial capital. The importance of maintaining and enhancing resources to ensure sustainable profits from the farm enterprises is also studied.

Opening statement

Let us begin with a review of the main points in Handout 2.2A (The farm and its resources) and of Handouts 2.2B, C and D, which in this session deal with the four farm resources:

- (i) natural – land, water; (ii) human – labour;*
- (iii) physical – livestock, planted trees, buildings;*
- (iv) financial – money, access to credit.*

These resources are referred to as "capital". In the next session we will discuss the sharing of resources. This is called social capital.

The outline on the following pages is provided to help the facilitator conduct the review.

Outline of Handouts 2.2A, B, C and D

Farms have a resource base made up of: (i) natural capital, (ii) human capital, (iii) physical capital, (iv) financial capital and (v) social capital. The concept of social capital and its role in small-holder-farming will be covered next in Session 2.3.

Natural capital

Sustaining the productive capability of natural capital is a very important part of farm management. Natural capital includes:

- biological renewable resources – rangeland or grazing land, forests, fish, wildlife;
- biological non-renewable resources: land and its productive powers;
- water.

Human capital

Human capital is among the most complex of resources used by a farmer. It is the skills and human power available to a farmer to carry out the farming activities. Many of the most difficult decisions made by a farmer involve human capital. Means of acquiring labour include:

- family labour
- hired labour
- customary social contract or practice

Physical and financial capital

- Physical capital includes producer goods, such as seed, fertilizer, equipment, planted trees and livestock.
- Financial capital includes cash, savings and access to credit.

Each of these types of capital represents decisions a farmer must make. The more they understand the role of capital and how it relates to farm management, the better position they will be in to make decisions to increase the profitability of the farm over many years.

Learning points

There are two ways of presenting Session 2.2. The choice depends on the degree of understanding that participants have about sustainable resource management prior to this programme.

If their understanding is limited, then you should follow the complete course as it has been designed. However, if you are confident that the participants understand the principles and practices of sustainable resource management (including natural resource management), then you may want to consider condensing the study. If you choose this approach, then you will need to prepare your lessons accordingly.

This unit asks the participants to develop a farm map as a learning space for the duration of the training programme. If you are using a collapsed session for the basic capitals, then you can leave the mapping of the capitals to be done all at once at the end of the study of the capitals.

Exercise introduction

Before we go into greater detail in our study of the farm "resources" or "capitals" let us briefly review them in a farm context. Exercise 2.2A (The farm and its resources) will help us to understand the roles of the various capitals. Then, in this and the following session, we will do a series of interactive exercises dealing with all "the capitals".

Exercise 2.2A

The farm and its resources

Purpose: To understand the role capital plays in farm management.
(Participants should have read Handout 2.2A prior to this exercise.)

Method: Group discussion and brainstorming, graphic representation.

Materials: (i) Heavy paper or posterboard, (ii) thick marking pens.

Allow 1½ to 2 hours for this exercise (depending on number of teams)

Procedure

1. Divide the participants into teams of 4–5 people each.
2. Assign each team one of the capitals.
 - Natural • Human • Physical • Financial •
3. Ask each team to develop at least two posters about the capital assigned to them*. One should be a general poster showing what the capital is in theory and the other should show how their assigned capital is related to farm management. (The posters should be designed as though they were to be used to communicate these concepts to farmers.)
4. When the posters are completed each team should develop a brief (5–6 minute) presentation. Each member of the team should have a speaking/presenting role.
5. Ask each team in turn to put up their posters and to make their presentations. Encourage questions of clarification.

While presentations are being made, check that the content being presented is consistent with the content in the handouts.

*The facilitator may need to assist the teams with planning their posters and presentations. Encourage them to be creative, but also to stick to the content as presented in the handouts.

Note

Each of the following three exercises is designed to help participants identify and map various forms of capital on their virtual farms. They will use the virtual farm maps created in the previous session and add various elements until a complete picture of the managerial boundaries of the farm become apparent. An example using physical and financial capital is shown in Handout 2.2H.

Exercise introduction

Now let us start with Exercise 2.2B (Natural capital). All farms make use of natural capital.

It is important that farmers have a clear picture of the natural resource base of their farm.

Long-term food security and profitability depend on how natural resources are used.

If they are used in a sustainable way, farmers can look forward to long-term success.

If not, their food security and their profits will decrease. Understanding this

will help farmers and extension workers appreciate the need to be aware

of the status of those resources

and to make farm management decisions

that contribute to sustainable agriculture as well as to sustained profits from the farm.

Exercise 2.2B

Natural capital

Purpose: To explore the inter-relationship of market-oriented farming and natural capital. (Participants should have read Handout 2.2B prior to this exercise.)

Method: Brainstorming.

Materials: (i) Handouts 2.2E (Worksheet – Assessing natural capital), (ii) pen and paper, (iii) heavy paper or posterboard, (iv) thick marking pens, (v) scissors.

Allow 60 minutes for this exercise

Procedure

1. Ask the group to get into their farm teams.
2. Each team brainstorms on the natural capital used by the virtual farm. This should include natural capital on the farm and natural capital brought onto the farm from outside. As they identify the natural capital they should answer the following questions:
 - (i) Which of this natural capital is renewable?
 - (ii) Which is non-renewable?
 - (iii) Who controls access to the capital?
Farmer, spouse, customary authority, private sector, government?
 - (iv) How do you obtain this capital?
Buy it, rent it, borrow it, customary sharing?
 - (v) Which enterprises use that capital?
 - (vi) Do any of the products or by-products replenish the natural capital?

Exercise 2.2B (continued)

3. A format for recording team findings is provided in Handout 2.2E. This can be used as a guide to create a similar working format on a large flip chart sheet or newsprint. When they have completed this, ask them to transfer their findings to Handout 2.2E. (A completed example is shown below.)

Assessing natural capital	Renewable	Non-renewable	Access controlled by	How access obtained	Linked to which enterprise	Return to natural resource
Cropping land around the homestead		X	Family	Allocated by traditional authority	Maize Vegetables Sorghum	Stover ploughed in Waste composted
3 ha of cropping land		X	Owner	Rented from brother	Maize	Stover ploughed in
Grazing lands	X		Traditional authority		Cattle	Dung
Water		X	Common property	Free access	Household vegetables	Waste water used on vegetables
Community forest	X		Village committees	Work for harvesting	None; income to household	1 tree planted for every tree harvested

4. When they are finished, ask each team to explain their grid. Discuss the significance of the different pathways of access to natural capital off the farm. Then look at linkages and sustainability issues. Some possible discussion questions are:

- (i) Is more taken from the natural resources than is returned?
What does this imply?
- (ii) How reliable are the sources of water for the household and crop?

Exercise 2.2B (continued)

- (iii) How long will common property continue to provide support to the farmer and the family?
- (iv) How can the farm contribute to maintaining and improving natural capital?
- (v) How does all of this influence the farmer in making long- and short-term decisions about inputs, production and marketing?
- (vi) How does it affect profitability?
- (vii) How does this affect the managerial/decision-making boundary of the farm?

Learning points

Natural resources (natural capital) form the basis of farming. Farmers get their natural capital from many different sources. Some of it comes from common property through social agreements that exist in the community. Some comes from government, such as in the case of irrigation water. Some is rented. Some is shared. Some is purchased and some is used on the understanding that it will be replaced, as is the case with community forests.

Some natural capital is renewable. Some is not. All natural capital is subject to losing its capacity to support the farm. The farmer's decisions about input, production and marketing all have impact on the long-term profitability of the farm. Farmers need to be aware of the affect of decisions about cropping patterns, the use of fertilizers and pesticides, the choice of production methods and other aspects of the farm management, on the farm's natural resource base.

Good farm management demands sustainable use of land and other resources. It includes maintaining and improving the productive power of land, which leads to sustained profits and can contribute to sustainable agriculture as well as to sustained profits from the farm.

Exercise introduction

Human capital on a farm is mainly labour.

There are many ways to access labour.

Exercise 2.2C (Human capital) will give you some ideas of how to assess labour sources for a farming community or household.

The idea is to help farmers look systematically at the choices they have instead of simply repeating what they have done in the past without considering other options.

Exercise 2.2C

Human capital

Purpose: To identify the sources of labour and to extend the managerial boundaries of the virtual farm to include labour. (Participants should have read Handout 2.2C prior to this exercise.)

Method: Brainstorming and group discussion.

Materials: (i) Handout 2.2H (Diagram – On- and off-farm labour sources), (ii) pen and paper, (iii) large flip chart paper or newsprint, (iv) thick marking pens, (v) scissors.

Allow 20 minutes for this exercise

Procedure

1. Divide the participants into their farm teams.
2. Ask each group to brainstorm about the sources of labour for their farm and identify on-farm and off-farm labour sources. Since they are just identifying sources of labour, they do not need to know details of labour requirements for their various products. To do this they will have to 'create' a community context outside their farm. They will need to agree on the farm setting to identify the range of possibilities for labour.

Family labour

Assume there is some family labour
(the size of the family is not needed now)

Social work contracts

Does this practice exist in their area?

Sharecropping

Does this practice exist in their area?

Hired labour

Are local workers available to be hired?
Are there migrant workers available;
does this practice exist in their area?

Exercise 2.2C (continued)

3. Ask each team to record this information on their virtual farm, linking the labour options available to the farm enterprises. See example in Handout 2.2H (Diagram – On- and off-farm labour sources).
4. Ask each team to present its results. (This session does not need discussion, but it would be useful to check if there are any questions.)
5. After the diagrams have been shared, ask each team to outline the extended managerial boundary of the farm showing the inclusion of labour. Discuss.

Ask some lead questions:

- What is the value to farm management of identifying all the sources of labour available to the farmer?
- What might be the next step once a list of labour options is identified?
- What is the status (i.e. current practice) in their areas of these different options? Is it changing? If so, how?

Learning points

To make good decisions about labour, farmers need to be aware of their options regarding sources of labour. Creating a checklist of options makes it possible for farmers to consider these options systematically. This encourages strategic thinking on the contribution of labour to the profitability of the farm.

Exercise introduction

In Exercise 2.2D we are going to look at physical and financial capital. In Handout 2.2D you have been introduced to some of the important concepts that explain physical and financial capital.

We should understand that decisions made about these assets have a significant impact on the profitability and sustainability of the farm. It is important that farmers carefully consider many factors before making decisions about physical and financial assets.

To make meaningful decisions about their assets, farmers need to have a clear understanding of what physical and financial assets are.

In this exercise, we shall look at the physical and financial assets of your virtual farms.

Exercise 2.2D

Physical and financial capital

Purpose: To identify and map the physical and financial assets of the virtual farm and the sources of physical and financial capital.
(Participants should have read Handout 2.2D prior to this exercise.)

Method: Small group discussion, mapping.

Materials: (i) Handout 2.2F (Worksheet – Assessing physical and financial capital), (ii) Handout 2.2G (Worksheet – Sources of physical and financial capital), (iii) Handout 2.2I (Diagram – Physical and financial capital on the farm), (v) pen and paper, (vi) large flip chart paper or newsprint, (vii) thick marking pens, (viii) scissors.

Allow 30 minutes for this exercise

Procedure

1. Divide the group into their farm teams and give each participant a copy of the worksheets in Handouts 2.2F and G. The first is to make an inventory of physical and financial capital currently on the farm and the second is to list the sources (suppliers) of physical and financial capital. Participants should make notes individually while conferring with the team.
2. In this exercise each team should develop one version for both themes. The idea is to develop a picture of the current situation as well as future possibilities. After that the virtual farm maps should be updated to reflect this information.
3. First, complete the grid in Handout 2.2F. Each team will need to identify and list the physical and financial capital currently on their farm. They should note on which enterprise (including the household) the capital is used, where they got the capital (private sector, self-built, own farm, another farm, household, government, common property) and how it was acquired (purchased, hired, borrowed, by right of common property). An example of an "own farm" source of physical capital might be seeds for planting that were kept from last year's harvest or cattle bred on the farm. An example of household source of funds might be personal savings.

Exercise 2.2D (continued)

4. Next, each team should complete the grid in Handout 2.2G. They should discuss possible sources of physical and financial capital. Some of these will be included in Handout 2.2F. For example, the team may use the cooperative to buy seed or fertilizer. But it may be possible to get these items from another source that they do not use, such as a general dealer. Or perhaps their farm does not have a loan, therefore a lender is not listed. They should list all the sources they can think of and what they can supply.
5. Finally, ask each group to compare their lists with their virtual farm maps. Some of the things listed in the previous worksheets will be accounted for. If there is anything on the list of physical capital that is not already on their maps, the team should create the necessary symbols or labels, and add them. They should create and paste arrows showing the movement from the sources to the farm. (Note: they may want to create symbols that show storage of consumer goods (e.g. seed, fertilizer). See the example given in Handout 2.2I (Diagram – Physical and financial capital on the farm).
6. When the lists and maps are done, ask each team to share and explain their findings with the whole group. Discuss.

Learning points

It is useful for farmers to have a good picture of the physical and financial capital on their farm and where and how they get that capital. It is also useful for them to be aware of all the potential sources of physical and financial capital available. When farmers have a picture of a known situation and can visualize the potential, they will be in a better position to make decisions on their farm.

*Space for notes
and questions
for the facilitator*

The farm and its resources

- NATURAL • HUMAN • PHYSICAL • FINANCIAL •

The working base of the farm is composed of a number of resources. Farm resources are either owned by individual farmers or belong to the pool of common property to which farmers have access under certain conditions. Resources can be divided into five categories called "capital": natural, human, physical, financial and social capital. The first four are discussed in detail in Handouts 2.2 B, C and D (Natural capital, Human capital, Physical and financial capital). Social capital is discussed in detail in Handout 2.3A.

Land is an example of natural capital. Labour is an example of human capital. Livestock, planted trees and buildings are examples of physical capital. Money and access to credit are examples of financial capital. Sharing of resources (common property) is an example of social capital, such as a community forest. In general these resources are either owned and/or controlled by the farmer, owned by someone else and hired by the farmer, or are common property to which the farmer has access.

Natural capital

Natural capital (natural resources) is classified into three broad categories. The first is "biological, renewable resources", which includes such natural resources as rangeland (grazing land), forests, fish and wildlife. The second is "non-renewable resources", which is land and its productive powers. The third is water. Sustaining the productive capability of natural capital is a very important part of farm management because natural capital is the primary resource used for both food production and profits.

The farm and its resources (continued)

Biological, renewable resources are often common property, such as grazing land and forest land (except legally protected forest or game reserves and national parks). In many societies, access to cultivated land for grazing is free after harvest. In many regions of Africa, registered land ownership is still uncommon. In such cases, land tenure rights are exercised through unwritten customary law.

Land and water areas are often also regarded as common property — where resources are accessed through customary practice or through more modern laws.

Human capital

Human capital refers to people. It is the skills and human power available to farmers to carry out their farming activities. An important human resource to the farmer is labour. Labour may be provided from the farm family, it may be hired, or it may be obtained through a customary social contract or practice. In many parts of Africa, customary social contracts exist. Such contracts generally make mutual aid possible under an unwritten reciprocal agreement.

Human capital is among the most complex resource used by a farmer. Many of the most difficult decisions made by a farmer involve human capital.

Physical and financial capital

Physical and financial capital are the things and funds available to farmers to carry out farming activities. Physical capital includes producer goods, such as seed, fertilizer, equipment, planted trees and livestock. Financial capital includes cash, savings and access to credit.

*The farm and its resources (continued)***Farm capital and financial management**

Each of these types of capital represents decisions a farmer must make.

- What is the condition of the crop lands? Grazing land? What crops can be grown?
- How much land should be allocated to which enterprises?
- How much labour is needed? What source of labour is best? Family? Hired?
- What equipment, seed, tools and infrastructure is needed for each enterprise?
- How should the farm be financed? With cash? With loans? A combination?

A farmer faces these and many other decisions about resources every year and sometimes every day. The more farmers understand the role of farm capital and how it relates to farm management, the better their positions will be to make decisions to increase the profitability of their farms over the years.

*Space for notes
and questions
for the facilitator*

Natural capital

Natural resources form the basis of all human life. Worldwide, humankind uses available natural resources to produce food, drink, fibre and fuel. Therefore, it is vital that natural resources be used sustainably by humans, for their continued benefit. The question for farm management is: How can farmers use natural resources both sustainably and profitably?

Because market-oriented farm management works largely in economic terms, it is useful to think of natural resources as part of the capital base of a farm. Natural resources form part of the assets of a farmer. As such it is capital employed to create profits. Thus, we refer to natural resources as natural capital. In this discussion of natural capital, we will look at land, vegetation, water, fish and wildlife.

Land

Regarding natural capital, the primary concern of this module is sustainability of the land and its implications for market-oriented farm management. *Sustainability of the land* means making sure that the land is able to continue to produce long into the future. This is often referred to as the productive powers of the soil. Decisions and actions of farmers about the way they arrange their input, production and marketing activities impact on the sustainability of land and other natural assets. This makes sustainability of natural capital of primary concern to market-oriented farm management.

Natural capital (continued)

Land forms the core of most farming activities. Land for crops. Land for livestock. Land for housing structures for other enterprises such as poultry. Farmers are faced with a number of important choices in deciding how to use their land. Some decisions may lead to maintaining or even improving the productive powers of soil. Other decisions may lead to eroding these powers. Long-term sustainable income from the profits of a farm will be directly affected by the way the land itself is treated and used. If the productive powers of the land decrease, profits will also decrease.

In many parts of Africa land has become a scarce resource. Most farmers practise permanent cultivation of their fields, applying crop rotation, multiple cropping, mixed farming or other practices for maintaining soil fertility. Unfortunately, the impact of these practices is limited in the face of widespread decreasing of soil productivity.

Regaining control over the long-term productive power of the soil is a very important part of market-oriented farm management. Farming for high profits in the short term without taking steps to sustain the soil will eventually lead to lower profits.

Soil erosion. This is the wearing away of soil by wind and water. Erosion happens when vegetation, such as trees and permanent grasses, are removed from the land. To prepare new land for crops, one removes trees and grasses. Too many head of livestock have the same effect by eating grasses. Both of these lead to erosion.

In some regions large areas of forest land have been cleared to make way for high-priced cash crops. Interest in short-term profits made farmers forget about protecting the productive powers of the soil. As a result, in many parts of Africa, the soil over large areas of land have been washed away or eroded by wind.

Natural capital (continued)

Even some farming practices contribute to erosion. For example, tractors using disk ploughs or harrows on light tropical soils can chop up the soil and expose it to erosion. Another example is intensive crop farming without sufficient use of organic fertilization. This drains soils of important nutrients, which reduce the productive powers of the soil.

The objective of good farm management being 'the maximization of profits' should not be misunderstood. If the desire for profit leads the farmer to neglect farming practices that protect the land, money might be made in the short term, but will without doubt be lost in the end.

Land tenure. This refers to the laws and customs that govern occupying and using land. Many different systems exist in Africa. But in general there are three types of land in Africa: state land (land belonging to the government); private or freehold land (land owned by individuals or businesses); and common land (land held under a traditional system or customary system).

In many parts of Africa, traditional land tenure systems are still very common. Over time this has led to a situation where many farmers have several small pieces of land on which to produce. In addition to land allocated to a family, the family may also have access to common land and to land that has been 'loaned' to them by another family. The allocation of and access to land is not uniform. Some families have large amounts of land while others have very small amounts of land.

Natural capital (continued)

Common land. In Africa, the common land systems present the greatest challenge to good farm management. The most widespread common land system in Africa is communal or shared grazing. The rules that govern communal grazing lands vary widely, but they share a common thread — members of the community should have access to grazing lands.

The status of cattle in the social and cultural systems in many parts of Africa often appears to cut across good farm management practice. Farm management treats communal lands and the livestock that graze them as factors of production used to generate income/profit. Culture tends to treat communal lands and the livestock as non-productive factors, but more as a savings system linked to social status. It is not uncommon for livestock to be referred to as the "African bank".

It is difficult to reconcile the conflicting cultural and farm management (economic) values governing livestock on communal land. Extension workers will need to find ways to embrace both systems in their efforts to support farmers with market-oriented farm management. They will need to find ways that help the farmers make decisions that comply with both sets of values. This is particularly challenging in arid countries such as Botswana, Namibia, Ethiopia, Eritrea and parts of South Africa, where livestock on communal lands is the primary agricultural activity.

Over time there will very likely be a change in these values, but this evolution should happen through the decisions made by the farmers and not through the deliberate attempt to change or undermine cultural values.

Natural capital (continued)

When land is limited. In many parts of Africa land is limited — therefore production is limited. Land sizes are often small. In some cases, a farmer may have two or more small pieces of land that are some distance from one another. It may be difficult or even impossible to get more land.

When this is the case, it becomes very important that the farmer get the most out of the land in the most sustainable way. Market-oriented farm management presents a number of options to the farmer to increase the productivity and the profitability of the farm through careful planning. Among the options available to smallholder farmers are:

- Learn about and apply the most productive and sustainable methods of growing the crops currently produced on the farm.
- Use intercropping to produce more than one crop at a time to increase total output from the land.
- Instead of growing common crops, grow more marketable and profitable crops to increase profitability of the land.
- Investigate growing more than one crop a year.
- Investigate the possibility of raising livestock for the market and use crops as feed.

Vegetation

Vegetation is an important part of the overall productivity of a community or country's soil. Increasing populations cause farmlands to be turned into settlements. New lands are being cleared for cultivation. The result is that the natural vegetation and forests are shrinking.

Natural capital (continued)

On the remaining areas, the situation is declining. Grazing lands are often overgrazed. Forests and wood-reserves are often overexploited through gathering for firewood and cutting trees for construction. This increases runoff causing severe erosion particularly in lower lying parts of the region or country where the good farmland is situated.

Two initiatives can be taken to fight against this. One is improved community management of common land and forest reserves. The other is careful management of farms, keeping income generation (profit-making) activities in balance with sustainability practices.

Water

Water is an important natural resource. It has three main functions in life:

- water for drinking
- soil moisture for crops
- water for irrigation

Water is limited. Farmers need to understand and practise careful use of water to get the most out of it while at the same time making sure it is available long into the future. Many farming systems are rainfed — that is they rely on rainfall for water. Other systems use irrigation that draws on water from rivers or underground water. In general it can be said that water is common property. There are some cases where individual farmers control water through the use of small dams, wells and water harvesting. But the majority of smaller-scale, smallholder farmers have to share water resources.

Natural capital (continued)

Water, as land, is influenced by population increases. More people requires more water. Industrialization also increases demands for water. More water used by households and industry means less water available for agriculture. As water becomes scarcer careful farm management is required, and collective management of water resources becomes essential.

As with land, the key concern regarding water is sustainable use to make sure that it is available for farm production in the future.

Fish and wildlife

In many parts of Africa, fish and wildlife play an important role in rural livelihoods and food security. Generally, fish and wildlife are common property, and specific rules have been made to control use of these. Governments and traditional societies both have systems for the management of fish and wildlife. In some parts of Africa, fish and wildlife are part of a private farm. In places such as Namibia, Nigeria and South Africa, fish and wildlife form part of farming.

Common property fish and wildlife require the protection of government or customary law. If used wisely and through collective arrangements, common property fish and wildlife can be used to increase the overall profitability of a farm as well as help with cash flow problems.

*Space for notes
and questions
for the facilitator*

Human capital

Human capital represents the skills, knowledge and ability to labour, and to good health that together enable a person to pursue a livelihood to fulfil their personal objectives.

Farming is a livelihood strategy used by many people throughout Africa. Farming uses several forms of human capital including labour and management, which it draws from various sources. Human power is a critical element of farm productivity.

Types of labour

Five types of labour are commonly called upon in smaller-scale, smallholder farming:

- family labour
- communal labour
- social work contract
- sharecropping
- hired labour

Family labour. This is labour provided by the members of the farming family. Generally, this includes members resident in the household. But it can also include members of the extended family. In most cases there is little or no economic value attached to family labour. In most cases — even when part of the labour requirements of the farm is hired labour — the core of the farm workforce is made up of family members.

Human capital (continued)

Availability of family members depends on the composition and ages in the family. At different stages of the family life cycle, family labour can be more available or less available. In general, farming activities take a high priority in smallholder farm families. At times of peak labour demands, members of the family often reorganize their household duties and other tasks so that they are free to help on the farm.

In most of Africa, the size of the agricultural workforce at household level is generally declining. On occasions, households may actually increase in size. This is because of the return of people from urban areas (following retrenchment, lack of employment opportunities, or the onset of sickness), or taking in orphans to care for. However, despite the increase in the number of people in a household, the ratio between those active in agriculture and their dependants may deteriorate.

Many farms employ no full-time labour. All of the work is done by their own family members. This puts them in a vulnerable position. Illness, injury or death of a family member has a significant negative impact. Loss of a family worker is met by imposing additional farm duties on other family members.

In addition, a farmer without regular help is handicapped when it comes to planning for change and developing the farm business. The farmer is tied to the farm and may have limited contact with other farmers to hear about and discuss new ideas. Difficulties in taking time off to seek advice may also constrain farm development.

Human capital (continued)

Communal labour. It is common for some smaller-scale farmers to come together when there is a particular job that needs doing quickly. This is referred to as communal labour. In some countries, communal labour is often grouped by age or gender. The social role is important for their members especially for ceremonies and feasts. At times, communal labour helps elderly people, widows or orphaned children in farm work and to build shelter for them.

Social work contract. This is a type of communal labour based on payment in kind. Community members help one another with various farming activities, such as bush clearing, land preparation or harvesting. In return the individual farmer who received help will provide food and drink for the helpers. There is not always a direct requirement of reciprocity. Instead work is done on good faith and mutual trust. This type of communal labour exists in many parts of Africa under different names. In Zimbabwe it is called *Nhimbe*, in South Africa the Batswana call it *Letsema*, and in Kenya it is called *Ushika* or *Umoja*.

A variation of this social work contract is found in West Africa where it is more structured and formal. They have a specific form of social work contract provided by working parties. These are traditional associations organized according to age group, gender or shared social interest. They vary in size, objective and manner of operation. Work is either provided for in kind, in cash and in some cases for free. The ultimate goal is often social cohesion, expressed through ceremonies or feasts.

Human capital (continued)

Sharecropping. In this system a farmer finds a person who will assume responsibility for a particular crop in terms of cultivation and harvesting. This person is called a sharecropper. Instead of being paid a wage, the sharecropper is allowed a share of the crop once harvested. Before farming begins, the farmer and the sharecropper agree on what percentage of the crop will go to the sharecropper and what percentage will go to the landholder. Often one-third to fifty percent will go to the sharecropper and the balance to the farmer.

Earning a share of the crop is a powerful incentive to work for high yields, and if sharecropping is done using sustainable farming methods, this is good for long-term profitability. But because the land does not belong to the sharecropper, short-term income is often of greater interest than sustainability. Thus the sharecropper may cause permanent damage to the soil or vegetation, or tree crops in trying to get high yields.

Hired labour. Labour can be hired on a permanent or temporary basis. It can be hired full time or part time. It can also be hired as casual labour. It is more cost effective to hire workers only when they are actually needed for particular activities. Sometimes workers are hired because they have a special skill that the farmer does not have. There are four categories of hired labour: permanent, seasonal, casual and contract labour.

- *Permanent labour* is paid on a monthly or weekly basis. Such labour is paid whether or not there is work to be done. This forms part of the fixed costs of the farm. In some countries in southern Africa, permanent workers may not be paid less than a legal minimum wage. Farmers need to plan very carefully before committing themselves to permanent labour.

Human capital (continued)

- *Seasonal labour* is employed at particular times of the year for particular activities on the farm, especially harvesting or post-harvest processing. The period of employment is usually fixed and happens at the same time or season every year.
- *Casual labour* is employed on an hourly, daily, weekly or monthly basis to add labour for short-time periods. Farmers can determine ahead of time when there will be high labour need and short labour supply. Farmers can employ casual labour when the regular labour supply is unexpectedly short because of illness, injury, death or absenteeism. Using casual labour is very flexible, but payment is normally high.
- *Contract labour* is engaged to carry out specific tasks at an agreed rate, (e.g. payment of 30 shillings per kg for cotton picked).

Generally, labour is hired from two sources:

- *Local workers*. This includes local workers who make themselves available for hire and other local smaller-scale farmers who may offer themselves or their family members for hire when the family needs extra cash or food.
- *Migrant workers*. Migrant workers are people from outside the community in which the farm is situated. They are often hired as seasonal labour, coming to the farms in a particular area at a particular time each year to do specific activities. When they have completed the work, they return home, or move on to the next farm or area.

Human capital (continued)

Hired labour is of increasing importance as market-oriented production and individualism spread through Africa. Use of hired labour varies considerably in Africa. Rates of pay, conditions of employment (e.g. accommodation and meals) will depend on the social, cultural and legal requirements of the region or country. In some places, migrant workers may live with the employer's family and share meals. In the case of migrant workers who stay for longer periods, they may be given fields to grow food crops for themselves.

Functions within the household in relation to labour availability

Labour is not a single homogenous input. It consists of variations in terms of age and gender groups. Division of labour is important to improve efficiency and productivity. Division of labour by gender is being increasingly questioned as societies adopt new social standards based on the principle of equality of women and men. Further, the incidence of HIV/Aids and the introduction of modern farming technology are changing the work women do on farms. However, in most parts of rural Africa, division of labour by gender is still the norm.

Most of the household domestic work, such as fetching wood and water, cooking and cleaning, is the responsibility of women and girls. Women and girls (and some of the very young boys) will also have responsibility for the care of smaller children, tending to small stock and food gardens kept around the homestead, and repairing of mud walls and floors in the case of traditional housing. In many African cultures women are limited (sometimes forbidden) from carrying out particular duties. For example, among cultures in Botswana and parts of South Africa, women should not handle large stock.

Human capital (continued)

Men and (older) boys generally carry out heavier tasks, such as bush clearing and land preparation, looking after large stock and repairs to structures, fences and roofs (thatch) on houses. Men also tend to be the ones to work with mechanical traction such as tractors and heavy implements.

These different roles and responsibilities of men and women have implications on labour availability and productivity. In West Africa, for example, planting by hand is done by women, while planting using a mechanical planter is done by men. This division of labour clearly affects labour choices.

Impact of social factors on labour availability and productivity

Various factors affect labour productivity and availability, including climate, ill health, death, migration in search of employment, nutritional status of family members and cultural practice.

Cultural practices impose a variety of limitations on labour availability and productivity. In southern Africa, boys attending initiation school are not available for certain periods of time, and women in their courses are not allowed to tend to animals. In some cultures, one may not work in one's fields if there has been a death in a family. Religious rites also impose limitations on when people are available to work and what kind of work they are permitted to do. The result of these various social factors is that the agricultural labour force becomes increasingly characterized by the elderly, female-headed households and the very young (including orphans).

This loss of human power is often compounded by the reduced availability of other power sources, such as the loss of draught animals and the closure (or increasing expense) of tractor-hire services.

Human capital (continued)

These labour shortages, through their effects on agricultural production, reflect the vulnerability of agricultural production. The spiral of decline arising from farm power shortages (human and other) contributes to food insecurity (arising from untimely farm operations and an inability to cultivate sufficient area), malnutrition and poor health, and a lack of disposable income. This deteriorating situation acts as a further catalyst to rural–urban migration and contributes to social instability because of depression, frustration and the break-up of families.

HIV/Aids also has a negative impact on the asset base of families as assets are used or sold to cover medical expenses or to compensate the loss in production or other income generating activities. The remaining relatives may not have the skills to maintain and take care of the assets, and this will lead to the deterioration of the asset base.

Households that have lost a key family member are most likely to experience increased workloads and changed patterns of work. Many women who are heads of households take on more casual work in order to generate the means to feed their family. Not only does this reduce their time available for working on their own farm but may also introduce seasonal constraints, delaying critical activities such as weeding.

Men who lose their wives become responsible for the care and maintenance of the home. This changes their lifestyles also, and requires them to take on more responsibilities.

Human capital (continued)

Migration has also negatively affected farm productivity. In many countries, men (younger and older) and younger women take up work in towns far from their family farms. Visits to the farm/homestead are infrequent and short. This leaves the (older) women and children to provide labour on the farm. At times the family cannot cope with all the work — fields are neglected, production of crop/livestock enterprises is not properly done and infrastructure is not well maintained. Although in some cases money is sent by those employed elsewhere, this might not be enough to cover both household needs and farm inputs requirements.

Physical and financial capital

Physical capital. This consists of the producer goods and the basic infrastructure needed to support the farm and livelihoods. In farm management terms, producer goods are those things farmers need to produce their products. Producer goods include seed, fertilizer, equipment, livestock, farm fences, wells, pumps and irrigation equipment. Infrastructure consists of changes to the physical environment that help farmers to meet their basic needs and to be more productive. Infrastructure common to a whole community includes roads, telecommunications, electricity, access to a clean water supply, sanitation and secure shelter. Infrastructure unique to farming includes irrigation canals and water to farm edge, government storage facilities and markets.

Financial capital. This includes cash, credit, loans or income that farmers and their households use to achieve their farm management and livelihoods objectives.

Sources of financing and credit

At times, farmers struggle to finance their enterprises. This is true for both large and smaller-scale farmers. When this situation arises, the farmer will need to consider options carefully before making a decision.

Self-financing. Some farmers have savings that they use in times of need. The savings can be money from farm activities or off-farm sources. Savings are a preferred type of financial capital because they belong wholly to the household (no one has a claim on them). In addition, by using savings the farmer does not have to rely on others.

Credit financing. Other farmers rely on credit or borrowed money to finance farm activities. Farmers can get credit from formal or informal sources.

Physical and financial capital (continued)

Informal sources (e.g. family members, relatives, village traders and money lenders). Informal institutions have advantages over formal institutions:

- They are convenient, available locally, require no documentation and can provide credit quickly.
- The informal moneylender has local knowledge to help in appraising household credit needs and creditworthiness.
- There is little risk of default because the lender is generally well placed to apply pressure on the borrower to ensure payment.
- Administrative costs are low.
- With some types of informal credit, such as the care-taking of livestock and the promise of tree crops, the risks of borrowing are shared between the two parties involved.
- Interest rates may be low.

The disadvantages of informal credit are that:

- The borrower feels an obligation to the lender and loses independence.
- There are few alternatives to choose from.
- Only short-term and relatively small loans are available.
- Interest rates may be high.

Farmers can obtain credit from formal sources such as:

- *Banks.* They provide agricultural credit to farmers. In some countries banks through their country branches provide credit to the farmers Credit and Saving Associations, which then extend it to their members.
- *Some non-governmental organizations.* They provide loans and inputs on credit to farmers.
- *Cooperative societies.* They give loans to their members or organize loans for them when they need to buy supplies.

Physical and financial capital (continued)

- *Government organizations.* Some governments set up special agricultural credit organization to lend money to farmers. Borrowing terms at such institutions are normally fair and at low interest rates.

Credit from any of the above sources can be taken for different lengths of time varying from short to long term.

- Short-term loans cover up to one year, generally for inputs.
- Medium-term loans are for two to five years, for equipment and store.
- Long-term loans are five years and above, for irrigation, land improvement, perennial crops and buildings.

Accessing (getting) financial capital/credit

When accessing financial credit there are conditions to be met by the farmers. Factors normally considered are:

Viability of the proposed plan or previous success. This refers to the likelihood that the plan will succeed. When a plan is viable, it means the farmer should be able to pay back the loan. Viability is shown in the plan, budget and financial records.

The character and ability of the farmer. Lenders need to know whether or not the farmer is reliable, hard-working and experienced. They look into past records funds borrowed before.

Security. In case the farmer is not able or fails to pay back borrowed money, the lenders require some form of security or collateral for the loan. Security is anything promised to be given to a lender to sell if the money cannot be repaid. Security can be in the form of crops, cattle or buildings. The farmer needs to negotiate this carefully with the lender.

Physical and financial capital (continued)

In many West African countries security is seldomly accepted because it is too difficult to put a claim on it. Instead, banks generally accept fixed registered property for security, which most family farmers do not possess. For this reason, in most cases in West Africa, credit is provided only when there is shared responsibility (e.g. cooperatives).

The cost of a loan. Borrowing money costs money. Lending money is a business — the lender has costs and also needs to make profits. To cover these costs and to make a profit, the lender charges interest on the loan. Interest is the price paid for the use of someone else's money, just as rent is the price for the use of hired land.

Before agreeing to take the loan and especially before signing any documents, the farmers need to be very clear about the rate of interest being charged for the loan. They should ask the lender to make this very clear and to show how much money must be paid to borrow the money. Those not happy with the interest rate should talk to the lender about getting a lower rate. In the end, it is the farmer who carries the full responsibility of a loan and must pay it back plus the interest.

Advantages of credit/loans

- Credit makes money available to a farmer to buy inputs at times when not enough cash is available to buy them.
- Credit makes it possible for a farmer to start different enterprises or to expand existing enterprises. This provides the chance to increase farm profitability.

Limitations of credit/loans for farmers

- A farmer may not have anything to offer as collateral security, and land cannot be offered as security without legal title.

Physical and financial capital (continued)

- Smallholder farmers usually need small loans. Many lenders are not interested in making small loans because they are not as profitable as large loans. Lenders prefer to lend large amounts to commercial farmers.
- Loan offices are often in larger towns, making them less accessible to smaller-scale farmers.
- Many farmers lack knowledge and experience of formal application procedures. They are discouraged by the need to complete application forms and other documents, which naturally make the process long.
- Many lenders believe that agricultural production is too risky and that the chances are high that the farmer will fail to pay back the loan.

As a result of these limitations, formal credit agencies rarely operate in rural areas without government support and promotion. Farmers are often forced to rely on informal sources.

Farmer, market orientation and resources

Market-oriented farmers are faced with three challenges:

- They are attracted by strong market demand and good prices for their products.
- They are under strong pressure from their dependants for a better life.
- They need to preserve the productive powers of their farm.

Therefore, a farmer needs to be:

- a good farm business manager;
- a wise user of resources;
- a capable decision-maker in the household.

Worksheet — Assessing natural capital

Assessing natural capital	Renewable	Non-renewable	Access controlled by	How access obtained	Linked to which enterprise	Return to natural resource

Worksheet – Assessing natural capital (continued)

Assessing natural capital	Renewable	Non-renewable	Access controlled by	How access obtained	Linked to which enterprise	Return to natural resource

Worksheet — Assessing physical and financial capital

Physical capital	Enterprise/ Household	Source	How acquired
1			
2			
3			
4			
5			

Worksheet – Assessing physical and financial capital (continued)

Financial capital	Enterprise/ Household	Source	How acquired
1			
2			
3			
4			
5			

Worksheet – Sources of physical and financial capital

Sources of physical capital	Capital provided by source
1	
2	
3	
4	
5	

Worksheet – Sources of physical and financial capital (continued)

Sources of financial capital	Capital provided by source
1	
2	
3	
4	
5	

Diagram – On- and off-farm labour sources

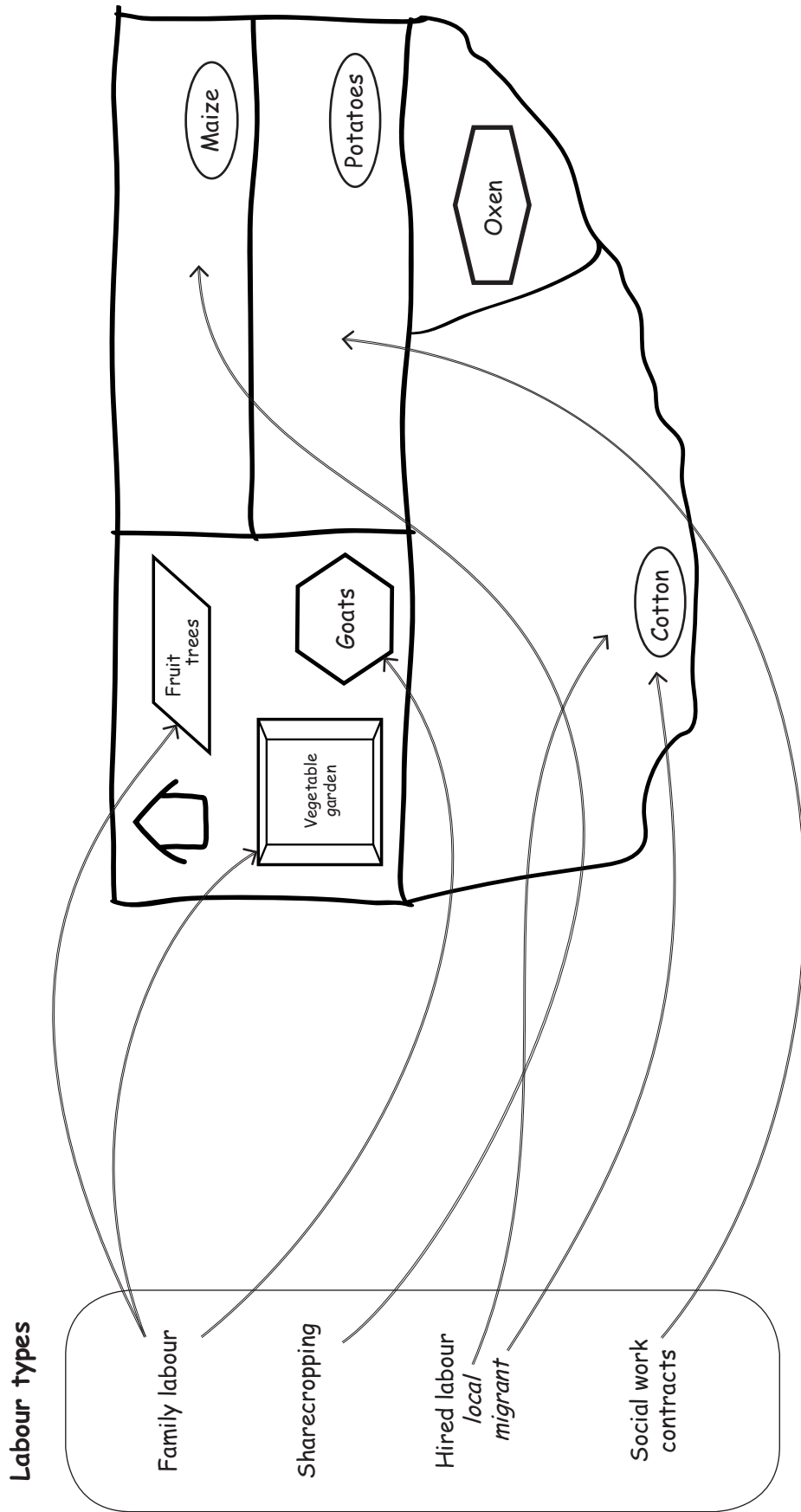
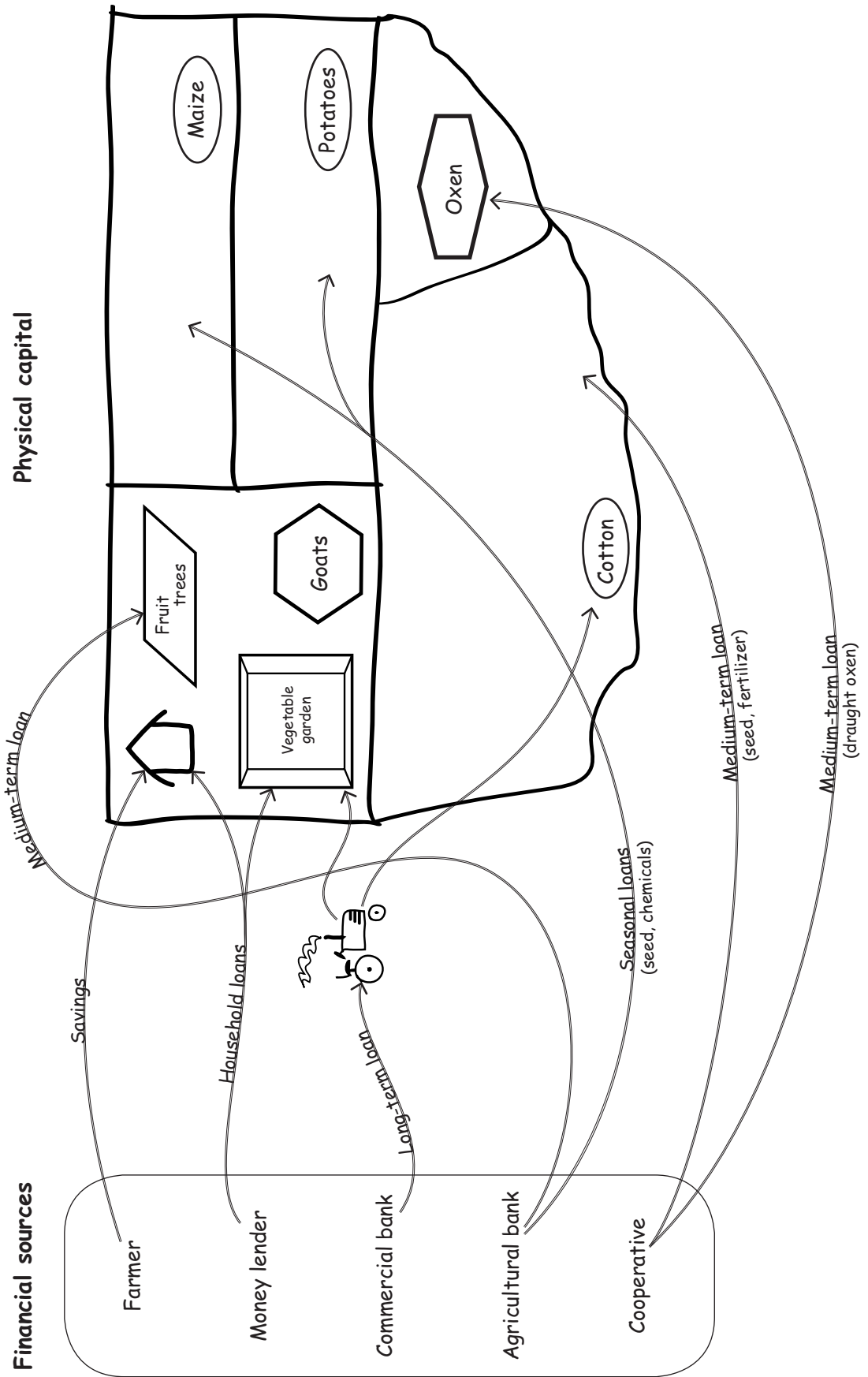


Diagram — Physical and financial capital on the farm



Understanding social capital

"Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions" (World Bank/October 10, 2002). In this session the participants will explore the concept of social capital and the role it plays particularly in smallholder farming.

Opening statement

We are about to begin a study of "social" capital. You have already been told that this refers to the sharing of resources. It involves interaction between individuals and the formation of groups that are critical for farmers to prosper economically.

Now let us review the main points in Handout 2.3A (Understanding social capital). All those participating should feel free to ask questions.

The outline on the following pages is provided to help the facilitator conduct the review.

Outline of Handout 2.3A (Understanding social capital)

Social capital refers to the institutions, relationships and norms that shape the quality and quantity of a society's social interactions. Among other things, it:

- contributes to sustainability;
- includes social resources that farmers can draw on;
- includes informal social networks and formal organizations used to exchange resources and information;
- involves interaction between individuals and groups.

A useful way of looking at social capital is to ask the questions: (i) Who owns it? (ii) Who has access to it? (iii) What are the relationships between people like? (iv) What rules, norms and sanctions exist? (v) How is social capital used? (vi) How strong are the connections and networks? (vii) What types of social arrangements exist? (viii) How effective are local groups? (ix) What are their weaknesses and how can they be addressed?

If the resource is collectively owned or held and there is access to it by the collective, then it is a social asset. A shared human resource would be defined more by the right of access.

Social capital can be divided into five categories: (i) shared natural capital, (ii) shared human capital, (iii) shared physical capital, (iv) shared financial capital, (v) institutional capital.

Exercise introduction

Now we shall begin to work with the virtual farms we have created in the last module, which map the physical boundaries of the farm and household. In Exercise 2.3A (Identifying social capital on the farm) we shall identify links to social capital on our virtual farms.

Exercise 2.3A

Identifying social capital on the farm

Purpose: To identify and map the social capital of the farm.
(Have participants refer to Handout 2.3A.)

Method: Brainstorming, group discussion and representative mapping.

Materials*: (i) Handouts 2.3B (Case study – Social capital on the farm),
(ii) large flip chart paper or newsprint, (iii) thick marking pens,
(iv) scissors.

** Handout 2.2H from the previous session*

Allow 80 minutes for this exercise

Procedure

1. Ask the participants to get into their teams and review the case study given in Handout 2.3B
2. Distribute the handout among the participants. The handout should be used as an example.
3. Explain that the item refers to the different forms of capital. The second column identifies links to social capital.
4. Ask the participants to give examples of different forms of capital from farms they've worked with previously.
5. Ask the participants to identify the sources of these capitals.
6. Ask the participants to describe their relationship to social capital.
7. Ask the participants to comment on its four elements (i.e. trust, exchange, common rules and norms, connectedness).
8. List the information provided by the participant groups on a large sheet of paper and encourage them to discuss and share ideas.

Exercise 2.3A (continued)

9. Each team should brainstorm on other forms of social capital that cannot be easily allocated to the other forms of capital (natural, physical, financial, human).
10. Each team should present its findings to the rest of the participants. Encourage discussion.

Learning points

Trust emerges as the most important aspect of social capital. Social capital is an important and complex part of the farm resource management system. It touches on most if not all of the resources available to a farmer. If managed correctly, social capital can help improve profitability of the farm, thus farmers need to be conscious of its impact on their farm management choices.

Understanding social capital

"Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions" (World Bank/October 10, 2002).

Social cohesion is critical for rural communities to prosper economically and for development to be sustainable. Farmers can draw from the social resources that are available in rural areas in pursuit of farm management objectives. These consist of informal social networks and formal organizations used by farmers, the farm household and communities to exchange resources and information. The strength of social capital depends upon shared interests, common or mutual agreements on norms/rules, mutual trust and reciprocity within the rural community.

Social capital involves interaction between individuals and groups. It can be thought of as the oil that lubricates the process of joint farm management decisions. It can also be thought of as glue that holds families and communities together in partnerships of mutual support and accountability. These interactions can be informally or deliberately arranged. They help farmers to get to know each other and develop networks. The interactions increase confidence among the farming community to act for the overall benefit of the community and its members, and to build a commitment to the benefit of all. Social capital is dynamic and is both used and built through interactions where people share resources, knowledge, skills and values.

A way of looking at social capital is to ask the questions:
(i) Who owns it? (ii) Who has access to it? (iii) What are the relationships between people like? (iv) What rules, norms and sanctions exist? (v) How is social capital used? (vi) How strong are the connections and networks? (vii) What types of social arrangements exist? (viii) How effective are local groups? (ix) What are their weaknesses and how can they be addressed?

Understanding social capital (continued)

Generally, if the resource is collectively owed or held and there is access to it by the collective, then it is a social asset. Consider a community forest — it is collectively held by all the people in a given community. The local authority may have the responsibility of governing the resource, but it belongs to the community and the community has access to it under certain conditions. A river is not actually owned, but is held by a state authority that governs access to it.

Conversely, a bicycle may belong to a single person, who paid for it at a shop. It is privately owned. It can become as a shared resource (social capital) if the owner decides to make it available to others. But because the owner has the power to withdraw the asset, it is not really social capital to which others have inherent right.

In the case of human assets, one does not own a person. Therefore a shared human resource would be defined more by the right of access. For example, in many African cultures, there is an understood social work contract that communities can call upon for the completion of a variety of tasks including work on individual farms, community building projects and hunting. Such work arrangements would be considered social capital.

Using the approach described above, social capital can be divided into five categories:

- shared natural capital
- shared human capital
- shared physical capital
- shared financial capital
- institutional capital

Shared natural capital. Includes rivers, lakes, common grazing lands, shared croplands, wildlife and fish to which communities have shared access.

Understanding social capital (continued)

Shared human capital. Includes social work contracts that can be called upon by members of the community.

Shared physical capital. Includes items such as equipment, buildings, fences that are owned collectively and to which the collective has access. It also includes privately held items that may be made available under a cooperative arrangement within a group of people.

Shared financial capital. Includes group savings, group loans, group investments where the financial assets are held collectively by the group.

Institutional social capital. Includes *formal social organizations* that provide services, support and safety nets to the community. Some of the institutions may be structures that govern access to natural, human, physical and financial capital. *A cooperative* is an example of institutional social capital that provides access to physical and financial capital to its members. *A village bank* is another example of institutional social capital providing access to finance. *A village development committee* responsible for assigning work tasks in the community would be a form of institutional social capital providing access to human capital. *Clubs, associations and funeral societies* are all examples of institutional social capital.

Also included are *informal social organizations* providing services, support and safety nets. Here the focus is more on the trust arrangements that exist within society. *A group of parents* who come together to discuss the welfare of the children in the community is an example of informal institutional social capital. Another example might be the understanding that *families will assist one another* in times of difficulty. This form of social capital is discussed in greater detail later.

Understanding social capital (continued)

The intangibles. Beyond the more tangible forms mentioned, social capital can be also characterized by four elements*:

- relations of trust
- reciprocity and exchanges
- common rules, norms and sanctions
- connectedness, networks and groups

Relations of trust. Trust is the common thread in all forms of social capital. "Trust lubricates co-operation." One can trust a farmer or group of farmers based on a prior knowledge of the individuals involved. Or one can trust these same individuals based on one's faith in the system or structure within which they are working.

Social obligation and trust can replace time, money and energy when carrying out an activity. As trust is an essential for the formation of social capital, its absence (distrust) has a powerful negative influence. A breakdown of trust quickly destroys social capital, which normally takes a long time to build up.

Reciprocity and exchanges. Social capital often works at two levels: (i) where reciprocity (or exchange) is specific and timed, (ii) where reciprocal exchange is less defined. An example of specified reciprocity and exchange is found in the case of social labour arrangements where certain tasks are performed in return for food. Unspecified reciprocity and exchange is found when informal labour arrangements and mutual aid is used to help a farmer get over a shock. The families might contribute knowing that support will be reciprocated sometime in the future. In this case there is a continuing relationship of exchange that works out over longer periods of time.

* Pretty and Ward. 2001. Social Capital and the Environment, World Development 29 (2), 209–227

Understanding social capital (continued)

Common rules, norms and sanctions. Social capital operates according to systems of common rules, norms and sanctions. It is rare that these are openly negotiated. They are known and understood in advance by both parties as they are traditional and have been passed from generation to generation. The rules are built on a fundamental principle of collective over the individual.

Common rules, norms and sanctions create boundaries, which in turn create a sense of confidence that allows the individual to work with other persons or group members. The individual knows (or at least trusts) that others in the group will behave in a similar way. They also provide a code of sanctions for reward and punishment. These arrangements are intended to promote conformity of behaviour and action.

Connectedness, networks and groups. Social capital is built on connectedness, networks and groups. These come in many forms from formal and informal groups to looser development of networks. 'Connectedness' consists of the following five groupings:

- *Local connections.* Strong connections between individual farmers and within local groups and communities.
- *Local-local connections.* Horizontal connections between groups within communities or between communities, which sometimes become platforms and new higher-level institutional structures.
- *Local-external connections.* Vertical connections between local groups and external agencies or organizations, being one-way (usually top-down) or two-way.
- *External-external connections.* Horizontal connections between external agencies.
- *External connections.* Strong connections between individuals within external agencies.

*Understanding social capital (continued)***How is social capital used?**

In many parts of Africa, social capital is an important means of survival and forms the foundation for society and for economic activity. Social capital is used for many economic activities on farms, such as buying of inputs, marketing of produce, exchange of information, mutual help, and accumulation of savings and provision of loans.

Social capital also fulfils a welfare purpose within the village community, collecting funds for funerals or weddings and health. Social capital arrangements are used to manage more effectively labour, common property and infrastructure (including land, equipment and transport), finance and credit, organization, access to inputs and marketing, and on knowledge (both acquired and indigenous). In short, social capital permeates every aspect of rural economic life. As previously noted, the primary force behind social capital is trust.

Social capital is usually formed when people in the rural community come together either formally or informally to use their labour, (mutual ploughing, weeding, harvesting and building construction), their capital (rotating credit and savings groups) or their land and water (community forests, land clearing, water user associations, collective activity).

Social capital implies group action or joint action involving more than a single farmer. Group action brings benefits — it implies a higher level of information and discipline as well as psychological stimulation and support. Joint action can ensure that certain activities are carried out both more effectively (on a regular basis with greater skill) and more efficiently (with greater economies of scale) than if done individually by a farmer.

Understanding social capital (continued)

Some of the functions of social capital are:

- providing mutual help at key times of the year when labour demands are great;
- sharing resources at periods of personal tragedy and celebration;
- providing food assistance at times of austerity and drought;
- reciprocity in breaking bottlenecks through the provision of scarce resources;
- construction/development of community projects;
- the pooling of assets in order to expand the production potential;
- creating a safety net in times of hardship.

What type of social capital arrangements can be made?

The means of providing additional labour or other resources by rural farmers can be classified as informal, commercial, cooperative arrangements, sharecropping and communal labour. Each of these categories can be developed through both formal and informal arrangements.

Informal arrangements. These imply that help is given on a friendly basis without involving financial transactions. Relatives, friends and neighbours are most commonly providers of mutual aid. But provision of neighbourly help or mutual aid is unlikely to be 'free' in the widest sense. To accept help puts the recipient under a certain social or moral obligation. Informal arrangements happen entirely in the absence of legally binding arrangements but the trust and social norms that exist make it last for generations among communities. An example of this is the exchange of help between farmers at busy times of the year.

Understanding social capital (continued)

In much of Africa help is often given when there are emergencies. Assistance is given spontaneously. The help usually comes from individuals. However, the farmer who receives the support is often under a moral obligation to the community rather than to individuals in the community.

Mutual aid or neighbourly help is also given at regular peaks in the farming cycle. This implies an obligation to exchange something in kind. Very often labour is exchanged for labour, for hospitality, for use of machinery or for other services but not for cash. This type of social capital is usually encountered among relatives and among small-scale 'family' farmers.

Farmers can also cooperate informally among themselves by meeting together to discuss their farming problems, compare their records and accounts and share market information.

Commercial arrangements. These are services made in the expectation of payment and profit. Services are paid for at a rate agreed in advance. Agricultural contractors, seasonal and casual workers are 'commercial' sources of additional labour. Such arrangements do not carry any social obligation, any exchange of favours, or any commitment to use the service again. However, social ties may reinforce the contractual agreement. Commercial arrangements of sharing are more common in market-oriented farming. Commercial arrangements will no doubt continue to meet the greater part of the demand for additional labour services.

Cooperative arrangements. Social capital is often promoted through grouping of farmers to better provide agricultural inputs, credit and market surplus produce. Cooperative arrangements differ from commercial provision of services. They are established for the mutual benefit of users. Rather than the suppliers initiating the arrangement,

Understanding social capital (continued)

cooperative arrangements are initiated by farmers themselves. Cooperative arrangements also differ from informal arrangements in that there is prior discussion and formal commitment to the group, which is legally binding and which continues on agreed terms for a defined period.

Sharecropping. Under sharecropping the farmer rents out land for an in-kind payment as a percentage share of the physical output of the farm. Under this system, a farmer makes another person (called a sharecropper) responsible for a particular crop, which the latter cultivates and harvests. The sharecropper is not paid a wage but is allowed to keep a share of the crop yield. A disadvantage of the system is that the sharecropper may cause permanent damage to the crop in trying to get as high yield as possible.

Communal labour. This is a common practice in which villagers work together when there is a job that needs doing quickly. It is a good way for the people to help themselves in improving their living conditions. Sometimes an individual farmer can be helped by communal labour to build a house or clear a farm.

There are many societies in Africa where communal work groups are the only means of supplementing family labour. The work groups are formed on the basis of ties of kinship, age or neighbours. They still play an important role in tropical Africa although as commercialization occurs this role is diminishing. The groups may be organized on the basis of reciprocity, with incentives in kind offered. Alternatively they may consist of groups of individuals who work for cash or payments in kind and cash. Although communal work groups do not increase the total supply of labour, in practice people working together are frequently willing to work longer hours than when they work alone. Moreover, such heavy work as bush clearing is considerably facilitated by group labour.

Understanding social capital (continued)

What are the weaknesses of social capital arrangements?

Breakdown of informal arrangements. Commercial and market trends in Africa are undermining the traditional basis for neighbourly help and mutual aid. Farm enterprise specialization tends to prevent farmers from helping one another. It becomes more difficult to provide assistance if a farm enterprise increases in size. Frequently too high a level of assistance is needed. HIV/Aids has also led to breakdown of informal social exchanges as there is a dearth of labour available for exchange and reciprocity.

Farmers with a more 'commercial' approach to farming tend to regard labour as a scarce resource with an exchange value. More commercially minded farmers tend to be more aware of their time and are more reluctant to carry out neighbourly acts that were once commonplace. The more commercially minded farmer may also find that relying on informal sources of labour at key times or in periods of distress has become less reliable. As farmers become more commercial they are often willing to pay workers so that both reliability and quality are assured. They want to know that workers will always be available when needed and will be of sufficient calibre to cope with demands of modern technology and mechanization.

Market-oriented farming requires a higher level of labour skills. This may be more important than informal obligations to relatives and friends and even cost considerations.

Breakdown of more formal group arrangements. When group activities, such as marketing, input supply and credit mobilization are sought, farmers organize themselves into either formal or informal groups. While the productivity of a group is potentially greater than that of individuals, a group does not automatically perform better. No active group is ever immune from conflict, and conflicts often

Understanding social capital (continued)

result in the social breakdown of the group. A group locked in internal conflict cannot adequately provide human rewards to its members. In some instances the existing social conflict may be so great that it creates a lack of commitment by its members. Some members may even leave the group altogether. Social conflict is a major reason for low group cohesion, low performance and low sustainability. These problems of conflict result in lack of consensus in decision-making and the organization of splinter groups.

Conflict can occur within all of the social capital formation arrangements mentioned. The causes of conflict are complex. Among the more formal groups there are many reasons for it, such as group size, heterogeneity of membership, low levels of participation, ineffective leadership and conflicting interest groups.

Listed below are a few common sources of social conflict.

1. *Failure of communications* is one of the commonest causes of disagreement. Conflict may arise early in the life of a social network because of failure to develop adequate channels of communication. Failure to communicate occurs at all stages of group life. Communication must be a two-way process.
2. *Formation of splinter groups* sometimes occurs as the goals of group members change. New goals may not be shared by all members and may not be compatible with the original objectives of the group. Over time some members may subscribe to new goals while others don't. If new goals emerge that are incompatible with the original objectives, members could feel polarized. In this event the original group may even disintegrate.

Understanding social capital (continued)

3. *Difficulty in reaching consensus.* Members may agree to cooperate but disagree about how to cooperate. Agreement over a group task will be achieved more readily if members recognize the importance of unified action.
4. *Commitment of group members* is needed to maintain group motivation. Commitment generally comes when the members see the benefits of membership are greater than the input required to realize those benefits. If members feel the benefits are not equal to the input, individuals may become inactive or drop out.
5. *Interpersonal conflict.* Social arrangements tend to break down when unanticipated difficulties emerge. Disagreements among neighbours occur when there are inadequate ways of resolving these problems. For example, in many countries of Africa memories of unfortunate experiences with 'friendly' arrangements may have turned some farmers against the thought of cooperation in any form. As farming becomes more of a business with more capital at stake farmers may feel the need for more formal, guaranteed arrangements.
6. *Group cohesion.* This attribute of groups is the force that binds members together and helps the group cope with external shocks and stresses. The more cohesive a group is the greater the power it can exert over its members.
7. *Lack of trust and corruption* are also causes of conflict and ultimate group breakdown. This may occur as a result of poor leadership, failure to introduce methods that ensure greater accountability and lack of transparency and democratic principles.

Understanding social capital (continued)

8. *Lack of understanding* among group members of responsibilities, credit liabilities and accountability. Most often members lack capacity and skills in such topics as enterprise feasibility assessment, bookkeeping, market development, and the technical expertise to develop new enterprises and adapt them to the farming system.

How can these weaknesses be addressed?

Group size and composition. Groups with small, homogeneous membership usually find it easier than large, mixed groups to develop an effective network of human relationships. Small, intimate groups tend to be more cohesive than large groups. Cohesive groups achieve more because they can impose greater discipline on members. Small groups are less likely to suffer from breakdown of communications, formation of splinter groups or failure to reach agreement. Smallness has its drawbacks too. For some purposes the wealth of resources, variety of interests and greater power of larger groups can be an advantage.

Effective leadership. One of the key factors for the success of a group is the presence of effective local leadership. Good leadership in informal groups and more formal local organizations result in greater accountability, transparency, and innovativeness and an effect of increasing the commitment of group members. For leadership to be effective, communication with members needs to be assured. Part of effective leadership is to be able to monitor and evaluate progress towards the realization of the group's objectives and to be able to respond to changes.

Understanding social capital (continued)

Management training programmes. Training programmes for both group leaders and members are necessary to ensure that participants have the tools at their disposal to resolve problems of conflict and mismanagement. Training programmes in order to be effective require the full participation of group members in their design.

Organizational arrangements. The introduction of good management practices and arrangements are often needed to improve performance. This could include the regularization of meetings, the adherence to rules of decision-making, and procedures that increase the flow of communications and information among members. Actions that can be taken by management include rotating leadership responsibilities; spreading skills of administration among members; establishing and convening meetings on a regular basis; delegating responsibility to group members; and introducing sanctions and instruments that can be used to control malpractices.

Management procedures. Simple management procedures are optimal. There is a need for simplified and standardized methods of bookkeeping, record keeping and financial control, and these should be laid down in the group constitution. Simplified and appropriate methods of reporting and bookkeeping should permit most members to understand the intricacies of the bookkeeping and financial systems.

Case study – Social capital on the farm

Farm household

Item	Link to social capital
<i>Natural</i>	
3 Fields (1 ha each = 3 ha) <ul style="list-style-type: none"> • Usually Sorghum, maize millet • Access to stream • Access to a variety of common natural resources; thatch, herbs, weaving grass, building materials 	Common property Common property
<i>Physical and financial</i>	
Physical: Own <ul style="list-style-type: none"> • 3 cows; 2 oxen; 3 goats • Several chickens • 2 hunting dogs • 1 yoke • 1 plough • 1 hoe; 2 shovels • 1 bicycle Financial: Own <ul style="list-style-type: none"> • Sells surplus to market Physical: community <ul style="list-style-type: none"> • Rural roads to enable marketing of surplus crop • Church • Primary school • Clinic • 2 boreholes (working) • 1 hand-dug well (working) • 2 other wells (dry) 	Oxen shared with son in return for labour Plough shared with son in return for labour Village development committee helps with marketing Common property Common property Common property
<i>Human</i>	
3 adult children (1 son, 2 daughters) <ul style="list-style-type: none"> • Son and his children help prepare, plant & harvest fields • Knowledge about which crops to grow in drought • Physically strong (carrying and building) • Good coping strategy for when food is limited 	Family reciprocity arrangement Food for work safety net
<i>Social</i>	
<ul style="list-style-type: none"> • Tenure security that enabled her to retain her land after her husband's death • Shares harvest with her children and their families • Food for work safety net (Care Zambia) • Storage at son's home 	Village development committee helped improve

Inputs and markets – where profits are made

In this session the participants will be introduced to the off-farm management activities of input supply and marketing. Here they will learn that the farm is more than merely a place of production. It is a business that has to be managed beyond the production activities. The concepts of inputs, equipment and markets as the place where profits are made will also be introduced here.

Opening statement

As before we shall begin this session by reviewing the main points in Handout 2.4A (Inputs and markets), but this time we shall do it as a "farm team" competition as outlined in Exercise 2.4A (Test your input and marketing knowledge).

This relates to the questions you have already answered in the worksheet provided.

***Note:** The winning team will not have to help clean up at the end of the day (the reward can be changed in consultation with the group).*

Exercise 2.4A

Test your input and marketing knowledge

Purpose: To review the inputs, production, market sequence. (Participants should have read Handout 2.4A prior to this exercise.)

Method: Farm team participatory competition.

Materials: (i) Handouts 2.4B (Worksheet – Test your input and marketing knowledge), (ii) 27 strips of paper per team, (iii) flip chart paper, (iv) thick marking pens.

*Allow 80 minutes
for this exercise*

Procedure

1. Divide the group into their farm teams.
2. Prepare a score sheet. It can be drawn on the classroom board or on a flip chart as shown.
3. Refer to Handout 2.4B (Worksheet – Test your input and marketing knowledge), which should have been distributed to the class and completed prior to this session.
4. Give each team 27 strips of paper to answer the questions.

Question	Possible score	Team 1	Team 2	Team 3
1	5			
2	5			
3	5			
4	5			
5	5			
6	5			
7	5			
8	5			
9	5			
10	5			
11	5			
12	5			
13	5			
14	5			
15	5			
16	5			
17	10			
18	10			
19	5			
20	5			
21	5			
22	5			
23	5			
24	5			
25	10			
26	5			
27	5			
Total	150			

Exercise 2.4A (continued)

5. Each team should discuss and answer each of the questions. Their answers should be short and to the point. They should write down each answer on a separate strip of paper. They should be sure to write the name of their farm group and the question number on each strip.
6. After 20 minutes ask each team to put the papers in order from 1 to 27. Collect the question sheets (so that there can be no more writing). Keep them separated by team.

Start with Question 1. Ask one person from each team in turn to answer the question according to their papers. Each team will have only 10 seconds to answer each question. Keep time carefully to be fair.

7. When the team has read its answer, decide on a mark and write it on the score sheet. If you award less than full marks for a question, you may call on another team to finish the answer for the remaining points. If no team can answer the question, then no marks are to be awarded for that question. There should be no discussion unless no team gets the correct answer.
8. Work through all the questions in the same way. There are many questions, therefore keep the pace lively.
9. When all the questions have been answered, total up the marks and see which team wins and gets the reward. If they all get the same score, then no one wins. Answers to the questions in Handout 2.4B are provided for the facilitator on the following pages. (Remember: each question is worth 5 points, except questions 17, 18 and 25, which are each worth 10 points each.)

*Allow 30 minutes for answering questions
(about 1 minute per question)*

*For the facilitator**Answers to the questions in Handout 2.4B**(Worksheet – Test your input and marketing knowledge)***1. Explain how money is made on the farm.**

Money is made through the management of the process of inputs, production and marketing.

2. Three elements of the farm management model.

INPUTS → THE FARM & PRODUCTS → MARKET

3. Any two kinds of inputs.

Inputs can be divided into six categories: (i) labour, (ii) equipment, (iii) production requisites, (iv) genetic material, (v) finance, (vi) information.

4. Any two sources of inputs.

Most inputs can be obtained from a number of sources: (i) the farmer's own farm, (ii) another farm, (iii) private suppliers, (iv) local general dealers, (v) farmers' cooperatives, (vi) product distributors.

5. Before deciding on an input what must the farmer determine?

Farmers need to know which inputs to use and where to get them. They need to determine whether the additional cost of using inputs will generate sufficient additional income to cover these costs. In each case, the farmer must consider the price, quality and availability offered by the various sources of inputs.

For the facilitator (continued)

6. Name the qualities inputs must have.

(i) Is it technically effective? (ii) Is it of dependable quality? (iii) Is its price reasonable? (iv) Is it available locally in particular when farmers need to use it? (v) Is it offered for sale in appropriate sizes or amounts?

7. What qualities must a farmer look for in a supplier?

In addition to knowing which input to buy, farmers also need to know who are reliable and trustworthy suppliers of inputs, equipment, machinery, spare parts and maintenance supplies. Farmers also need to know what each item supplied offers in terms of prices, quality, and availability of inputs and equipment.

8. What is a market?

The place where the exchange takes place is called the market. The market is made up of sellers, buyers, products and prices. The relationship among these elements influences the amount of money received in exchange for products.

9. What is marketing?

Marketing is the process of exchange between the producer (farmer) who sells and the consumer who buys. The exchange takes place when the two sides agree on an exchange rate (price). If they do not agree on a price, no exchange will take place. Price is the exchange value of a product measured by money.

For the facilitator (continued)

10. What determines the market price?

The price of the product is determined by two concepts: supply and demand. Supply refers to how much of that product is available and on sale. Demand refers to how much consumers (people who buy it) want the product. The balance between supply and demand sets the price of the product.

11. Using the two factors that determine price, give a situation in which price would be low.

High supply, low demand.

12. Using the two factors that determine price, give a situation in which price would be high.

Low supply, high demand.

13. What is one factor in Africa that makes marketing important?

Two factors make it important to market agricultural products in Africa. First is the fact that populations in towns and cities in Africa are increasing. This is increasing the demand for agricultural products. Farmers are the only ones who can supply these products. If farmers only produce for their own families, there will not be enough food for people in urban areas.

For the facilitator (continued)

14. What is the second factor in Africa that makes marketing important?

Second, the economies in Africa have changed. People need and want things that require cash such as school fees and uniforms, consumer goods (e.g. radios, televisions), and household goods (e.g. soaps, cooking utensils, linens). If a family needs cash, it needs a source of income. Families that live in towns look for jobs or start businesses. Rural farm families must rely on their farms to generate cash income. They do this by selling (marketing) agricultural products. "Market-oriented farming" means thinking about and making decisions about selling agricultural products in the market.

15. How can extension workers help farmers benefit from marketing?

Farmers can plan their farms to use marketing opportunities. Instead of only growing food for their families, they may be able to generate income by growing crops for the market. Extension workers can help farmers understand about how the market works. Understanding the market reduces the farmer's risk in generating a cash income for the family. Good farm management requires a good understanding of the market. The decision-making boundary of the farm must extend to include the market.

For the facilitator (continued)

Most smallholder farmers sell their products at the farm or local markets because it is easiest and simplest. Many farmers do not have the skills, resources or yields to access other markets. Extension workers can help farmers improve their ability to use the local market to increase profits. This will help farmers acquire the skills, resources and yields necessary to access other markets.

Extension workers can help farmers with reliable information about markets including: (i) prices, (ii) quality requirements, (iii) handling, (iv) packaging and transport, (v) niche marketing opportunities.

16. How does farm management relate to marketing?

From this discussion, we can see that the decision-making boundary (the farm management boundary) extends well beyond the production unit and the household. It extends beyond the natural resource base of the farm. It includes all the factors that affect the profitability of the farm: inputs, production and markets.

17. Which of the following would probably make a farmer a “price taker”? Which would probably make a farmer a “price maker”? Explain your answers in terms of supply, demand, price, quality, timing. (e.g. taker: quality low, supply high, demand low, price low).

Note: the following are possible answers, depending on how the situation is interpreted. The main point is for the participants to understand what puts the farmer in the position of being a price taker or price maker.

For the facilitator (continued)

- Selling maize in a local market just after the harvest season
Taker: large supply, large demand, low price
- Selling strawberries in winter
Maker: low supply (out of season), large demand, high price
- Carrying fruit to market loose
Taker: lower quality, lower price
- Carrying fruit to market packaged
Maker: better quality, higher price
- Selling grazing cattle at the end of winter
Maker: better quality, higher price
- Selling grazing cattle at the start of winter
Maker: higher quality, higher price
- Selling organic vegetables
Maker: specialized market, high demand, low supply, high price
- Reducing livestock numbers on overgrazed land
Taker: lower quality, lower price
- Growing mushrooms
Maker: specialized market, high demand, low supply, high price
- Selling cattle when the school year starts
Taker: high supply, lower price

18. Why is the price of a product in a shop higher than the price paid to the farmer?

The price of a product in a shop is higher than the price paid to the farmer because of the cost of the steps in the marketing chain. Each person or agent who handles the product changes the product in some way and each charges a fee. This fee is added to the cost of the final product sold to the customer.

For the facilitator (continued)

19. What are the three main areas of costs involved in the marketing channel?

- product preparation and packaging costs;
- processing and handling costs;
- transport costs.

20. At present where must most smallholder farmers sell their products? Why?

Most smallholder farmers sell their products at the farm or local markets because it is easiest and simplest. Many farmers do not have the skills, resources or yields to access other markets.

21. What can extension workers do to help farmers access markets other than the local markets?

Extension workers can help farmers improve their skills and ability to select more lucrative markets to increase profits. They can also provide them with market information.

22. What is the most common marketing problem?

Lack of market information is the most important problem in marketing. Farmers need current price information to plan properly.

23. Name any two other common marketing problems.

- lack of expertise and information; including a shortage of extension officers to convey information;
- low volumes and quality problems with their produce leading to poor returns;

For the facilitator (continued)

- government support is minimal;
- market flooding (over-supply);
- lack of local marketing outlet infrastructure (e.g. a lack of roadside stalls);
- lack of technical expertise on packaging and grading;
- inconsistent supply of farm products;
- little contact between producers and buyers;
- transport – availability, costs, financing to pay costs;
- lack of (or access to) storage facilities and pack-houses;
- prices of equivalent imported products are low;
- discrimination in some marketing channels.

24. What is value adding and why is it important to marketing?

Add value to their produce by wholly or partially processing it (e.g. drying, milling) and then market products through the various marketing channels.

25. Define any two of the following marketing options.

- Farmgate marketing
Marketing done by the farmer at the place where the product is produced.
- Village marketing
Village marketing entails the farmers in village community organizing to sell their produce at a farm stall located in the village or along a main road.
- Produce markets
Markets set up in larger centres mainly for the sale of vegetables and fruit.

For the facilitator (continued)

- **Stock sales**
The stock sales system uses the auction system where sellers offer animals for sale and buyers offer a price for the animals.
- **Contract marketing**
Markets where the farmer sells directly to the retailer at agreed prices, quantities and qualities.
- **Collective marketing**
Farmers organize to market their products together on a formal market.
- **Community-supported marketing**
A farmer or group of farmers supported by a neighbourhood or community agree to provide produce at a set price or a proportion of yield based on the degree to which the community has supported them (i.e. supported their costs of production).

26. What can extension workers do to help farmers with inputs?

The extension workers have an important role to assist farmers in making management decisions about inputs, equipment and markets. They can help farmers to ask the right questions about sources of inputs and equipment and about the inputs and equipment themselves. They also can provide farmers with information about inputs and equipment including:

For the facilitator (continued)

- Research information on the technical effectiveness of the inputs and equipment;
- Experiences of other farmers with the inputs and equipment;
- Availability of inputs and equipment in the area.

27. What is the real decision-making boundary of the farm?

From this discussion, we can see that the decision-making boundary (the farm management boundary) extends well beyond the production unit and the household. It extends beyond the natural resource base of the farm. It includes all the factors that affect the profitability of the farm: inputs, production and markets.

Exercise introduction

Now that we have understood input supplies and markets, we want to apply them to our virtual farms.

In Exercise 2.4B (Inputs and markets on the farm) we shall brainstorm and discuss how to include and map inputs and markets for our farms.

Exercise 2.4B

Inputs and markets on the farm

Purpose: To identify (i) their input requirements and enable participants to visualize their products in the market, (ii) likely markets for their farm's products and likely problems in marketing their farm's products.

Method: Brainstorming, group discussion, mapping.

Materials: (i) Handouts 2.4C (Worksheet – Inputs and equipment on the farm), D (Worksheet – Marketing brainstorming) and E (Diagram – Input supply and markets), (ii) large flip chart paper or newsprint, (iii) 2–3 sheets of lined paper per team, (iv) thick marking pens, (v) scissors.

Allow up to 45 minutes for this exercise

Procedure

Part one Inputs

1. Divide the group into their farm teams.
2. Give each participant Handout 2.4C (Worksheet – Inputs and equipment on the farm). Ask each team to complete the grid. To do this they should discuss and agree on the following:
 - Choose three enterprises (one must be a livestock enterprise).
 - Identify the basic input and equipment requirements (3–4 only) for each enterprise (do not include labour).
 - Identify the source (supply) of each input or equipment.
 - Identify any problems they might encounter with the product in terms of the availability, accessibility, reliability and appropriateness of the supply or product.

The source of each input or equipment should be one of the following: (i) the team farm itself, (ii) another farmer, (iii) a supplier in a nearby town, (iv) a supplier in a town/city far from the farm.

Exercise 2.4B (continued)

3. Ask each team to report and discuss their findings.
 - What is their experience about where farmers can get inputs and equipment?
 - What is their experience about maintenance, repairs and spare parts for equipment and machinery?
 - What are some of the most common problems encountered by farmers in getting inputs and equipment?
4. Following the discussion, each team should list potential market outlets for their farm produce, creating symbols or labels for their inputs and placing them onto their farm map. Include arrows indicating where the inputs go onto the farm, linking farm enterprise products to the relevant market outlets. See the example in Handout 2.4E (Diagram – Input supply and markets).

Part two
Marketing

Allow up to 45 minutes for this exercise

1. Give each participant Handout 2.4D (Worksheet – Marketing brainstorming) and ask the teams to brainstorm over the following:
 - Identify two likely end uses of three products from their virtual farm at a local market and two at large city markets (e.g. if they grow wheat, the end product at a local market might be bread; at a large city market it might be sandwiches in a hotel restaurant). At least one product must be from livestock.
 - Identify the most likely profitable market for three farm products.
 - Identify the problems they are likely to run into when marketing the products from their virtual farm to the selected markets they have identified.
2. As ideas are developed they should be discussed and if appropriate provisionally listed on working sheets of paper.

Exercise 2.4B (continued)

3. When finished team members should then record their best answers in the spaces provided in Handout 2.4D (Worksheet – Marketing brainstorming).
4. Ask each team to share their findings. Start with the crop they agreed likely to be most profitable. Ask each team in turn until all the crops and their markets are covered. Encourage discussion. Look for creativity and an expanded understanding of the concept of marketing.
5. After the discussion, each team should design symbols or labels for their chosen markets and place them on their farm maps. They should lay arrows from the crops to the relevant market. See the example map in Handout 2.4E (Diagram – Input supply and markets).
6. Follow this up with a wrap-up session to discuss the main points again. Encourage the participants to ask questions from their reading and their class work.

Exercise 2.4B (continued)

Learning points

- Markets are the source of cash income to a farm.
 - Incorporating markets into farm planning extends the decision-making boundary of the farm from the original physical farm, from the wider "household farm", to the "market farm".
 - Prices of products are determined by supply and demand.
 - Common products in large quantities generally attract lower prices.
 - Rare products and high-quality products generally attract higher prices.
 - Opportunities exist for small-scale farmers to increase the profitability of their farms and increase cash income by learning market-orientated farm management.
 - To enter into the market, farmers will need to investigate the supply and demand of different crops and animal products at different times of the year to see which ones will bring them the greatest opportunity for increasing their profits from their farms.
 - Extension workers can help farmers learn to be more market-oriented by helping them with market information. This means, of course, that extension workers will need to gather market information and understand its use in making choices on the farm.
-

*Space for notes
and questions
for the facilitator*

Inputs and markets — where profits are made

We have looked at the decision-making boundary of the farm in terms of the physical farm (the enterprise units) and in terms of the household. We learned that farm management decisions do not only involve production related decisions. Farm management also requires that decisions are made about off-farm opportunities. Two key sets of management concerns are inputs and markets: where profits are made. In this session we will expand the decision-making boundary of the farm to include inputs and the market.

How money is made on the farm

As noted earlier, extension officers and farmers are often trained only in production. The questions of what to grow, how to grow and how much to grow are production decisions. While this is a very important part of farm management, there is much more to making money on the farm.

A farm is like a factory. It is a business. The production unit (or enterprise) is the place where the goods are produced. And like any factory, money is made when raw materials (called inputs) are combined with labour (another input) and processed (called production) into goods that are sold to consumers. If the cost of the inputs and production are less than the income generated by sales, then the business makes money. However, if the cost of inputs and production are greater than the income generated by sales, then the business loses money.

Good production managers can be good business managers only when they understand clearly that money is made through the management of the process of

INPUTS → PRODUCTION → MARKETS

*Inputs and markets (continued)***Inputs**

Farmers require inputs, equipment and materials in order to produce outputs for the market. These inputs and equipment include seeds, fertilizers, pesticides, livestock feeds, medicines and tools.

While much of the inputs and materials may come from the farm itself, such as livestock feed, compost and farm yard manure, some of the inputs required by the farmer have to be manufactured and specially prepared. Livestock producers often require purchased feed. Although it is possible for farmers to mix some of these themselves it is often more efficient for them to be manufactured. Similarly, only the simplest tools and implements can be made locally and by hand. Farm mechanization and specialized implements need to be manufactured.

Farmers need to know which inputs to use and where to get them. They need to determine whether the additional cost of using inputs will generate sufficient additional income to cover these costs.

Inputs can be divided into six categories:

- labour
- equipment
- production requisites
- genetic material
- finance

Labour. Labour refers to the people who work on the farm. In some countries labour is the most limiting factor to growth and profitability. The causes may be the shortage of labour (especially skilled labour) or the cost of actual labour.

Inputs and markets (continued)

Equipment. Equipment refers to the tools, handling equipment (for livestock) implements and means of traction (tractors or draught animals) farmers use to work their land. The choice of technologies is important. It is important that they do the job that the farmer requires. Technologies chosen must also fit into the livelihood and household system of the farmer. In other words, the tools, implements and means of traction must be appropriate to the farmer's situation. Often the farmer will make choices between labour and equipment.

Production requisites. For crop production, requisites are inputs such as seed, seedlings, fertilizer, manure, pesticides and other items used to grow crops. For livestock production, they include feed, medicines, dips, licks and similar items. As with equipment production, requisites need to be appropriate to the farmer's situation.

Genetic material. Genetic material refers to trees for orchards, point-of-lay-hen, day-old chicks, breeding stock and dairy stock for livestock enterprises. These are critical inputs into the farm. Issues of quality and suitability for the climate and other factors are key issues to consider when choosing genetic material.

Finance. Finance refers to the money needed to purchase or pay for the other inputs. It includes cash, loans, trading agreements and credit arrangements. How farmers finance their farms can make a difference between profit and loss. Thus again, the farmer must take great care to farm appropriately.

Sources of inputs. Most inputs can be obtained from a number of sources: (i) the farmer's own farm, (ii) other farms, (iii) private suppliers, (iv) local general dealers, (v) farmers' cooperatives, (vi) product distributors. In each case, farmers must consider the price, quality and availability of the various sources of inputs.

*Inputs and markets (continued)***The market**

Once the appropriate input and equipment has been selected the farmer can start producing. However, farm products gain value only once they leave the farm and are exchanged for money. Thus we need to look at marketing.

What is the market? The market is the place where the exchange of products for money takes place. The market is made up of sellers, buyers, products and prices. The relationship among these elements influences the amount of money received in exchange for products.

Marketing is the process of exchange between the producer (farmer) who sells, and the consumer who buys. The exchange takes place when the two sides agree on an exchange rate (price). If they do not agree on a price, no exchange will take place. Price is the exchange value of a product measured by money.

The price of a product is determined by two concepts — supply and demand. Supply refers to how much of that product is available and on sale. Demand refers to how much consumers (people who buy it) want the product. The balance between supply and demand sets the price of the product.

High prices are a result of supply being lower than demand. For example, suppose the farmer produces maize before anyone else. Everyone would want it, thus the farmer could raise the price without worrying about competition from other producers. Low prices occur when the supply of a product is greater than the demand for the product. For example, suppose the farmer has tomatoes to sell but everyone is selling tomatoes too. The supply is far greater than the demand. In order to get rid of the tomatoes the farmer may be forced to reduce prices.

Inputs and markets (continued)

Understanding the relationship between supply and demand will help farmers to decide on product price. When farmers plan they need to know what prices to expect. When they sell they need to know what prices to charge.

Why is it important to market agricultural products in Africa? Two factors make it important to market agricultural products in Africa. First is the fact that populations in towns and cities in Africa are increasing. This is increasing the demand for agricultural products. Farmers are the only ones who can supply these products. If farmers only produce for their own families, there will not be enough food for the people in urban areas.

Second, the economies in Africa have changed. People need and want things that require cash such as school fees and uniforms, consumer goods (e.g. radios, televisions) and household goods (e.g. soaps, cooking utensils, linens). If a family needs cash, it needs a source of income. Families that live in towns look for jobs or start businesses. Rural farm families must rely on their farms to generate cash income. They do this by selling (marketing) agricultural products. "Market-oriented farming" means thinking about and making decisions about selling agricultural products in the market.

Farmers can plan their farms to use marketing opportunities. Instead of only growing food for their families, they may be able to generate income by growing crops for the market. Extension workers can help farmers understand how the market works. Understanding the market reduces farmers' risk in generating a cash income for their family. Good farm management requires a good understanding of the market. The decision-making boundary of the farm must extend to include the market.

*Inputs and markets (continued)***Marketing is finding out what the customer wants and supplying it**

From the point of view of the farmer, marketing is a process where a farmer finds out what the customer wants and supplies it at the quality and price at which the customer is prepared to buy, and at which the farmer makes a profit. Agricultural marketing involves a number of tasks including harvesting, grading, sorting, packing, transporting, storing, processing, distributing and selling of produce.

Price takers. Farmers who produce and sell in a competitive market with many buyers and sellers are called *price takers*. Price takers have very little influence on the price. They can sell as much as they want at the market price. Their marketing challenge is to cope with fluctuations in supply and demand during the year. In such an environment, successful marketing implies selling as much as possible at higher prices.

Price makers. In situations where the market may not yet exist or may be very small, the farmer may be a *price maker*. This is true for specialized products produced for 'niche' markets. Their marketing challenge is to get a higher price by making their products different from other similar products. This could be done by growing a new variety or producing a product of higher quality to be sold in specialized markets (e.g. mushrooms, flowers).

*Inputs and markets (continued)***The marketing chain**

The different steps involved in moving produce from the farm to the consumer, is called the *marketing chain*. Each of these steps involves costs. At the simplest level, the steps and costs involved may just be the time taken to walk to a nearby market and sell produce. At the most complex level, a product may be stored for long periods, transported long distances and processed several times before reaching the form in which it is finally sold.

The cost of marketing makes the price of a product in a shop or retail market higher than the price paid to the farmer. Each person or agent who handles the product changes the product in some way and charges a fee. This fee is added to the cost of the final product sold to the customer.

Farmers selling directly to the end customer will receive the full market price, but will be responsible for all marketing costs. Farmers selling to someone else (e.g. a trader who will process the product and then sell it again) will receive only the price paid by the trader. The trader is then responsible for the marketing costs.

Costs involved in the marketing chain

Product preparation and packaging costs. Products must be prepared and packaged for marketing. This means they must be moved from the field to a place of preparation. Packaging helps to protect the product from damage and to keep the product attractive to the customer.

Inputs and markets (continued)

Handling costs. At all stages in the marketing chain, produce will have to be packed and unpacked, loaded and unloaded. Each time the product is handled there is a cost involved. The cost is added to the final price of the product.

Transport costs. Once packed, the produce is then transported. Whether by foot, bicycle, car, truck or other means, transport is a cost that is added to the final price of the product.

Types of markets

There are many different types of markets. Some are close to the farmer while others are far away. At some markets, farmers can sell products with very little packaging, handling and transporting. Other markets may require substantial packaging, handling and transporting. Each type of market requires different information, different skills and different decisions. Farmers must carefully consider these requirements when choosing a market.

Most smallholder farmers sell their products at the farm or local markets because it is easiest and simplest. Many farmers do not have the skills, resources or yields to access other markets. Extension workers can help farmers improve their ability to use the local market to increase profits. This will help farmers acquire the skills, resources and yields necessary to access other markets.

Local markets. Markets the farmer can reach fairly easily and are not too far from the farm.

Distant markets. Markets that are far from the farm. The distance requires the farmer to organize transport or sell to an agent at the farm or in the nearby town.

Inputs and markets (continued)

Export/international markets. Markets in other countries. Very often they are outside Africa. Export marketing requires specialist information and skills. Very few smallholder farmers are able to sell directly to the export market.

Specialized markets. Markets for very specific products. Generally they will have very specific quality and packaging requirements. Such markets might include hotels, processing plants, caterers, schools and hospitals.

Marketing channels

A number of marketing channels exist for farmers. They can:

- market directly from their farms to the surrounding communities;
- supply processing units;
- directly supply various retail outlets such as supermarkets and hotels;
- market through farm or market stalls;
- sell through contracts to commercial farmers or processors.

*Inputs and markets (continued)***Options for marketing produce*****Farmgate marketing***

Farmgate marketing is where consumers come to the farm to buy produce. Examples include the sale of vegetables from a farmer's garden, the sale of eggs from an egg production unit and the sale of pigs directly from the farm. This type of marketing is common in traditional small farming.

Village marketing with farm stalls

Village marketing entails the farmers in village community organizing to sell their produce at a farm stall located in the village or along a main road. Farmers may sell as individuals or they may group together to sell collectively. Unlike farmgate marketing, the farmers take their products closer to the customer.

Produce markets

Produce markets are set up in larger centres mainly for the sale of vegetables and fruit. They usually cater for larger-scale commercial producers and, in turn, supply the larger urban centres. These markets usually seek larger quantities of specific grades of produce. Farmers can use agents at the market to sell their produce.

Stock sales

Stock sales (auction system) where the sellers offer animals for sale and buyers offer a price for the animals. The seller may decide whether or not to accept the price offered by the buyer. The prices are not fixed. Generally, prices reflect the supply and demand position, both locally and within the entire market. Pigs, cattle, goats and other animals are commonly marketed this way.

Collective marketing

Farmers may choose to market collectively. Farmers' associations may get together and jointly market their crop. This form of marketing is one of the basic functions of a cooperative.

Contract marketing

With contract marketing the farmer sells directly to the retailer at prices, quantities and qualities agreed to in advance.

Community-supported marketing

A farmer or group of farmers supported by a neighbourhood or community agree to provide produce at a set price or a proportion of yield based on the degree to which the community have supported them (i.e. supported their costs of production).

*Inputs and markets (continued)***Common marketing problems**

Lack of market information is the most important problem in marketing. Farmers need current price information to plan properly. Lack of information leads to frequent surpluses on the market, which decrease prices. Other marketing problems are:

- lack of expertise and information; including a shortage of extension officers to convey information;
- low volumes and quality problems with their produce leading to poor returns;
- government support is minimal;
- market flooding (over-supply);
- lack of local marketing outlet infrastructure (e.g. a lack of roadside stalls);
- lack of technical expertise on packaging and grading;
- inconsistent supply of farm products;
- little contact between producers and buyers;
- transport — availability, costs, financing to pay costs;
- lack of (or access to) storage facilities and pack-houses;
- prices of equivalent imported products are low.

The decision-making boundary

From this discussion, we can see that the decision-making boundary (the farm management boundary) extends well beyond the production unit and the household. It extends beyond the natural resource base of the farm. It includes all the factors that affect the profitability of the farm: inputs, production and markets.

INPUTS → PRODUCTION → MARKETS

Worksheet — Test your input and marketing knowledge

Discuss and answer all the questions. Write your answers on the papers provided. One question, one answer. Please write your farm name and the question number on each paper. Each question is worth five points except where otherwise noted.

1. Explain how money is made on the farm.

2. Name the three elements of the farm management process.

3. Name two kinds of inputs.

4. Name the two sources of inputs.

5. Before deciding on an input what must the farmer determine?

Worksheet – Test your input and marketing knowledge (continued)

6. Name the four qualities inputs must have.

7. What qualities must a farmer look for in a supplier?

8. What is a market?

9. What is marketing?

10. What determines the market price?

11. Using the two factors that determine price, give a situation in which price would be low.

Worksheet – Test your input and marketing knowledge (continued)

16. Which of the following would probably make a farmer a “price taker”? Which would probably make a farmer a “price maker”?

Note: Explain your answers in terms of supply, demand, price, quality, timing, etc. For example price taker: quality low, supply high (in season), demand low, price low.

10 points (1 for each)

- Selling maize in a local market just after the harvest season

- Selling strawberries in winter

- Carrying fruit to market loose

- Carrying fruit to market packaged

- Selling grazing cattle at the end of winter

- Selling grazing cattle at the start of winter

- Selling organic vegetables

Worksheet – Test your input and marketing knowledge (continued)

- Reducing livestock numbers on overgrazed land

- Growing mushrooms

- Selling cattle when the school year starts

18. Why is the price of a product in a shop higher than the price paid to the farmer?

19. What are the three main areas of costs involved in the marketing channel?

20. At present where must most smallholder farmers sell their products? Why?

21. What can extension workers do to help farmers access markets other than the local markets?

Worksheet – Test your input and marketing knowledge (continued)

22. What is the most common marketing problem?

23. Name two other common marketing problems.

24. What is value adding and why is it important to marketing?

25. Define any two of the following marketing options.
10 points (5 for each)

- Farmgate marketing
- Village marketing
- Produce markets
- Stock sales
- Contract marketing
- Collective marketing
- Community-supported marketing

Worksheet – Test your input and marketing knowledge (continued)

26. What can extension workers do to help farmers with inputs?

27. What is the real decision-making boundary of a farm?

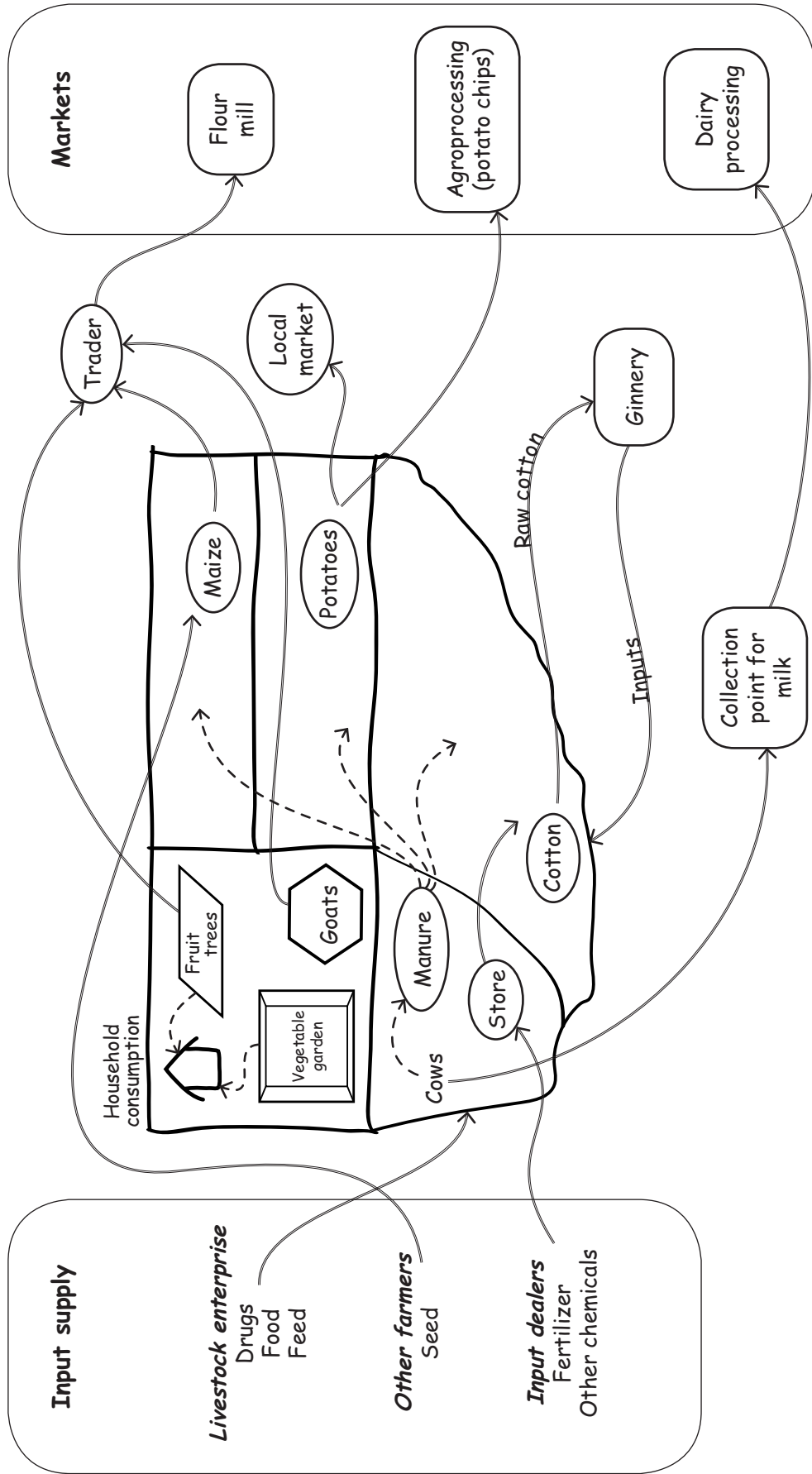
Worksheet – Inputs and equipment on the farm

Enterprise	Enterprise	Enterprise
Input:	Input:	Input:
Source:	Source:	Source:
Problems:	Problems:	Problems:
Input:	Input:	Input:
Source:	Source:	Source:
Problems:	Problems:	Problems:
Input:	Input:	Input:
Source:	Source:	Source:
Problems:	Problems:	Problems:
Input:	Input:	Input:
Source:	Source:	Source:
Problems:	Problems:	Problems:
Input:	Input:	Input:
Source:	Source:	Source:
Problems:	Problems:	Problems:

Worksheet — Marketing brainstorming

	Enterprise	Enterprise	Enterprise
Final products: local market			
Final products: city market			
Most likely profitable markets			
Likely marketing problems			

Diagram — Input supply and markets



Review of Module 2

The participants should have a good practical understanding of the farm setting in which market-oriented farm management decisions are made. They will have learned about small- to medium-sized family farms and their enterprises, the farm and its resources, social capital, and the input/production/marketing process. (This review also includes an exercise.)

The facilitator may handle the exercise in one of two ways. If time permits and the participants are not too tired, then the exercise can be done in the classroom. Otherwise, if it fits into the timing well, it can be given as an overnight assignment and the participants can report in the morning. (The facilitator can then continue with the review outline following the exercise.)

Review exercise 2

Understanding the farm setting

Purpose: To ensure that the learning outcomes have been attained.

Method: Group discussion, mind mapping.

Materials: (i) Flip chart paper or newsprint, (ii) thick marking pens.

Allow 2 hours for this exercise

Procedure

1. Randomly divide the participants into four teams.
Give each team 2 sheets of flip chart paper and a set of marking pens.
2. Assign each group one of the sessions to work on:
Group 1—Session 1, Group 2—Session 2, etc.
3. Each group is to work on two tasks:
 - Task 1: Develop a mind map of the main learning points as they relate to the learning outcomes. (Draw this on the flip chart paper)
 - Task 2: Draw a picture that can be used to tell farmers about the points raised in the mind map developed in Task 1. The picture should be farming related. It is not a diagram, but a picture of a farm or market, etc.
4. When each group has completed their mind map and picture, ask them to present them to the rest of the participants. Encourage discussion and guide the discussion where necessary to ensure that 'correct' learning has taken place. The learning outcomes and key learning points for each session are set out below.

The following outline will guide the facilitator in a brief review of the activities of this module.

Session 1

The farm and its enterprises

Purpose of this session:

to focus on small- to medium-sized family farms that are partially or fully integrated into the market.

Learning outcomes

Understanding (i) the farm and its physical boundaries, (ii) farm enterprises, (iii) the connection between cash and food, farm and household, (iv) the whole system in which the farm operates.

Session 2

The farm and its resources

Purpose of this session:

to study resources of natural capital, human capital, physical capital and financial capital in a livelihoods framework.

Learning outcomes

Understanding (i) the different kinds of capital used on a farm, (ii) the relationship of farm management and its resources.

Session 3

Understanding social capital

Purpose of this session:

to explore the social cohesion that is critical for rural communities to prosper economically and develop sustainably.

Learning outcomes

Understanding (i) the different ways of sharing natural, human, physical and financial resources,
(ii) advantages and disadvantages of sharing.

Session 4

Inputs and markets — where profits are made

Purpose of this session:

to introduce inputs and markets, the two key sets of off-farm resources, and to expand the decision-making boundary of the farm to include inputs and the market.

Learning outcomes

Understanding (i) how money is made on the farm, (ii) the role of inputs in profitability, (iii) the concept of the market, (iv) the role of markets in profitability, (v) of the market for products.

Closing questions

Ask the participants if they believe that the overall purpose of the module has been achieved and if they have improved their understanding of (i) the farm resource base, (ii) the decision boundaries of the farm, (iii) the different forms of capital and (iv) the market for inputs and products.

The following is a list of the AGSF series TRAINING MATERIALS FOR AGRICULTURAL MANAGEMENT, MARKETING AND FINANCE

1. Farm planning and management for trainers of extension workers in the Caribbean, 2004 (CD-ROM, English).
2. Horticultural marketing extension techniques, 2004 (CD-ROM, English).
3. Farm planning and management for trainers of extension workers. Asia, 2006 (Hard copy and CD-ROM, English).
4. Integrating environmental and economic accounting at the farm level, 2005 (CD-ROM, English).
5. Curso de gestión de agronegocios en empresas asociativas rurales en América Latina y el Caribe, 2005 (CD-ROM, Español).
6. Market-oriented farm management for trainers of extension workers. Africa, 2007 (Hard copy and CD-ROM, English).

In preparation

- Farm planning and management for trainers of extension workers. Latin America (CD-ROM, in Spanish).
- Training manuals on farmer business schools. Asia and Africa.

Other work

- FAO Pacific Farm Management and Marketing Series 3, Helping small farmers think about better growing and marketing (Hard copy)*.

* Copies soon to be available from AGSF

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This publication is also available on the Internet at:
<http://www.fao.org/ag/ags/subjects/en/farmMgmt/training.html>

It is useful to look at farm management from two aspects. One aspect is the farm, the farmer and the input—output relationships of farming. The second aspect is the resources used by the farmer on the farm. Both affect farm decisions. In Module 2 we shall explore these briefly and develop our own virtual farm, which will be an important tool used in learning about farm management.