

Farm planning and management for trainers of extension workers

TRAINING
MATERIALS FOR
AGRICULTURAL
MANAGEMENT,
MARKETING
AND FINANCE

3

ASIA



Module 2 FARM RESOURCE ASSESSMENT



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related to farm management
please contact:

Agricultural Management Group
Agricultural Support Systems Division
Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla
00153 Rome, Italy

Fax: (+39) 0657056850

E-mail: AGS-Registry@fao.org

Web site: <http://www.fao.org/ag/ags/home/en/agsf.html>

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Module 2
FARM RESOURCE
ASSESSMENT

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FARM RESOURCE ASSESSMENT

Unit 2.1

Farm data collection

Session 2.1.1 Data and information (45 minutes)

Session 2.1.2 Farm records and accounts (45 minutes)

Session 2.1.3 Inventory of farm resources (45 minutes)

Unit 2.2

Farm resource appraisal

Session 2.2.1 Farm assets and liabilities (60 minutes)

Session 2.2.2 Asset valuation (60 minutes)

Session 2.2.3 Farm balance sheet and net worth
(45 minutes)

Session 2.2.4 Sources of finance (30 minutes)

*This volume has been designed
as a complete working package which includes all components
of the training programme needed for Module 2.*

*The "trainers information box",
at the beginning of each session, lists the handouts,
training slides and exercises needed for that segment of the course.
The trainer's guide, in the section "steps for instruction",
suggests a sequence for the use of these training materials.
Mini-versions of all slides are provided at the end of each session.
Where appropriate, answer keys for training exercises are also provided.*

FARM RESOURCE ASSESSMENT

Farm data collection is important as a source of information on farm performance not only for farmers but also for government and non-governmental organizations. Records of assets and liabilities and careful preparation of balance sheets give a clear picture of financial standing. This information can improve the quality of the diagnosis of farming problems and the identification of constraints and opportunities. It is also useful for planning and analysing at policy and programme levels.

Farm data collection

This unit discusses the importance of farm data and its use as information to enable farmers to make better decisions. Farm management decisions on what to grow, how to grow, and where and when to sell require reliable data from various sources. Farmers need data to make informed choices. Reliable farm data are essential to enhance competitiveness of the farm business and to increase profits. The different sources of data available to farmers and various methods of data collection to use are also discussed.

Preparing for session 2.1.1
Data and information

Teaching methods
Lecture, trainer/participant interaction,
group discussion

Duration: 45 minutes

Learning support materials
Handout 2.1.1 (Data and information), Slide 12
(Data and information), Slide 13 (The processing
of data), Slide 14 (Sources of data),
Slide 15 (Methods of data collection),
Slide 16 (Technical and physical information),
Slide 17 (Economic, social, institutional
and political information)

Notes

Data and information

This session defines data and differentiates it from information. The different types of data and information available to extension workers and farmers are also listed and described. Elaboration of the two sources of data, (i) primary, (ii) secondary, is given as well as common methods of farm data collection.

Data is needed for farmers and extension workers to enable better informed management decisions regarding farm operations. It is essential for both farmers and extension workers to collect appropriate data so that the right type of information is available to improve their decision-making capability.

Objectives

At the end of the session, the participants are expected to:



- understand the difference between data and information;
- learn the process of transforming data into information;
- understand the different sources and uses of data;
- recognize the types of information needed for market-oriented farming;
- understand the different methods that could be employed in collecting farm data;
- understand the importance of data and information gathering in planning and analysing the farm business.

Key points

1. Data refers to raw numbers and facts such as prices, costs and quantities.
2. Information is processed data.
3. Information is crucial for better decision-making.

4. The two major sources of data are primary and secondary.
5. Data can be collected as cross-sectional or time series.
6. Data can be quantitative or qualitative.
7. Different types of data are required: technical, economic, social, political and institutional.
8. The common methods of collecting data are:
 - B surveys
 - B rapid rural appraisal (RRA)
 - B participatory rural appraisal (PRA)
 - B informant interviews

Steps for instruction



1. Distribute Handout 2.1.1 (Data and information) before the start of the session.
2. Define data and explain the way data can be converted into information. Show Slide 12 (Data and information). Explain that data refer to raw numbers and facts, such as prices, costs and quantities, and that information is processed data.
3. Show Slide 13 (The processing of data) and discuss the importance of information for effective decision-making.
4. Using Slide 14 (Sources of data) explain the difference between primary data (farmers) and secondary data (government publications, NGOs and private agencies) and discuss further whether sources of data can be obtained.

5. Discuss the different methods of collecting data: (i) farm management surveys, (ii) rapid rural appraisal, (iii) participatory rural appraisal, (iv) informant interview or focused dialogue. Show Slide 15 (Methods of data collection). Encourage discussion of the different methods and verify if participants are familiar with them or alternatively if they are new to them. Provide time to describe and explain new methods. Outline in which situations each method is best suited and provide examples.

6. Explain that farmers rely heavily on their personal experience as an additional source of data and information. It should be emphasized here that experience can be effectively supported by the provision of supplementary data.

7. Show Slide 16 (Technical and physical information) and Slide 17 (Economic, social, institutional and political information) in turn and encourage discussion among the participants on where they can obtain this kind of information locally. Ask them to recount their data collection sources.

Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.1.1.

Notes

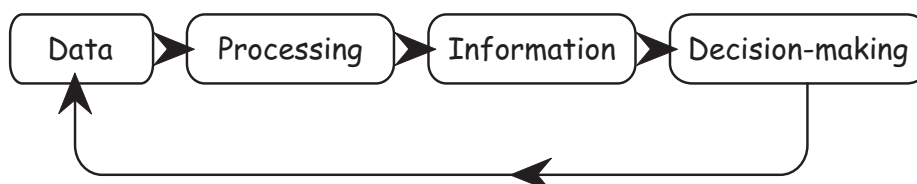
Data and information

Farmers are continually exposed to new data that affect how their farms are organized, what, how and when products are produced, and what type and quantity of inputs should be used.

Data refer to the raw numbers and facts such as prices, costs and quantities. Information is data that is processed in a way that is useful for decision-making. The relationship between data, information and decision-making is shown in the diagram.

Data are raw numbers, and information is processed data

Figure 2.1 – The processing of data



Primary and secondary data

Primary data are collected directly from farmers and include data on production, yield, rates of fertilizers and chemicals.

Secondary data are based on published statistics and are taken from sources such as government ministries, public organizations, banks and the private sector. Examples of the type of secondary data collected might include national production levels, product prices, input costs and agricultural policies.

Primary and secondary data are the two main sources

Methods of data collection

The most common methods for collecting farm data are:

Surveys. This is a method used in particular in farm management. With the help of a prepared questionnaire, surveys are carried out by enumerators who interview farmers. The results often provide information on background conditions that can be found in a given area. However, surveys that require travel costs, and personnel and logistic support may be expensive.

Rapid rural appraisal (RRA). As the name implies, these are quickly conducted appraisals of the agricultural setting, often using small teams, which include identifying constraints and opportunities in farming. RRA consists of a series of techniques for "quick and dirty" research that produces results that are sometimes less precise than more comprehensive surveys. However, they are often of great value because they are generated quickly.

Participatory rural appraisal (PRA). This is similar to RRA, but with the explicit participation of local farmers. PRA can be used, for example, to obtain information about village conditions and to assess the production potential, economic feasibility and social acceptability of particular technologies. Monitoring and evaluation of specific project activities can also be done in a timely and focused manner using PRA techniques.

Key informant interviews. This is the process of collecting data from selected persons, including farmers, with specific knowledge about particular types of farming. Visiting key informants and local organizations are not only useful to gather information, but also provide an excellent opportunity for raising awareness and building relationships for cooperation.

A checklist of possible key informants and their knowledge base is shown in Table 2.1.

Table 2.1 – Checklist of possible key informants

Key informants	Knowledge base
Extension/development workers	General farming situation, macro- and micro-level constraints
Research workers	Potentials, opportunities
Village elders	Historic developments, tradition, customs, consensus
Priests	Religious obligations, beliefs, taboos
Women	Gender issues, decision-making, family member roles
Local businessmen, traders, merchants	Marketing channels, banking, loan conditions, prices, trade regulations, transport, storage facilities
Women farmers	Socio-religious-cultural and economic constraints on them as producers
Progressive farmers	Development opportunities, adoption of new technologies, prerequisites for adoption
Staff of development projects or agencies	Local experience
Managers of processing factories, commodity delivery schedules	Demand projections, pricing, quality issues, quota systems

Identify those who are in the best position to assist in making better decisions

The data collected are often supplemented by quantitative measurements such as field area, yields and input use.

Sources of data and information

Most farmers rely heavily on personal experience. However, current market prices and past information on price trends are useful forms of information. Information is available from the following sources:

Farm records are a source of historical information

Farm records. The best source of historical production and marketing information is farm records. Crop yields, livestock production and cost information generated from farm records form the basis for information on productivity and profitability and indicate how successful farmers are in managing the farm.

National statistics are aggregated farm level data

Production and market information. Historical yield and price information is often available from national statistical services. This information is very useful. National data is sometimes calculated as an average of the information collected from a number of farms. As such it does not tell farmers what level of yields or prices that they can expect. Comparing historical farm yields to that of similar farms in the same area is an additional source of information and is often an effective way of improving farm performance.

Other farm information. This includes information from the agricultural statistics services, national extension services, and other government agencies as well as consulting advisory services, newsletters, magazines, agricultural suppliers and neighbours. These are all valuable sources of information for the farmer.

A checklist of categories of data to facilitate decision-making is shown in Table 2.2.

Table 2.2 – Checklist of data and information

General information	Specific data
Technical and physical	<p><i>Soil characteristics</i> (soil type, texture, soil analysis)</p> <p><i>Climate and weather</i> (rainfall, relative humidity, temperature, hurricanes, droughts)</p> <p><i>Land characteristics</i> (slope, topography, elevation)</p> <p><i>Production capacity</i> (yield per acre or per hectare)</p> <p><i>Production technology</i> (fertilizer and diseases control, seed variety, harvest and post-harvest operations)</p> <p><i>Labour inputs</i> (source of labour, seasonal labour distribution, gender)</p>
Economic	<p><i>Buyers</i> (quality requirement, terms of payment)</p> <p><i>Supply and demand conditions</i></p> <p><i>Sources of credit and conditions</i> (terms of payment, interest rate)</p>
Social	<p><i>Community culture</i> (customs, beliefs and traditions)</p> <p><i>Community organizations</i> (farmer cooperatives, associations, civic and religious groups)</p> <p><i>Community facilities and services</i></p>
Institutional	<p><i>Support service organizations</i> (both public and private)</p>
Political	<p><i>Government policies and priorities</i></p>

A wide range of data is required for better
d

Notes

Training slides
for Session 2.1.1
Data and information

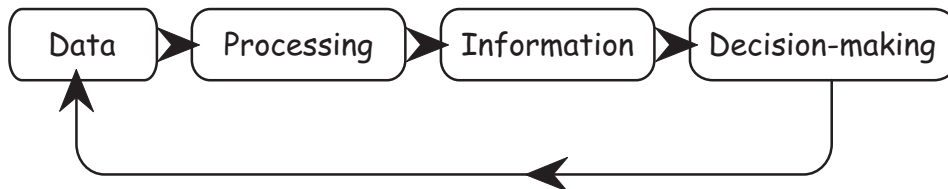
12 Data and information

Farmers are continually exposed to new data and information that affect how their farms are organized
(what, how and when products are produced and what type and quality of inputs should be used)

Data refer to raw numbers and facts
(such as prices, costs and quantities)

Information is data that can be processed in such a way that it becomes useful for decision making

13 The processing of data



The relationship between data, information and decision-making

Module 2, Unit 2.1, Session 2.1.1

14 Sources of data

Primary and secondary data
are the two main sources

Primary data

Collected directly from farmers and include data on production, yield, rates of fertilizers, chemicals

Secondary data

Based on public statistics from sources such as government ministries, public organizations, banks, the private sector

Module 2, Unit 2.1, Session 2.1.1

15 Methods of data collection

Surveys

(used in particular in farm management with the help of a prepared questionnaire)

Rapid Rural Appraisal (RRA)

(quickly conducted appraisals of the agricultural setting)

Participatory Rural Appraisal (PRA)

(similar to RRA but with the participation of local farmers)

Key informant interviews

(interviews with those having specific knowledge)

Module 2, Unit 2.1, Session 2.1.1

16 Technical and physical information

Soil characteristics

(soil type, texture, soil analysis)

Climate and weather

(rainfall, humidity, temperature, hurricanes, droughts)

Land characteristics

(slope, topography, elevation)

Production capacity

(yield per acre or per hectare)

Production technology

(fertilizer and disease control, seed variety, harvest and post-harvest operations)

Labour inputs

(source of labour, seasonal labour distribution, gender)

Module 2, Unit 2.1, Session 2.1.1

Preparing for session 2.1.2
Farm records and accounts

Teaching methods

Presentation, trainer/participant interaction and discussion, summarize findings and draw conclusions

Duration: 45 minutes

Learning support materials

Handout 2.1.2a (Farm records and accounts) and Handout 2.1.2b (A farm map, records and accounts), Slide 18 (Uses of farm records and accounts), Slide 19 (Most commonly used records), Slide 20 (Importance of farm records and accounts), Slide 21 (Sketch of a farm), Record forms (Field material, labour, livestock/poultry, income, farm expenses)

Notes

Farm records and accounts

This session explains the uses of farm records and accounts and discusses the various types of farm records needed to help the farmer in managing the farm. Farm records and accounts not only aid the farmer and the extension worker in evaluating farm performance, but are also useful for policy-makers and other government agencies that are concerned with improving the welfare of farmers and the entire agricultural economy.

Objectives



At the end of the session participants are expected to:

- know the many uses of farm records and accounts;
- know the different types of farm records needed to help the farmer in managing the farm.

Key points

1. Farm records and accounts can be used as tools to assist farmers in:
 - evaluating the farm's financial position in relation to its objectives;
 - measuring economic performance;
 - controlling the daily routine operations of the farm;
 - evaluating alternative strategies for controlling the available resources;
 - financing the farm;
 - meeting legal requirements.
2. Farm records are also used by policy-making bodies and other government agencies.

3. Operational or physical records serve the everyday management requirements of farmers and are aimed at providing information to better manage specific activities, enterprises and farm operations.
4. Financial records can be used as data sources for statistics, tax purposes and as a basis to evaluate the farm. The most commonly used financial records are balance sheets.

Steps for instruction



1. Distribute Handout 2.1.2a (Farm records and accounts) and 2.1.2b (A farm map, records and accounts) before the start of the session.
2. Underline the importance of farm records and accounts and the fact that they can be used as tools to assist farmers in farm decision-making. Show Slide 18 (Uses of farm records and accounts). Ensure the attention of the participants by asking them whether records are kept by farmers in the districts or municipalities that they are responsible for. The trainer should further ask the participants, "Being extension workers, what have you done to encourage farmers to keep records?"
3. Show Slide 19 (Most commonly used records) and bring to the attention of the participants the two types of farm records emphasized in this session. These are operating or physical records (a farm map, and records for field material, inputs, labour, machinery and equipment, livestock/poultry, marketing, income and farm expenses) and financial records (balance sheets). The balance sheet will be discussed in greater detail in Session 2.2.3.

4. Explain the importance of farm records. Ask participants what their views are on this and why they regard farm records as important. Following the discussion, show Slide 20 (Importance of farm records and accounts). Review the key points of the slide with the participants. Ensure that they adequately understand the use, relevance and importance of farm records.

5. Ask the participants to review the sample formats given in Handout 2.1.2b (A farm map, records and accounts) and compare them with the descriptions found in Handout 2.1.2a (Farm records and accounts). Have the participants discuss the type of data that they would require (for each of the formats) and how they would record it.

6. Explain the value of drawing a sketch map of the farm and show its use in planning and monitoring. Get comments from the participants of some of the difficulties in preparing a farm map and initiate a discussion on its potential use. Show Slide 21 (Sketch of a farm).

7. Briefly introduce the subject of a financial record and describe its potential use in analysing the financial performance of the farm.

Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.1.2a and Handout 2.1.2b.

Notes

Farm records and accounts

Farm records provide useful information for extension workers to help farmers increase farm profits, adjust farm practices, select enterprises, determine the best use of available resources, obtain credit and formulate production plans. Accounts are drawn up and are used to measure the performance of the farm.

More specifically, farm records and accounts can be used to assist farmers in:

- evaluating the farm's financial position in relation to its objectives;
- measuring the outcome of farm management decisions and enabling farmers to compare their performance with other neighbouring farms;
- regulating the daily routine operations of the farm and enabling the farmer to know what has been spent and done at any given time during the year;
- evaluating alternative strategies for controlling the available resources and thereby helping the farmer to identify where the enterprise is strong and where it is weak;
- financing investments;
- meeting legal requirements.

Apart from its potential use in farm management decision-making, farm records are sometimes used to formulate national policies, programmes and action plans. Various types of farm records are needed to assist the farmer to monitor and evaluate farm performance. Physical and technical records help the farmer diagnose the various aspects of the farm and prevent emerging problems. Some of the most commonly used farm records are outlined on the following pages.

Farm records are necessary ...

... for better decision-making ...

... to assist farmers in the tasks leading to better management ...

... are useful to formulate national policies and plans

Operating or physical records

These serve the needs of everyday farm management and are aimed at managing specific activities or separate operations. A series of blank record forms in Handout 2.1.2b (A farm map, records and accounts) can be used for collecting everyday farm data. Some of the most common non-financial records are discussed below.

The farm map. Often a sketch of the most important features of the farm. Alternatively it could be based on aerial photos. Fields should be properly identified and the size determined to assist in planning activities for possible investments such as land levelling, irrigation or drainage systems. An example of a simple farm map is shown in Handout 2.1.2b.

Field material input records. Provide the farmers with valuable information on various material inputs (e.g. seeds, fertilizer and pesticides) and cultural practices used in the production process.

Labour records. Show basic information relating to the number of person-days used for a particular task and the corresponding monetary value.

Livestock/poultry records. Information kept by the farmer on feeds, concentrate use, veterinary supplies and miscellaneous items. These records provide the livestock producer with facts to design, implement, monitor and evaluate current livestock enterprises as well as to detect, diagnose and prevent emerging problems.

Income records. Farm receipts, including proceeds from the sale of farm produce such as crop and livestock products. The income record must show the contribution of each farm enterprise to total farm income.

Records of farm expenses. Represent the costs of operating the farm business. Like farm income, any cost item should be properly dated, explained and recorded in corresponding columns. Needless to say, the farm expense record is similar to the farm income record in design.

Any decision on the type of records to keep depends on their usefulness to the farmer.

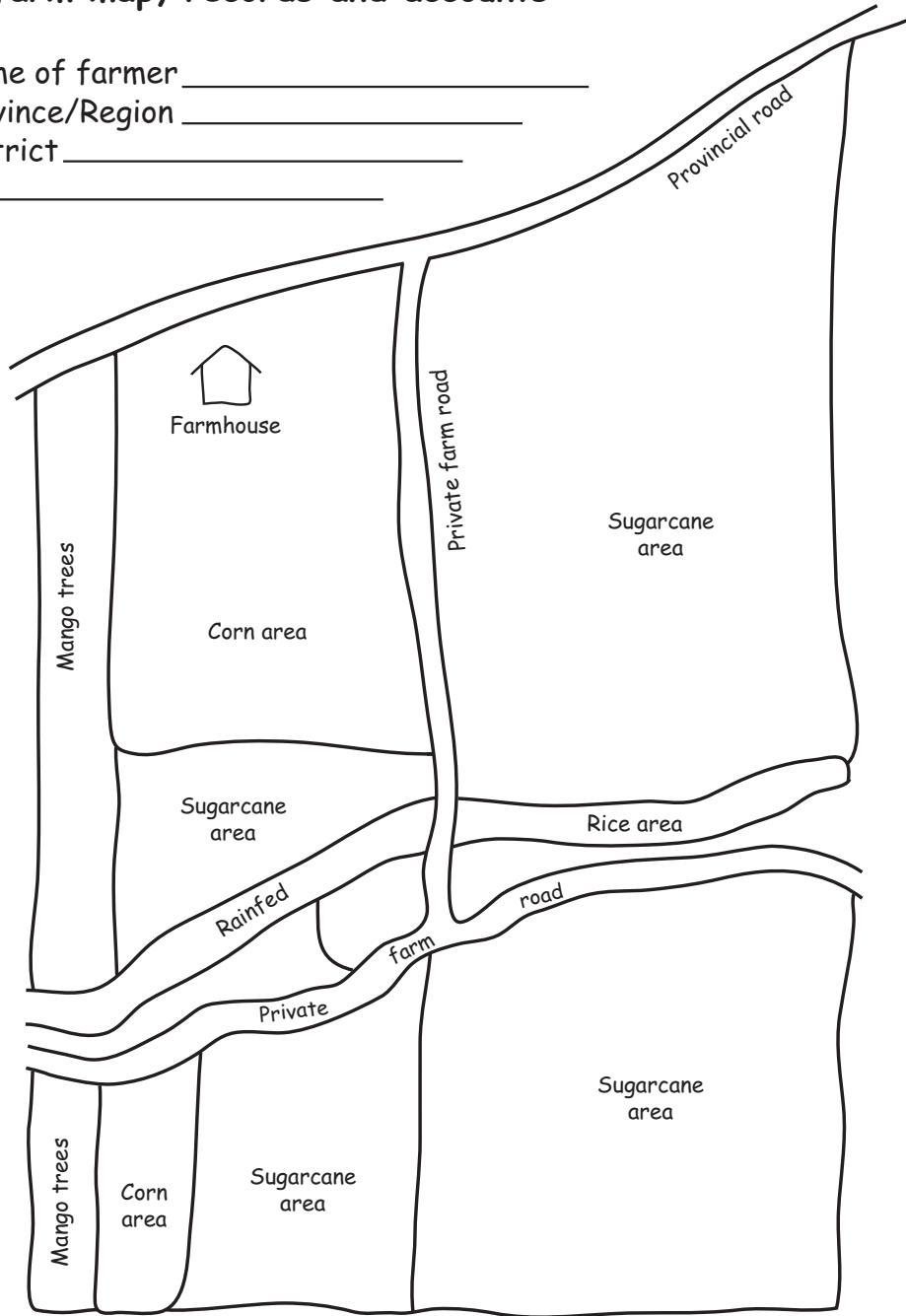
Financial records

Financial records are used to measure the financial performance of the farm business. The most commonly used financial statement is the balance sheet. The balance sheet summarizes the assets used by a farm and the sources of finance invested in these assets at a given point in time. Financial records are also for taxation purposes.

Notes

A farm map, records and accounts

Name of farmer _____
Province/Region _____
District _____
Lot _____



Note: a simple farm map, like the one above, can be drawn by hand

Record form – Field material input

Enterprise _____ Area planted _____				
Date	Input	Quantity	Price per unit (\$)	Value (\$)
Total				

Record form – Labour

Enterprise _____ Area planted _____						
Date	Operation	Family (person/days)	Hired			Total labour (days)
			per/days	\$/day	value	
Total						

Record form – Livestock/poultry

Type _____ Number raised _____									
Date	Operation	Feeds		Concentrate		Veterinary supplies		Others	
		qty	cost (\$)	qty	cost (\$)	qty	cost (\$)	qty	cost (\$)

Record form – Income

Enterprise _____		Area planted _____					
Date	Description	Sold			Value of produce (\$)		
		quantity (kg)	price per unit (\$)	value (\$)	consumed	stored	given away
Total							

Record form – Farm expenses

Enterprise _____		Area planted _____		
Date	Description	Number/ quantity	Price per unit (\$)	Value (\$)
Total				

Notes

Training slides
for Session 2.1.2
Farm records and accounts

18 Uses of farm records and accounts

**Evaluation of the farm's financial position
in relation to its objectives**

Measurement of economic performance

Regulate daily routine operations

Control available resources using alternative strategies

Financing investments

Meeting legal requirements

19 Most commonly used records

Operating or physical records

(a farm map, and records for field material, inputs, labour, machinery and equipment, livestock and poultry, marketing, income and farm expenses)

Financial records

(the most commonly used financial statement is the balance sheet which summarizes the assets used and the sources of finance invested in these assets at a given point in time)

Module 2, Unit 2.1, Session 2.1.2

20 Importance of farm records and accounts

Farm records and accounts provide information for extension workers to help farmers ...

Increase profits

Adjust practices

Select enterprises

Best use available resources

Obtain credit

Formulate production plans

Farm records assist farmers in the tasks leading to better management

Module 2, Unit 2.1, Session 2.1.2

Preparing for session 2.1.3
Inventory of farm resources

Teaching methods
Lecture, trainer/participant interaction
and discussion

Duration: 45 minutes

Learning support materials
Handout 2.1.3 (Inventory of farm resources),
Slide 22 (Inventory of farm resources),
Slide 23 (Visiting a farm prior to inventory)

Notes

Inventory of farm resources

It is useful for both extension workers and farmers to understand the importance of conducting a farm inventory. This is often an important first step in analysing the farm business. Comparison between beginning and end of year inventories illustrates how the financial position of the farm changes over time.

In this session the need for taking a farm inventory, recording resources and methods of valuation is explained. It is important that information be collected efficiently and in a timely manner. This requires a systematic listing of farm assets so that all aspects of the farm are covered. A well-conducted farm inventory provides the basis for a thorough financial assessment of the farm business.

Objectives

At the end of the session the participants are expected to:



- know what a farm inventory is, why it is useful and the best time to conduct the exercise;
- understand the importance of taking a farm inventory;
- know the components of the farm inventory;
- know how to conduct a farm inventory and assign values;
- understand the methods of valuation and computation of depreciation of farm machinery, buildings, tools and equipment.

Key points

1. *Definition:* The farm inventory is a complete list of all physical assets at a specific date.
2. *Use:* It is essential at both the beginning and end of a season or year. The ending inventory of the previous year serves as the beginning inventory of the current year. A comparison between the beginning and end of the year shows how the financial position of the farm has changed after one production cycle or year.

3. *How:* There are different methods of assigning values to the farm inventory and the calculation of depreciation for some of the items that wear or tear over time.
4. *Timing:* The appropriate time to take the inventory is about one to two weeks before the start of the new crop year, when most farm products have been harvested and disposed.
5. A visit to a farm prior to making an inventory is recommended. If there is time, participants should be given a chance to talk with the farmer(s). A farm visit should involve the following:
 - B Make a general inspection of the farm assets.
 - B List items of property according to main groupings: land, farm buildings, draught animals and livestock, machinery, tools and equipment, farm inputs on hand, crops on hand and standing.
 - B Indicate the year when each item of property was acquired and its acquisition cost.
 - B Indicate total useful life of each item from year of purchase.
 - B Calculate rate of depreciation and determine its value.

Note: If a farm visit is not possible, encourage the participants to draw on their experiences to generate the information necessary to formulate a farm resource inventory.

Steps for instruction



1. Distribute Handout 2.1.3 (Inventory of farm resources) before the start of the session.
2. Define the farm inventory and show Slide 22 (Inventory of farm resources). Explain the usefulness of taking the farm inventory at the beginning and end of the year. Discuss the most appropriate time to take the inventory, pointing out the advantages of taking an inventory at the beginning of the year.

3. The participants should be taught how to conduct a farm inventory by explaining to them the series of steps to be followed. Show Slide 23 (Visiting a farm prior to inventory).
4. Explain the concept of capital asset, salvage value and capital depreciation. It should be pointed out that there are several methods of calculating depreciation, but for the purpose of the training and for ease of understanding, only the straight-line method will be taught.
5. The participants should be informed that when calculating depreciation, especially using the straight-line method, assignment or determination of salvage value is often arbitrary because there is no universal formula that can be used for this. For simplicity and ease of application, 10 percent of the purchase price is sometimes assigned as salvage value for vehicles and machinery and 5 percent for tools and equipment.
6. Show how depreciation is actually computed by way of a concrete example. Ensure that participants fully understand the process by calling upon them to compute depreciation for one or two farm assets.

Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.1.3.

Notes

Inventory of farm resources

The farm inventory is a complete list of all physical assets at a specific point in time. The list indicates the value of every item of property. The kinds of farm properties will vary depending on the type of farm enterprise.

A farm inventory is essential at both the beginning and end of a farming year. The "ending" inventory of the previous farming year is useful as the "beginning" inventory of the succeeding year. Comparing the beginning and end of the year inventories shows how the financial position of the farm has changed after one production year.

The appropriate time to take the inventory is about one to two weeks before the start of the new farm year when most farm products have been harvested and disposed. During this period, farm products, inputs and materials on hand are low so that the measurement of quantities and the estimation of values of various items is easier.

Preparing to make a farm inventory

If your instructor has arranged a farm visit it will help the class prepare an inventory of farm resources. When making a farm visit do the following:

- Make a general inspection of farm assets.
- List resources according to main assets: land, farm buildings, draught animals and livestock, machinery, tools and equipment, farm inputs and crops on hand, including standing crops.
- Determine and list the year when each asset was acquired, its costs and total useful life. (The explanations on the following pages and in Table 2.3 show how a farm inventory is completed.)

The farm inventory lists all the physical assets on the farm

Table 2.3 — A sample form for estimating the value of farm assets

Items	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Year of purchase	Year of purchase	Purchase price (\$)	Total useful life	Salvage value (\$)	Annual depreciation value (\$)	Accumulated depreciation value (\$)	Beginning (no.)	Beginning (value)	Ending (no.)	Ending (value)
Land	1995	1995	1 000					1 ha	1 200	1 ha	1 200
Buildings	1995	1995	5 000	10	500	450	3 150	1	1 850	1	1 400
<i>Machinery/equipment/tools</i>											
Plough	1998	1998	100	5	0	20	80	1	20	1	0
Harrow	1999	1999	100	5	0	20	60	1	40	1	20
Sprayer	2000	2000	120	5	0	24	48	1	72	1	48
Tractor	1999	1999	1 000	10	100	90	630	1	370	1	280
Others											
Work animals	1998	1998	300	5		60	240	1	60	1	0
<i>Production inputs</i>											
Fertilizer	2002	2002	20					50 kg	20	0	
Seed	2002	2002	10					50 kg	10	0	
Chemical	2002	2002	5					1 l	5	0	
								Total	3 647	Total	2 948

Table 2.3 outlines the steps to be taken when preparing an inventory of farm resources. It also provides a format suitable for completing an inventory. The following is a column-by-column explanation of each work item. (The information provided for a tractor will be used for the required estimates and for the series of calculations that follow.)

Column (1)

List the items according to main groupings
(land, buildings, machinery/equipment/tools, supplies)

Column (2)

Indicate the year each asset was purchased
(a tractor was purchased in 1999)

Column (3)

Indicate the purchase price/acquisition cost of each item
(the cost of the tractor was \$1 000)

Column (4)

Indicate the total useful life of each item
(the life span of the tractor is 10 years)

Column (5)

Estimate the salvage value of each item

The salvage value is estimated to be 5% of the purchase price for equipment/tools and 10% for buildings, vehicles/machinery.

The salvage value of the tractor is ...

$$10\% \times \$1\,000 = \$100$$

The financial strengths of a farm business can be appraised by using an inventory of farm assets

Column (6)

Compute the annual depreciation for each item

There are several ways to calculate depreciation, the most

$$\text{Annual depreciation} = \frac{\text{Purchase price} - \text{Salvage value}}{\text{Years in use}}$$

simple and commonly used method is shown below.

Then the annual depreciation of the tractor is ...

$$\frac{\$1\,000 - \$100}{10 \text{ years}} = \$90 \text{ per year}$$

Column (7)

Compute the accumulated depreciation

(assume that the exercise is being conducted in 2006)

$$\text{Accumulated depreciation} = \text{Annual depreciation} \times \text{years in use}$$

The accumulated depreciation of the tractor from 1999 to 2006 is equal to ...

$$\$90 \times 7 \text{ years} = \$630$$

Column (8)

Indicate the quantity or number of units of the item at the beginning of the year
(the number of tractors is one)

Column (9)

Compute the beginning value
(value at the start of the year)

Beginning value = Purchase price - Accumulated depreciation

The beginning value of the tractor
as of January 2006 is equal to ...

$$\$1\,000 - \$630 = \$370$$

Column (10)

**Indicate the quantity or number of units
of the item at the end of the year**
(the number of tractors is still one)

Column (11)

Compute the ending value
(value at the end of the year)

Ending value = Beginning value - Annual depreciation

The ending value of the tractor
as of December 2006 is:

$$\$370 - \$90 = \$280$$

Notes

Training slides
for Session 2.1.3
Inventory of farm resources

22 Inventory of farm resources

**The farm inventory is a complete list
of all physical assets at a specific point in time**

**The list indicates the value of every item of property
and the amount of farm liabilities**

**An inventory is essential
at both the beginning and end of a farm year**

*A beginning and end of year comparison
shows how the financial position has changed
after one production year*

Farm resource appraisal

This unit deals with the importance of obtaining accurate information on farm resources and the need to value them properly. Farmers must know the type, quality and quantity of resources available (assets) and the obligations or debts owed by the farm (liabilities) to ensure that all resources are managed properly.

Preparing for session 2.2.1

Farm assets and liabilities

Teaching methods

Lecture, trainer/participant interaction and discussion, class training exercise, class discussion, summarize findings, draw conclusions

Duration: 60 minutes

Learning support materials

Handout 2.2.1 (Farm assets and liabilities), Slide 24 (Farm assets and liabilities), Slide 25 (Classification of farm assets and liabilities), Training exercise 4 (Classification of farm assets and liabilities)

Notes

Farm assets and liabilities

A thorough discussion of the concept of farm assets and liabilities is presented in this session. This includes some of the typical assets that can be found on a farm. This is followed by a discussion of the current and long-term liabilities.

Farm assets are of great value to the farmer because they can be sold to generate cash. This improves the "liquidity" of the farm business. However the extent to which this can be done in practice depends on the nature and type of farm assets found. Similarly, knowledge of farm liabilities is also important because it affects directly the financial stability of the farm and the profitability of the farm business.

Objectives

At the end of the session, the participants are expected to:



- understand the concept of farm assets and their different types;
- classify farm assets according to type (fixed and current assets);
- understand the concept of farm liabilities and their different types;
- classify farm liabilities according to type (current and short-term liabilities).

Key points

1. Assets are resources invested or earned by a farm. They are what the farmer owns.
2. Fixed assets are long-term assets and are used for several years.
3. Current assets are those assets that can be used during the next accounting period or can be converted to cash without having a negative effect on farm operations.

4. The following are typical assets of a farm:
 - land, buildings and machinery;
 - livestock and poultry;
 - standing crops (production in progress);
 - harvested crops (production completed);
 - stocks;
 - receivables;
 - cash;
 - money on deposit;
 - money invested or lent.
5. Liabilities are obligations to others or debts incurred by the farm.
6. Current liabilities must be paid within the next 12 months.
7. Long-term liabilities are those due for payment over one year or beyond the date of the balance sheet. Typical liabilities are:
 - (i) long-term loans, (ii) short-term loans, (iii) money owed for goods used by the farm.

Steps for instruction



1. Distribute Handout 2.2.1 (Farm assets and liabilities) before the start of the session.
2. Define assets and distinguish between fixed and current assets. Concrete examples should be given so that the participants can easily understand the concepts. Ask the participants to give examples of the two types of assets and write them down.
3. Define liabilities, give examples and classify them into current or short- and long-term liabilities. Discuss the classification based on the time duration over which they are to be paid. Have participants give examples of typical farm liabilities and write them down.

4. Summarize the previous discussion on assets and liabilities using Slide 24 (Farm assets and liabilities) for illustration.
5. Go on to show Slide 25 (Classification of farm assets and liabilities) and draw a similar outline of assets and liabilities on the classroom board. Then have the participants fill in the examples that they had previously written down.
6. Distribute Training exercise 4 (Classification of farm assets and liabilities). The participants should work independently on this exercise. After the exercise, initiate a classroom discussion and upon completion show the appropriate answer (see Training aids).

Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.2.1, (iii) refer to Training exercise 4.

Notes

Farm assets and liabilities

Assets

Assets are what the farmer owns. They are resources invested in the farm that can be used in the future. Assets can be divided into fixed and current assets. They are classified based on the ease by which they can be turned into cash. This is called liquidity. Both forms of assets have a strong influence on farm operations.

Fixed assets. These are long-term assets. They are bought to be used for several years. They form the basis of a farm's profitability. Usually, they are not maintained for long periods of time. Selling fixed assets can seriously affect the farm operations. These assets include farm property, livestock and tree crops, long-term credits or contracts that farmers have with suppliers and market outlets.

Current assets. Current assets are short term. Examples include cash in hand, money on deposit, livestock for sale, and grain and feeds in store. Current assets can be converted to cash without having a detrimental effect on the farm business. The shorter the period the more liquid the assets are.

The list below shows typical assets of a farm:

1. *Land, buildings and machinery.* Basic resources that are considered as fixed assets if owned by the farmer.
2. *Livestock and poultry.* Assets that are either used to produce saleable produce (e.g. milk and eggs) or are sold directly as breeding stock.
3. *Growing crops.* Costs incurred for crops that are still in the process of being produced. For example crops that have not yet been harvested and are still lying in the field.

Assets are resources that can be used in the future

4. *Harvested crops.* Crops that have been harvested and are currently being stored on the farm.
5. *Input stocks.* Value of the material inputs used for the production of produce (e.g. fertilizer, sprays, fuel, spare parts, bags).
6. *Debt.* Money owed to the farmer for the sale of produce and services.
7. *Cash.* Money at hand.
8. *Money on deposit.* Money that is kept in a bank or other financial institution.
9. *Money lent.* Money tied up with other individuals.

Liabilities

Liabilities show the debts, loans and money that are used to finance the assets of the farm. These are divided into current liabilities and fixed liabilities.

*Liabilities
are debts,
loans and money
used to finance
farm assets*

Current liabilities (short term). Those debts that have to be repaid over the year and within the time frame of the balance sheet. These include repayments of the principal on loans due within the year and taxes that have not as yet been paid out.

Fixed liabilities (long term). Liabilities due for payment over the year or beyond the date of the balance sheet. They consist of contracts on inputs and supplies, and long-term loans and taxes on capital appreciation that can occur from land sales.

The example on the opposite page shows some typical farm assets and liabilities and provides a form for listing them.

Example
Classification of farm assets and liabilities

ASSETS	LIABILITIES
<i>Fixed assets</i>	<i>Fixed liabilities</i>
Land and physical improvements	Long-term loans
Farm buildings	Mortgages
Farm machinery	
Draught animals	
Tools and equipment	
<i>Current assets</i>	<i>Current liabilities</i>
Cash on hand	Accounts payable
Cash in bank account	Short-term loans
Accounts receivable	Interest payable
Crops on hand for sale	
Livestock/poultry for sale	
Farm supplies on hand	

Notes

Unit 2.2 – Training exercise 4 Classification of farm assets and liabilities

Task

On the basis of previously studied material, trainees are asked to classify the following into assets and liabilities using the following list.

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Fattening cattle 2. Credit to buy fuel 3. Bank credit for machinery (payable in five years) 4. Plastic containers/sacks 5. Credit for shed construction (payable next year) 6. Sales of crops on credit | <ol style="list-style-type: none"> 7. Pigs 8. Bank credit for seed purchase 9. Advance payment for produce (received within the year) 10. Interest on short-term loans 11. Farm building 12. Hand tractor 13. Fertilizer and other chemicals |
|---|---|

ASSETS	LIABILITIES
<i>Fixed assets</i>	<i>Fixed liabilities</i>
<i>Current assets</i>	<i>Current liabilities</i>

(Answer key on the opposite page)

Answer key for
Training exercise 4

ASSETS*Fixed assets*

Fattening cattle
Plastic containers/sacks
Sales of crops on credit
Fertilizer and other chemicals

Current assets

Pigs
Hand tractor
Farm building

LIABILITIES*Fixed liabilities*

Credit to buy fuel
Bank credit for seed purchase
Advance payment for produce
Interest on short-term loans

Current liabilities

Bank credit for machinery
Credit for shed construction

Training slides
for Session 2.2.1
Farm assets and liabilities

24 Farm assets and liabilities

Assets

The resources invested or earned by a farm ...

which are either **fixed assets** (long-term)
or **current assets** (short-term)

Liabilities

The debts, loans and money used to finance
the assets of the farm ...

which are either **fixed liabilities** (long-term)
or **current liabilities** (short-term)

Preparing for session 2.2.2
Asset valuation

Teaching methods
Presentation, class training exercise, class presentation, discussion

Duration: 60 minutes

Learning support materials
Handout 2.2.2 (Asset valuation),
Slide 26 (Methods of valuation),
Training exercise 5 (Asset valuation)

Notes

Asset valuation

The importance of asset valuation in preparing the balance sheet is covered in this session. Money is the common unit of measurement that covers a wide range of the kinds of assets to be found on a typical farm. Valuation of farm assets allows a monetary assessment of the overall value of the farm to be made. Some commonly used valuation methods are discussed with suggestions of when and where to apply them.

Objectives

At the end of this session the participants are expected to:



- know the different methods of valuation;
- know which one to select to value different types of assets found on the farm.

Key points

1. The most appropriate method to determine the value of a particular asset depends on its nature and purpose.
2. Regardless of the method used, consistency is needed to ensure that the same method can be used again at another point in time.
3. The most commonly used methods of valuation are:
 - market value;
 - purchase price (original cost);
 - purchase price vs market value;
 - production cost;
 - purchase price minus depreciation.

Steps for instruction



1. Explain why asset valuation is important to determine the farm business performance and to plan the farm. Point out that money is the only unit of measurement common to a wide range of the types of assets found on a typical farm.

2. A thorough discussion of commonly used valuation methods should be conducted. These include: (i) market value, (ii) purchase price (original cost), (iii) purchase price vs market value, (iv) production cost, (v) purchase price minus depreciation. Emphasis should be made on the characteristics of the items to be valued and the appropriate valuation method to be applied. Show Slide 26 (Methods of valuation).

3. Distribute Training exercise 5 (Asset valuation). The participants should work independently on this exercise. Provide adequate time for the participants to complete the exercise. After the exercise initiate a classroom discussion and upon completion show the appropriate answer (see Training aids). Ask the trainees to justify their answers and discuss them with the class.

Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.2.2, (iii) refer to Training exercise 5.

Notes

Asset valuation

Assessment of farm assets is the first step towards preparing the balance sheet. All assets are expressed in monetary terms. Money is the only unit of measurement that is common for the wide range of assets that can be found on the farm. The most appropriate method to determine a particular asset depends on its nature and purpose. Regardless of the method used, consistency must be maintained and the same method should be used every time assets need to be valued.

Assets that can easily be sold on the market (e.g. as stocks of finished products) are valued by the market price that they obtain. However, assets, such as machinery, breeding livestock and land that are not sold or purchased, are often more difficult to value and less direct methods need to be used. The following are commonly used methods of valuation:

- market value;
- purchase price (original cost);
- purchase price vs market value;
- production cost;
- purchase price minus depreciation.

Market value. This method values an asset based on its current market price. It can be used for many types of assets but works particularly well for items that could be sold in a relatively short period of time and for which current market prices are available. Some examples are crops and livestock.

*Assets
can be valued
in numerous
different ways*

Purchase price (original cost). Items that were previously purchased can be valued at their original purchase cost. This method works well for those items recently purchased and for which records of their cost are still available. Feed, fertilizer and fuel supplies are normally valued in this way.

Note: Items such as buildings and machinery, which normally lose value or depreciate over time, are valued differently. Livestock raised on the farm and crops under cultivation cannot be valued using this method because there is no purchase price.

Purchase price vs market value. This method values an item at both its original cost and its market value, and the lower value is selected. The method has the advantage of minimizing the chances of placing too high a value on any item (e.g. land may increase in value because of inflation). Valuing land at cost price eliminates any increase in value over time caused by general increase in prices.

Production cost. Items produced on the farm can also be valued at their cost of production. Cereals, root crops, fruit crops and livestock reared can be valued by this method if records on the costs of production are kept. Established crops not yet ready to be harvested (e.g. tree crops) are usually valued in this way. This method is often preferred in place of having to assess yields and prices, which are notoriously volatile because of climatic changes. These uncertainties can affect drastically the yield of the crop before harvest and the price of sales.

Purchase price minus depreciation. Assets that provide services over a period of years but lose value over time because of age, use or obsolescence are valued at the original cost less all previous costs of depreciation (e.g. machinery, buildings, purchased breeding livestock). Each year the value of the item would be reduced by the amount of depreciation for that year.

Unit 2.2 – Training exercise 5 Asset valuation

Task

Trainees must decide which of the valuation methods to use ...

Market value
Purchase price (original cost)
Purchase price vs market value
Production cost
Purchase price minus depreciation

... when evaluating the following assets ...

Crops for sale
Feeds produced on farm
Farm equipment
Animal shed
Farmland
Milk for sale
Stored fertilizer
Tractor

Asset	Valuation method

(Answer key on the following page)

Answer key for
Training exercise 5

Asset	Valuation method
Crops for sale	Market value
Feeds produced on farm	Production cost
Farm equipment	Purchase price minus depreciation
Animal shed	Purchase price minus depreciation
Farmland	Market value
Milk for sale	Market value
Stored fertilizer	Market value
Tractor	Purchase price vs market value

Training slides
for Session 2.2.2
Asset valuation

26 Methods of valuation

Market value

(based on current market price)

Purchase price (original cost)

(previously purchased items valued at original cost)

Purchase price vs market price

(values an item at both its cost and market value
and the lower value is selected)

Production cost

(items produced valued at cost of production)

Purchase price minus depreciation

(assets that provide services and lose value
over time are valued at original cost less all
previous depreciation costs)

Preparing for session 2.2.3
Farm balance sheet and net worth

Teaching methods
Presentation, class training exercise, group presentation and discussion

Duration: 45 minutes

Learning support materials
Handout 2.2.3 (Farm balance sheet and net worth), Slide 27 (Farm balance sheet and net worth), Slide 28 (Calculating net worth and current ratio), Training exercise 6 (Calculating net worth)

Notes

Farm balance sheet and net worth

The balance sheet is discussed here. The session then goes on to explain the concept of net worth and how it can be calculated and interpreted. Net worth and the current ratio are important indicators that measure the financial progress of the farm and its liquidity.

Balance sheets often have to be prepared in order for farmers to obtain bank loans. Therefore it is relevant for farmers to know how balance sheets are constructed and to understand their use. If farmers are unable to prepare their own balance sheets, extension workers should be able to assist them in doing this.

Objectives



At the end of this session, trainees are expected to know how to construct a balance sheet, calculate net worth and current ratio, and how to interpret these indicators.

Key points

1. A balance sheet is a financial statement of the farm business taken at a single point in time. Its main principle is that total assets and liabilities must balance.
2. Net worth is the difference between the value of total assets owned and the value of liabilities. Knowing this helps farmers to assess their capacity to take risks and to estimate their wealth.
3. Net worth can change for a number of reasons: (i) assets can be used to produce crops and livestock, (ii) there are changes that occur regularly in an asset's value, (iii) gifts are often received, (iv) assets are sometimes sold at less than their value.
4. The current ratio is the ratio of current assets to current liabilities. The current ratio is equal to one when current assets are equal to current liabilities. A current ratio greater than one implies that the farm is more liquid. A current ratio of less than one implies that the farm business is less liquid.

Steps for instruction

1. Distribute Handout 2.2.3 (Farm balance sheet and net worth) before the start of the session.
2. The trainees should understand that the balance sheet is a financial statement of the farm at a particular point in time. Show Slide 27 (Farm balance sheet and net worth).
3. Point out that net worth simply shows the amount of money left to the farmer should farm assets be sold and farm liabilities paid. Explain that net worth is an important measure of the financial progress of a farm.
4. Introduce the concept of current ratio. Explain that it is an indicator of the liquidity of the farm business. Show how the ratio should be interpreted. Show Slide 28 (Calculating net worth and current ratio)
5. Distribute Training exercise 6 (Calculating net worth). Participants should work by themselves. Once completed allow them time to discuss their solutions. Then show the appropriate answer (see Training aids) and elaborate the results to the class.

Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.2.3, (iii) refer to Training exercise 6.

Notes

Farm balance sheet and net worth

The most well-known financial statement is the balance sheet. The balance sheet is one of a number of financial statements that summarizes the assets used by the farm and the financial resources invested in these assets. It is a record of the assets and liabilities on the day the balance sheet is compiled. The main principle of the balance sheet is that total assets and total liabilities always have to balance. The difference between assets and liabilities represents the net worth of the farm.

The balance sheet provides a picture of solvency. If liabilities exceed assets, the net worth is negative and the farm is insolvent. As a result of changes in net worth, balance sheets prepared at different stages of the annual production cycle cannot be compared directly.

The balance sheet is a "snapshot" of the financial situation of a farm at a particular point in time

Example An end of year balance sheet

Inventory date 31/12/2006

ASSETS		(\$)	LIABILITIES		(\$)
<i>Fixed assets</i>			<i>Fixed liabilities</i>		
Land		10 000	Bank loan		10 000
Buildings		8 000			
Breeding livestock		4 000			
Total fixed assets		22 000	Total fixed liabilities		10 000
<i>Current assets</i>			<i>Current liabilities</i>		
Debtors		700	Overdraft		1 000
Fertilizer in store		800	Creditors		1 000
Cash		300	Short-term loans		500
Seed in store		1 200			
Total current assets		3 000	Total current liabilities		2 500
Total assets		25 000	Total liabilities		12 500

Net worth is the difference between the value of the total farm assets and the total liabilities. In other words, it is the residual value of the farm if it were sold and all liabilities paid. It also represents the equity owned by the farmer. This calculation is usually conducted by using the balance sheet.

$$\text{Net worth} = \text{Total assets} - \text{Total liabilities}$$

Then, substitute the numbers from the previous page ...

$$25\,000 - 12\,500 = 12\,500$$

This result shows:

1. *Farm liquidity or working capital.* Cash left over after the current assets have been sold and the current liabilities have been paid off;
2. *Farm solvency.* Ability to repay debts;
3. *Farm net worth.* Owner's share of the farm.

A correct balance sheet also shows how the net worth, when added to total liabilities, must equal the total assets.

$$\text{Total assets} = \text{Net worth} + \text{Total liabilities}$$

If this does not occur, the balance sheet will need revision.

Knowing the net worth helps farmers to assess their capacity to take risks. It provides an estimate of total wealth. It is also useful for financial institutions by indicating whether the farmer has collateral to take out loans.

Net worth estimates the farmer's wealth

Net worth can change over time for a number of reasons. A common change comes from using assets to produce crops and livestock. The profit from these production activities is then used to purchase additional assets or to reduce liabilities. The net worth will also change if there is a change in the value of the asset or if gifts are received or an asset is sold for more or less than its estimated value.

For example, if \$2 000 is used to purchase new farm machinery, the net worth does not change. There is now \$2 000 less in current assets (the cash used to purchase the machine) but an additional \$2 000 in fixed assets (the machine). This shows that the net worth changes only when:

- the farmer puts additional personal capital into the farm;
- the farmer withdraws capital from the farm;
- the farm shows a profit or loss.

Current ratio

The current ratio is the ratio of current assets to current liabilities. It is an indicator of the liquidity of the farm. Current assets can be sold or turned into saleable products quite quickly, and the farmer would more easily be in a position to generate cash to repay debts.

The current ratio is calculated as follows ...

$$\text{Current ratio} = \frac{\text{Current farm assets}}{\text{Current farm liabilities}}$$

The higher the ratio the more liquid the farm.

*Net worth
over time
can change*

*Current ratio
is the ratio of
current assets
to current
liabilities*

Current ratio equals 1. This means that current assets equal current liabilities. While there are sufficient current assets to cover current liabilities, there is no safety margin.

Current ratio greater than 1. This means that current assets are greater than current liabilities. There is a safety margin that allows for price and other changes.

Current ratio less than 1. This means that current assets are less than current liabilities. The farm is less liquid and the risk is greater

On the one hand, a farm that concentrates its production during one or two periods of the year should have a high current ratio at the beginning of the year as no new production would be available for sale until much later in the year. This would be a prudent financial strategy. On the other, dairy producers with continuous sales throughout the year can operate safely with lower current ratios. The structure of the farm business can determine its potential financial position.

Notes

Unit 2.2 – Training exercise 6 Calculating net worth

Background: a list of assets and liabilities (end of current year)

Item	(\$)	Item	(\$)
Savings	190	Sales	100
Taxes	140	Short-term credit	120
Buildings	1 300	Insurance	40
Cash	20	Produce in process	60
Bank loan	1 320	Livestock production (milk)	160
Livestock for sale	260	Materials in store	30
Land	2 470	Creditor	250
Finished produce	680	Machinery and equipment	1 120
Bills to be paid	20		

Tasks

Place the items listed above in the appropriate spaces
in the form provided and calculate the net worth.

Inventory date ___/___/___

ASSETS	(\$)	LIABILITIES	(\$)
<i>Fixed assets</i>		<i>Fixed liabilities</i>	
Total fixed assets		Total fixed liabilities	
<i>Current assets</i>		<i>Current liabilities</i>	
Total current assets		Total current liabilities	
Total assets	<input style="width: 50px;" type="text"/>	Total liabilities	<input style="width: 50px;" type="text"/>

$$\frac{\text{Net worth}}{\text{(Net worth)}} = \frac{\text{Total assets}}{\text{(Total assets)}} - \frac{\text{Total liabilities}}{\text{(Total liabilities)}}$$

(Answer key on the following page)

Answer key for
Training exercise 6

Inventory date __/__/__

ASSETS	(\$)	LIABILITIES	(\$)
<i>Fixed assets</i>		<i>Fixed liabilities</i>	
Buildings	1 300	Bank loan	1 320
Land	2 470		
Machinery and equipment	1 120		
Livestock production (milk)	160		
Total fixed assets	5 050	Total fixed liabilities	1 320
<i>Current assets</i>		<i>Current liabilities</i>	
Savings	190	Taxes	140
Cash	20	Creditor	250
Livestock for sale	260	Bills to be paid	20
Material in store	30	Short-term credit	120
Finished produce	680	Insurance	40
Sales	100		
Produce in process	60		
Total current assets	1 340	Total current liabilities	570
Total assets	6 390	Total liabilities	1 890

$$\frac{4\ 500}{\text{(Net worth)}} = \frac{6\ 390}{\text{(Total assets)}} - \frac{1\ 890}{\text{(Total liabilities)}}$$

Training slides
for Session 2.2.3
Farm balance sheet and net worth

27 Farm balance sheet and net worth

The balance sheet

A financial statement of the farm business

It summarizes the assets used and the sources of finance
invested in those assets at a given point in time

Net worth

The difference between assets and liabilities

If liabilities exceed assets the net worth is negative
and the farm is insolvent

Sources of finance

This session presents different sources of capital that farmers could utilize if they need additional financing.

Farmers should be aware of the difference between working capital and investment loans. Finance is often needed at the beginning of the season in the form of working capital. In some situations farmers may also find themselves without adequate finance during the season. However once the agricultural production cycle has begun any disruption will reduce the farm's potential profitability. Knowledge of the different sources of finance available to farmers is necessary for profitable farming.

Objectives



At the end of this session the participants are expected to know about potential sources of financing as well as their advantages and disadvantages.

Key points

1. Sources of finance (capital) are the financial resources used in the production process.
2. Understand the different sources of finance.
3. Some possible sources of financing are:
 - individual savings;
 - borrowing (friends, relatives, others);
 - credit against goods;
 - bank credit;
 - investments (private, other business);
 - grants;
 - bank overdraft.

Steps for instruction



1. Explain that knowing the potential sources of financing is good practice for a farmer. Initiate a discussion among participants on the need to know the various sources of finance available to farmers. Develop the discussion by asking the participants at what time of the year farmers usually require finance.

2. Proceed to describe sources of financing with the aid of Slide 29 (Possible sources of financing). Have the participants interact among themselves and add other sources of financing that are not listed in the slide. Ask them to describe their experiences with possible sources of finance in the farming areas in which they work.

3. Identify the advantages and disadvantages of each. Ask participants to comment on their contribution. This should open the way for further discussion.

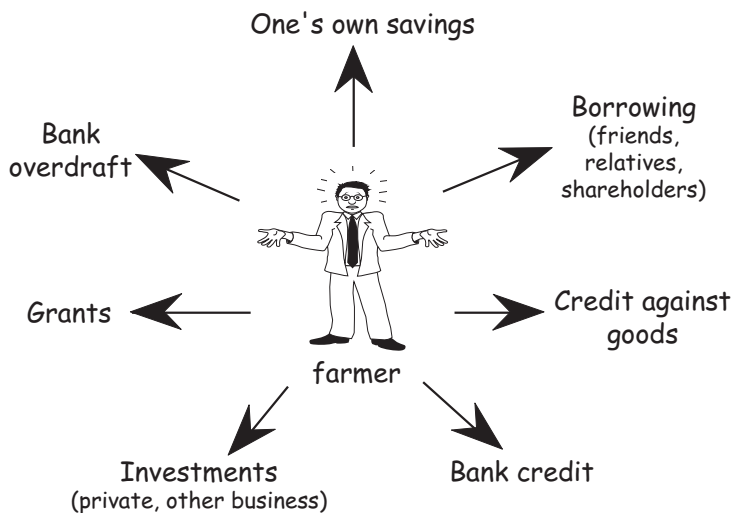
Evaluation: (i) review objectives in relation to key points, (ii) refer to Handout 2.2.4.

Notes

Sources of finance

Sources of finance are often essential to maintain the existing farm operations and to expand the scale of farm enterprises and the farm as a whole. Before the farmer can begin or expand an enterprise, finance is required. The aim of this session is to gain a better understanding of the different sources of finance and the strengths and weaknesses associated with them. Some possible sources are shown in the diagram below.

Figure 2.2 – Different sources of finance



To define the appropriateness of a source, it is necessary to identify the advantages (strengths) and disadvantages (weaknesses) of each. Extension workers could be asked to prepare a table listing all possible sources of finance for a particular farm. From this list, they could identify the advantages and disadvantages of each source of finance for a particular farmer.

A checklist of possible sources of finance is shown in Table 2.4 on the following page.

Finance is needed to begin or expand an enterprise ...

... and farmers should be aware of sources of finance before they need them

Table 2.4 – A checklist of sources of finance

Sources of finance	Advantages	Disadvantages
One's own savings	<ul style="list-style-type: none"> • freedom of actions • no interest charges 	<ul style="list-style-type: none"> • limited availability
Borrowing from relatives or friends	<ul style="list-style-type: none"> • low interest rates or no charge • freedom of actions • requires no formal justification • flexible in terms of repayment 	<ul style="list-style-type: none"> • possible misunderstanding of the problems • possibility of uneasiness arising between relatives or friends
Borrowing from shareholders	<ul style="list-style-type: none"> • low interest rates or no charges • flexible terms of repayment 	<ul style="list-style-type: none"> • restricted freedom of action
Credit against goods	<ul style="list-style-type: none"> • reduces the working capital requirement 	<ul style="list-style-type: none"> • can only be taken against specific goods
Bank credits	<ul style="list-style-type: none"> • available 	<ul style="list-style-type: none"> • usually requires formal justification • high interest rates • rigid terms of payment
Investments	<ul style="list-style-type: none"> • free grant • interest free 	<ul style="list-style-type: none"> • prolonged terms of payment
Overdraft	<ul style="list-style-type: none"> • can be obtained if necessary • bank interest can be reduced 	<ul style="list-style-type: none"> • repaid from money coming into account • possible immediate repayment of capital
Others	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •

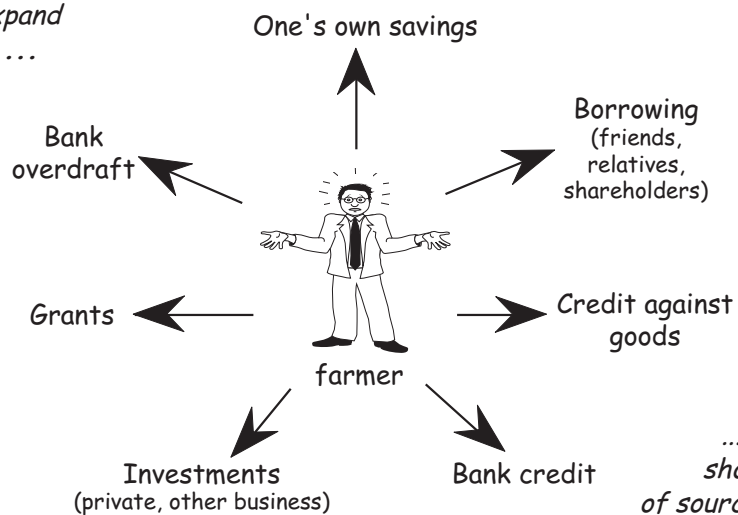
Farmers need to consider the advantages and disadvantages of different sources

Notes

Training slides for Session 2.2.4 Sources of finance

29 Possible sources of financing

*Finance is needed to
begin or to expand
an enterprise ...*



*... and farmers
should be aware
of sources of finance
before they need them*

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)

In preparation

6. Market-oriented farm management for trainers of extension workers. Africa (Hard copy and CD-ROM, English).
- Farm planning and management for trainers of extension workers. Latin America (Hard copy and 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

Module 2 discusses the different types and sources of data available to farmers and extension workers and methods of data collection. The usefulness of conducting an inventory of farm assets and liabilities and the methods that can be used in doing so is explained. It concludes by showing how this data can be used in assessing the financial performance of the farm business.