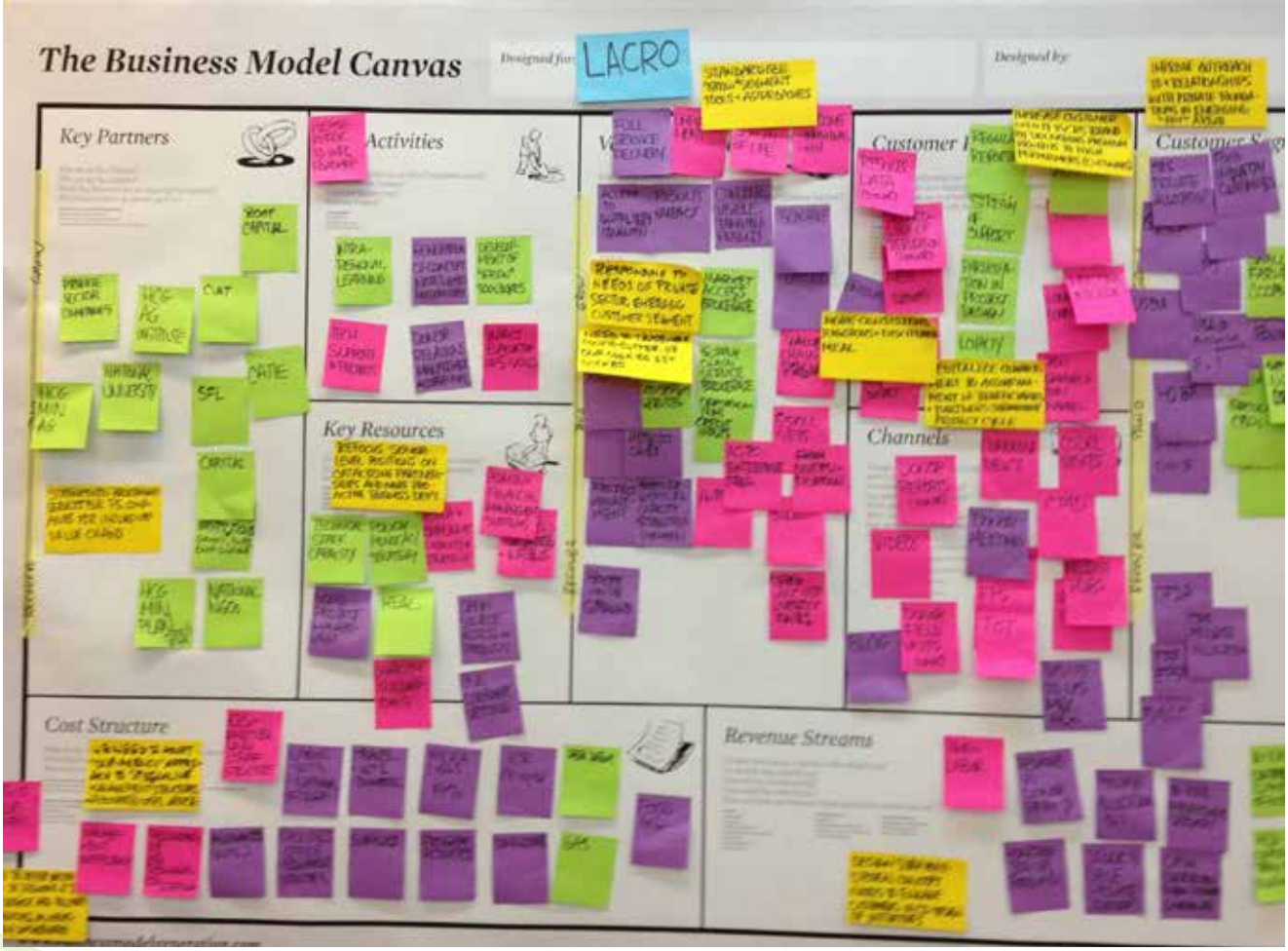

The seven steps of marketing

A SMART SKILLS MANUAL

BOOKLET 2: BUSINESS PLANNING

USAID FROM THE AMERICAN PEOPLE

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Seven steps of marketing

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BOOKLET 2: BUSINESS PLANNING

This publication was made possible by the generous support of the American people through the United States Agency of International Development (USAID) Office of Acquisition and Assistance under the terms of Leader with Associates Cooperative Agreement No. AID-OAA-L-10-00003 with the University of Illinois at Urbana Champaign for the Modernizing Extension and Advisory Services (MEAS) Project.

MEAS aims at promoting and assisting in the modernization of rural extension and advisory services worldwide through various outputs and services. The services benefit a wide audience of users, including developing country policymakers and technical specialists, development practitioners from NGOs, other donors, and consultants, and USAID staff and projects.

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ISBN-10: 1614921458
ISBN-13: 978-1-61492-145-5
Download this publication and related material at www.crsprogramquality.org/smart-skills-for-farmers/ or at www.meas-extension.org/meas-offers/training

Suggested citation: CRS and MEAS. 2016. Seven steps of marketing: A SMART Skills manual. Catholic Relief Services, Baltimore, MD, and Modernizing Extension and Advisory Services project, University of Illinois at Urbana-Champaign.

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BOOKLET 1: ORGANIZING GROUPS FOR MARKETING

BOOKLET 2: BUSINESS PLANNING

BOOKLET 3: MARKETING AS A GROUP

BOOKLET 4: REVIEWING PERFORMANCE

Contents of this booklet

List of tables

Step 3. Collecting information for the business plan

This step describes methods for field agents and farmers to gather information from four key areas required to develop an agroenterprise business plan for the selected product(s):

- Market information
- Production information
- Financial information
- Business services information.

Gathering and analyzing this information makes it possible to select an agroenterprise to focus on. This section will focus on the following lessons:

- **Lesson 7.** Market analysis
- **Lesson 8.** Analyzing production
- **Lesson 9.** Surveying and fostering business services
- **Lesson 10.** Tools for financial analysis
- **Lesson 11.** Deciding on credit

At the end of this step you will have:

- Reviewed the production needs of selected products
- Undertaken a market survey
- Evaluated essential business service availability and costs
- Discussed credit terms with lenders
- Discussed agroenterprise options with farmers
- Selected a product to invest in as part of your agroenterprise project.

LESSON 7. MARKET ANALYSIS

IN THIS LESSON

After this lesson you will be able to:

- Decide which units and measures to use
- Guide farmers to prepare a market map for their products
- Guide farmers to conduct a market survey
- Help farmers analyze the information from a market survey.

UNITS, MEASURES, AND CONVERSION FACTORS

Before you can start to analyze markets and collect information about the demand for a product, we need to be sure that all the field agents use standard weights and measures.

Consider this situation. One day you see a farmer selling a sack of onions for 15 birr at a roadside stall. Later in the market, you find a trader selling a small, 10-kilogram bag of onions for 25 birr. Then you go into a supermarket where a bag of large onions costs 38 birr for a 5 kg bag. Which onions offer the best value? Which should you buy?

This is not an easy question! The value depends on many things. Are the onions big in one bag and small in the other? What variety are they? Where are they being sold? Are they good quality, or are they rotting? Does the sack contain stones as well as onions? How convenient is it to buy the onions in each place? Do you have to travel a long way, or can you buy other things in the same place?

Many countries and even local areas within a country have their own systems of weights and measures. They classify products in different ways: a “grade 1 onion” may mean different things in different places.

Also when we compare the area of production, some farmers work in acres, some in hectares, others in *jeribs* or *manzanas*. In fertile areas of Ethiopia, a *timad*, is

equivalent to 0.25 hectares, but in other areas where the soil is poor a *timad* is 0.4 hectares.

So if you are to make measurements and set values, it is important to use standard units so you can compare across products and locations. You will also need standard measures when calculating the profitability of the agroenterprise and helping farmers decide on the best production and marketing options.

Standard measures are also important for the project managers when coordinating, monitoring, and evaluating agroenterprise development activities in different locations.

At the beginning of the project, make a list of the products and units used in the local area:

- **Products, grades, and standards (such as quality grades and moisture content)**
- **Production areas, local weights, and volume measures**
- **Prices, costs, and currencies**
- **Labor costs**
- **Dates using international calendar.**

Some rules:

- Clearly define any **local measures**. Note the conversion factors into metric values (hectares, liters, meters, kilograms and tons).
- Make a check list of commonly used **costs** for products, such costs of fertilizers for example, 50-kg bag of urea, cost of basic farm equipment, such as a hoe, and the cost of seed. You can use this to cross reference with farmers, see Annex 5, for template.
- Note the prices in the **local currency**, and record the conversion value into **US dollars** at the current rate of exchange (you can get this from the national bank).
- Note the **grades and standards** used locally.
- Use the Western calendar to record **dates**.

See Annex 3 for conversion tables.

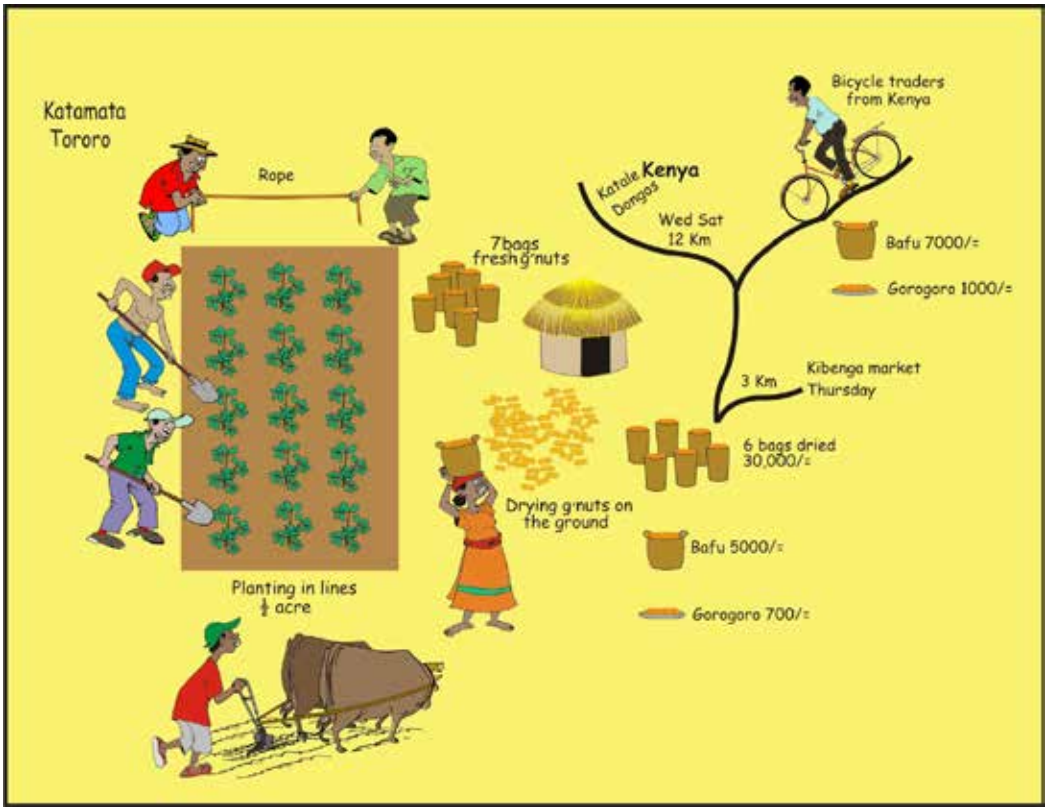
MARKET MAPPING

A **market map** is a diagram of the market for a particular product. It shows the product, where it is produced, prices where it is sold, who buys it, and how it is used. It also shows things like drying, processing, storage and transport. The diagram may be a sketch map showing where these activities take place. Or it can be a flow diagram showing the individuals and organizations involved.

By drawing a market map, the farmers can better understand the market for their priority product(s). See Exercise 7a for how to help them do this. You can use the market map in various ways:

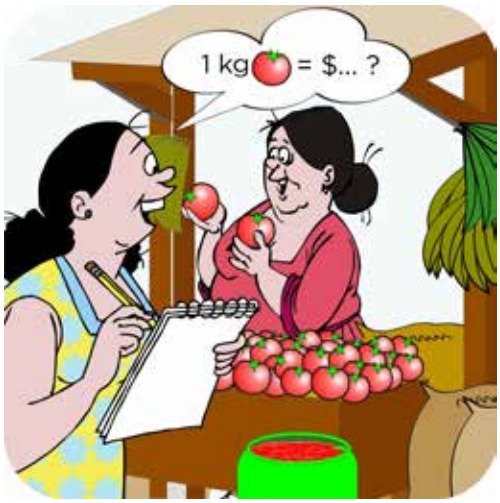
- Find out what the farmers already know about their market – what they do not know, and what you need to find out from a market survey.
- Help the farmers understand how the value chain works.
- Help them plan their market survey.

A market map is also useful when creating a business plan.



MARKET SURVEY

The market survey aims to gather information about the actual and potential markets for the farmers' products. It aims to answer three main questions:



- What is the demand for the products that the farmers are interested in?
- What are the buying conditions for these products?
- What other products are in high demand or scarce supply?

The best way to answer these questions is to visit one or more markets (see Exercise 7a).

For many farmers, the market visit is an eye-opener. While all farmers have been to a market to sell or buy something, few go there to gather information from traders with a view to improving their farming methods and businesses.

Which markets to visit? That depends on the priority products the farmers have chosen. Think about visiting the market nearest the village first, plus perhaps one or two other markets further away so you can compare information.

You may also want to visit other potential buyers such as restaurants, hotels, shops, supermarkets, and factories.

Who should take part? It is not realistic for all farmers in a group to visit a market, so ask the group to select two or three farmers to act as their market representatives.

How many traders to interview? Ask the same questions to two or three traders and see if they give the same answers. Remember always only interview one trader at a time. If the answers are the same you can feel confidence about the information they have given you. If the traders all have very different answers, ask some more traders until you can see consistency in the information.

How long does it take? This depends on the number of products, the number of markets to visit, and the distances between them. Typically, a visit to one market to study 2–3 products takes 1–2 hours, plus the travel time. For a basic market survey consider a period of one day to get to the market, ask the questions and then discuss the results. As people gain experience, it may be possible to divide them into groups and visit several markets at the same time. Remember that many markets operate only in the mornings and on certain days.

Allow time to analyze the findings and report back to the rest of the group (see below).

ANALYZING AND PRESENTING MARKET INFORMATION

After the market survey, the survey team should write up analyze the information it has collected, and report it to the whole group. Exercise 7c describes how to go about this.

In many cases, the information collected in the survey will be incomplete. You can get this from other sources, or from the contacts made during the survey.

Discuss the experience with the survey team members. What was new for them? What did they learn? What did they find most interesting?

Write up the information gathered and invite the market team members to present it to the other members of the farmers' group. Discuss the findings and their implications with the group. Help them identify what products and markets they are interested in exploring further.

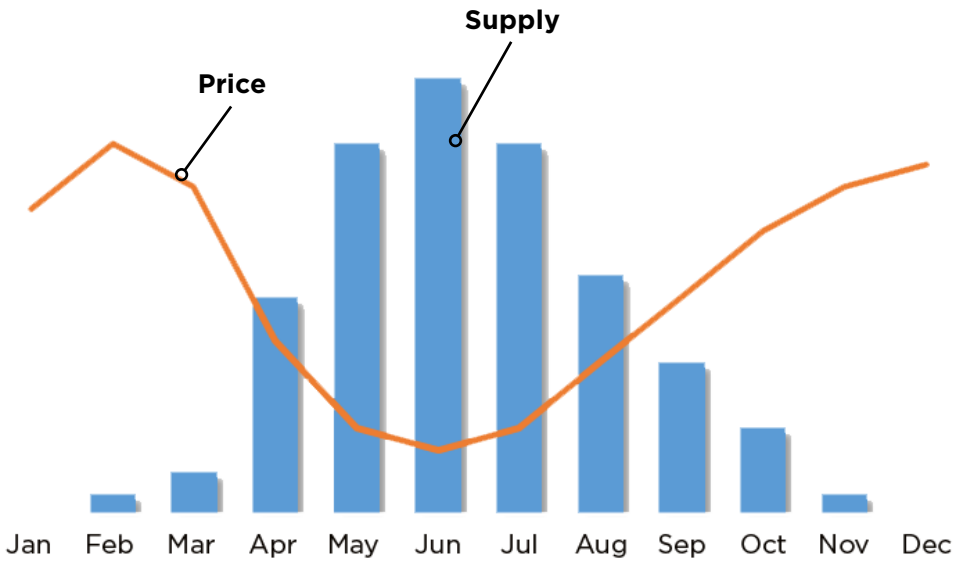
Price data. Be especially careful when reporting prices. Things to note:

- What was the product? What quality or grade? For what volume or weight?
- Where (in which market) and when (when in the season)?

TABLE 18. RESULTS OF A SURVEY CONDUCTED BY FARMERS IN SOROTI MARKET, UGANDA

RICE	
Buyer	Ben Ophrah
Telephone number	204-234-XXXX
Product	Maize
Demand	High in January–May
Type required	Local aromatic types, Serere 15, Super class
Minimum volume purchased	Lots of 10 bags (1 tonne)
Collective marketing volume	One trader offered UGS 102,000 per bag, but he wants 20 tonnes (two lorry loads)
Quality	Clean, dry, milled, no weevils, few brokens
Packaging requirements	100 kg clean bags
Frequency of delivery	Monthly
Purchase price	UGS 90,000/bag
Means of payment	Cash on delivery
Willing to buy from local farmers	If farmers are reliable

AS SUPPLY GOES UP, PRICES TEND TO FALL



Prices at different seasons. Most products can be grown only at certain times of the year, so prices often go down at the main harvest time. Farmers can often get a better price by avoiding selling at this time. Some ways to do this:

- Grow early maturing varieties
- Grow a product off-season (for example, using irrigation)
- Stagger planting and harvesting dates
- Store the produce until the price goes up.

We will look at these and other options in the next lesson.

Other questions. In addition to talking about market demand, the survey team also needs to be able to answer more general questions that farmers will want to know. Examples:

- Where do we get the varieties that the buyers want?
- When should I expect my first payment?
- Is selling the product to one of the traders more profitable that what I am already doing?

CONCLUSION

This lesson has covered ways to help the farmers understand the markets for their produce. By drawing a market map, they can improve their understanding of their actual and potential markets. By getting a small team to undertake a market survey and then report back to the group as a whole, they can gather and share information that will be vital to them as they select among alternative activities and plan their business.

QUIZ 7

Answers at the end of the guide.

1. "Everyone in this area uses a particular size of soft-drink bottle to measure liquids. So I don't need to worry about converting to a standard weights and measures."

   A. Correct. If everyone understands the local system, it's a waste of time converting to the metric system

   B. Incorrect. Local systems may change, and they may differ from place to place. And you need the standard system to compare across regions and countries

2. It's not practical to take the whole farmers' group to do a market survey. So what is your best approach?

   A. Take the whole group anyway: it's important for everyone to understand how the market works

   B. Ask the farmers to nominate a small group to do the survey, then to report back to the whole group

   C. Select a small group of individuals you think will do the best job, and get them to report back to the whole group

   D. Instead of doing a survey, invite representative traders to come to talk to the whole group

3. What is a market map?

   A. A map of how to get to the market

   B. A diagram showing information about where a product is produced, processed, and sold

   C. A map of the market, showing the location of the stalls, market administration and public toilets

4. Help Laura complete and analyze this market survey

   Match the category to the correct answer.

CATEGORY	ANSWER
A. Buyer	1. Local aromatic types, Serere 15, Super class
B. Telephone number	2. One trader offered UGS 102,000 per bag, but he wants 20 tonnes (two lorry loads)
C. Demand	3. Lots of 10 bags (1 tonne)
D. Type required	4. 204-234-XXXX
E. Minimum volume purchased	5. Ben Ophrah
F. Collective marketing volume	6. High in January-May

5. Help me pick the best ways of getting better prices.

   Select all that apply.

   A. Grow early maturing varieties

   B. Grow only those varieties that have done well for you in the past.

   C. Grow a product off-season (for example, using irrigation)

   D. Plant all varieties at the same time.

   E. Stagger planting and harvesting dates

   F. Store the produce until the price goes up.

6. Laura has done a market survey, but her notes are mixed up. Help her put them in order.

   Match the item to the correct category of information.

ITEM	CATEGORY
A. Clean, dry, milled, no weevils, few brokens	1. Packaging requirements
B. 50-kg bags	2. Means of payment
C. Monthly	3. Cash on delivery
D. UGS 90,000/bag	4. Purchase price
E. Bank transfer 1 week after delivery	5. Frequency of delivery
F. If farmers are reliable	6. Quality

EXERCISE 7A. MARKET MAPPING

This exercise enables the farmers to describe how they market their products, and encourages them to think about ways to improve their marketing.

OBJECTIVE

After this exercise the participants will be able to:

- Identify their current and potential marketing channels
- Describe potential new ways of marketing their products.

EQUIPMENT NEEDED

- Large sheets of paper, colored marker pens

EXPECTED OUTPUTS

- Diagrams of existing value chains and potential markets for the priority products

TIME REQUIRED

- 1 hour

PREPARATION

- If the group has already drawn a map of its resources, bring it with you. You can refer to this when drawing the new diagram to avoid having to repeat information.

SUGGESTED PROCEDURE

1. Ask the farmers to draw a diagram showing where they grow their crops, raise their livestock, store and sell their produce. The diagram does not have to be a map.
2. For one of their priority products, ask the farmers to show where it goes after it leaves the farm, and who is involved in marketing. They should draw the sellers, buyers, services (such as drying, milling, storage, transport and credit), and destinations.
3. If the product is sold at different places, ask the farmers to show these on the diagram. They should draw as much of the value chain as they can, if possible all the way to the consumer.
4. If they are considering more than one product for their enterprise, ask them to draw separate diagrams for the other products.
5. Ask them where the problems in marketing are, and how they might be overcome. Ask where they might find alternative buyers for each product. Mark these buyers on the diagram.

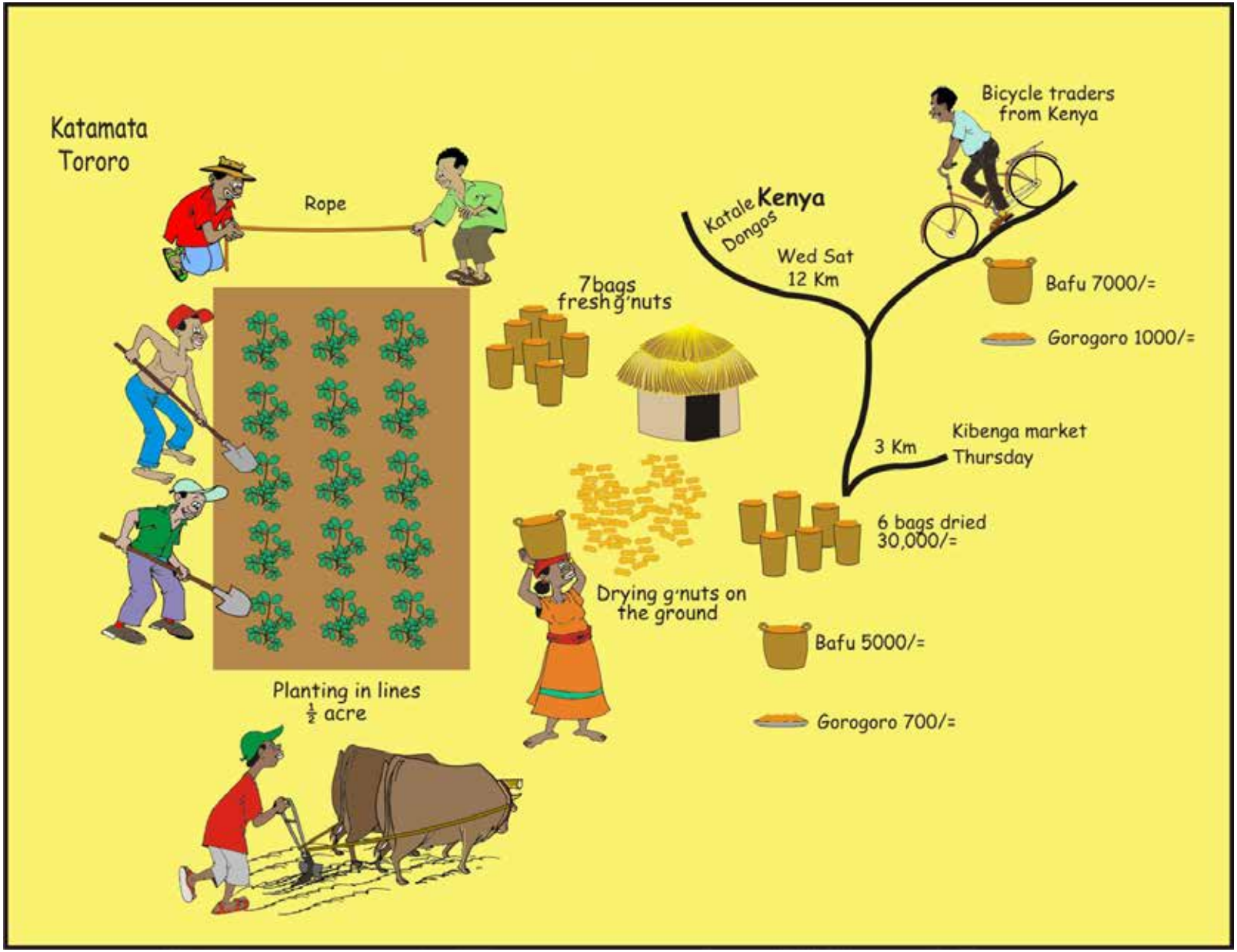
QUESTIONS TO STIMULATE DISCUSSION

- Do you process the product in some way before selling it – such as drying, husking or milling it?
- Do you sort or grade the product? How you package it – in sacks, boxes or crates?
- How much of the product do you sell? How many kilograms or sacks?
- Who buys this product? Do you sell to several different buyers? Do you know the buyers? Do they buy regularly from you? Do you sell at the same time as your neighbors?
- Where do you sell the product – at your farm, in the village, or in the market? Does the buyer pick the product up? Who arranges transport? How do you transport the product?
- What happens to the product after you sell it? Does someone else buy it? In what form do people consume it?
- What problems do you face in selling the product? Is it easy to find buyers? Does the price vary much? Can you get a good price?

NOTES

The value chains for some products are short and simple. For example, farmers may sell some types of produce (such as vegetables) directly to the consumers. Other value chains are long and complicated – think of cotton, which is ginned, spun, dyed, and woven before being made into clothes that consumers buy.

Farmers may be able to draw short value chains quite easily. But they may find it difficult to describe longer or more complicated chains.



EXAMPLE OF A MARKET MAP DRAWN BY FARMERS FOR GROUNDNUT IN EMBU DISTRICT, KENYA

EXERCISE 7B. MARKET SURVEY

A market survey is an important way for farmers to gather information about the markets for their products. A simple market survey focuses on a single product in one market. A more complex survey may cover several products in several different markets.

OBJECTIVE

After this exercise the participants will be able to:

- Gather information about demand and markets for their products.

EQUIPMENT NEEDED

- Survey questionnaire
- Large sheets of paper, colored marker pens, notepads, pens or pencils
- Transport to and from market
- Refreshments
- Expected outputs
- Information about market demand for priority products

TIME REQUIRED

- This depends on the number of products and markets, and where the markets are.

Single product

- **Day 1.** Afternoon: select a product and plan questions.
- **Day 2.** Morning: visit market; afternoon: analyze information; evening: discussion.

Several products, several markets

- **Day 1.** Decide which markets to visit, prepare a questionnaire or checklist.
- **Day 2.** Visit markets to gather information.
- **Days 3–5.** Analyze information.
- **Days 6–7.** Present findings to group.

PREPARATION

1. **Organize a team.** Ask the group to choose a small number of farmers who know about the product to visit the market and collect information. At least one should be able to write, and one should have good communication skills as they will report their findings back to the group.
2. **Decide what types of information to collect.** This will depend on the nature of the product and the market. Check the results of the market mapping exercise (Exercise 7a) for ideas.
3. **Decide where and when to visit.** List the market sites to visit (village market, assembly market, town wholesale market, retail market, processing factory, shop), and the best dates and times to visit them. Check the results of the market mapping exercise for ideas.
4. **Plan the number of interviews in each market.** Plan to interview several traders or buyers individually so you can compare their answers. Pairs of team members can conduct interviews, with one person asking questions and the other taking notes.
5. **Prepare a questionnaire or checklist,** based on the types of information you want to collect. See Table 19 for an example. You can plan to ask all these questions, or just the most essential items (in bold in the table). Adapt the questionnaire by adding or deleting questions to suit your own needs.
6. **Prepare an introduction** explaining why you are doing the survey.
7. **Rehearse.** Discuss the interview procedure with the team, and rehearse it with different farmers playing the roles of interviewer and interviewee.
8. **Arrange interviews.** If necessary, contact the people you want to interview beforehand to arrange a suitable time.
9. **Arrange transport.** If the market is a long way away, you may also need to arrange for the team to stay overnight.

SUGGESTED PROCEDURE

10. **Visit the market** with the team of farmers. Make contact with any market officials, to tell them what you are planning to do in the market. If the place is unfamiliar, walk through it to find out where your products are traded and who the team might interview.
11. **Conduct interviews.** Approach the person you want to interview, introduce yourselves, and explain why you want to talk to him or her. Follow the interview plan you have worked out, and make sure you collect the information you need. But also explore interesting topics that you had

not anticipated.

12. At the end of the interview, **thank the interviewee** for their time and information. Make sure your notes are in order before going to interview the next person.

13. Afterwards, **collate the information** you have collected so you can **analyze it and present it** (see Exercise 7c).

QUESTIONS TO STIMULATE DISCUSSION

- What do we need to know about the product and how it is marketed? What do we know already? What information do we need to check?
- How many people should we interview? What types of people – traders, managers, transporters, processors, consumers…?
- What is the best way to approach people we want to interview? Should we take notes during the interview, or immediately afterwards?
- What sorts of information may be sensitive or difficult to get hold of? Can we find out this information from any other sources?

NOTES

Some of the questions (e.g., about prices) may be sensitive, and interviewees may be reluctant to answer or give accurate responses. During an interview, start off with non-sensitive questions, then move on to the more difficult questions later. Ask about prices towards the end of your interview.

Be sure that the person you are interviewing has time (if not, arrange to come back at a better time). Do not take more than 15–20 minutes with each person. Stop asking questions when the person is dealing with customers.

Always thank the person you have interviewed for their time at the end of the interview.

Adapt the interview guide or questionnaire (Table 19) as necessary. The survey team can ask all of these questions for each product, or only the most important questions (marked with *).

TABLE 19. EXAMPLE OF A QUESTIONNAIRE FOR A MARKET SURVEY

THE INTERVIEW		
Place, date	*	
Type of product (e.g., maize)	*	
Interviewer(s)	*	
PERSON INTERVIEWED		
Name	*	
Type of activity in chain (e.g., trader)	*	
Position, name of company	*	
Phone number	*	
Address		
PURCHASES OF PRODUCT X		
How much of product X do you buy in all each day? Each week? Each year?	*	
How often do you buy product X?	*	
Who do you buy from?	*	
What is your main source of product X?		
TERMS OF PURCHASE		
What is the smallest amount of the product that you would buy? The largest amount?	*	
What varieties of the product do you need? How old or ripe? What size? What quality grade?	*	
How do you want sellers to package the product?	*	
What are your terms of payment? (e.g., full or partial payment on delivery, payment after a delay, provision of credit)	*	
Would you be interested in buying from a farmers' group? What amounts? At what price?	*	

PRICES	
What price do you pay? (per kilogram or sack) *	
How does the price change from season to season?	
Do prices vary for different varieties, ripeness, size or class?	
THE VALUE CHAIN	
What do you do with the product after you buy it? E.g., do you sell it, process, package it, etc?	
What price do you sell at?	
What are your main marketing costs?	
Who do you sell it to?	
What do they do with it?	
Who are the end users?	
THE MARKET FOR PRODUCT X	
Is demand for the product growing, stable, or declining? Are sales this year higher, the same, or lower than last year? Why the changes?	
How many other traders are there like you in the market?	
How much of product X is bought and sold at this market each day? In the peak season? In the low season?	
Who is the largest trader in this market for product X?	
OTHER PRODUCTS	
What products are in highest demand?	
What products are very scarce?	
What new products are being sold in this market?	
What would you advise farmers to grow to earn more money?	

EXERCISE 7C. ANALYZING MARKET INFORMATION

This activity is based on and follows immediately after the market survey (Exercise 7b). It enables farmers to present and analyze the information gathered during the survey, and feed this into the agroenterprise planning.

OBJECTIVE

After this exercise the participants will be able to:

- Organize and analyze information gathered through the market survey and present it to other group members
- Identify ways to improve the marketing of their priority products.

EQUIPMENT NEEDED

- Large sheets of paper, colored marker pens, information gathered during the market survey

EXPECTED OUTPUTS

- Summary of market situation for the short-listed products
- Understanding of market functions and opportunities

TIME REQUIRED

- 3 hours to 5 days, depending on amount and complexity of information

PREPARATION

- See Exercise 7b (market survey)

SUGGESTED PROCEDURE

1. **Assemble the team** that conducted the market survey, plus perhaps a few other group members to help with the analysis.
2. **Discuss the market survey experience** with the team. Find out what was new for them? What did they learn? What did they find most interesting? What was scary?
3. **Ask each interviewer to report** the information from the interviews they conducted. Write the results on large sheets of paper as tables of diagrams.
4. **Discuss the findings and analyze** their implications for the farmers.
5. **Summarize the information** using a form like Table 20.
6. **Decide who will present** the information to the larger group of farmers. It may be best to divide up the task of presentation among several members of the survey team.
7. **Call a meeting** with all the members of the group.
8. **Invite the team members** to present their findings to the whole group.
9. **Facilitate a discussion** of the findings to interpret the findings and explore their implications for the whole group.

QUESTIONS TO STIMULATE DISCUSSION

- What did the survey team members learn from the survey? What surprised them most? For each person, what was the single most useful piece of new information they learned?
- Of the various products and markets surveyed, which is the most promising? Which should the group explore further? Which are least promising?
- What would the group have to do to take advantage of the market opportunities they have identified?
- What other information does the group need?

TABLE 20. FORM FOR SUMMARIZING FINDINGS OF MARKET SURVEY

Product								
Market name								
Date								
Survey team members								
Is this a new product?	Existing (farmers produce this product) ☐				New (farmers do not produce this product) ☐			
Is this a new market?	Existing (the farmers already sell here) ☐				New (the farmers do not yet sell here) ☐			
WHAT FARMERS DO NOW								
Where do the farmers sell? (Tick all that apply)	Farm gate ☐	Local market ☐	District market ☐	Processor ☐	National market ☐	Super-market ☐	Export market ☐	Other ☐
What is the current marketing chain? (Tick all that apply)	Farmer ☐	Collector ☐	Local trader ☐	Traveling trader ☐	Processor ☐	Whole-saler ☐	Retailer ☐	Consumer ☐
What is the price of product?	Main season		Off season		Now			
How much product does the group sell?	Amount per farmer per season				Total amount for group per season			
WHAT FARMERS HOPE TO DO IN THE FUTURE								
What is the target market?	Farm gate ☐	Local market ☐	District market ☐	Processor ☐	National market ☐	Super-market ☐	Export market ☐	Other ☐
How much product does the group plan to sell?	Amount per farmer per season		Total amount for group per season		Price per unit			
What is the demand for this product?	**Current demand**				**Future demand**			
	High ☐	Medium ☐	Low ☐		Rising ☐	Stable ☐	Falling ☐	
How much will the buyer buy?	Smallest amount the buyer will buy				Amount for which the buyer will give a premium*			
How often does the buyer need supplies?	Per day? Per week? Per month? No schedule?							
What are the quality requirements?								
What are the packaging requirements?								
What are the business relationships?	None ☐	Handshake ☐			Agreement ☐	Contract ☐		
Who are the farmers' main competitors?								
What are the main risks?								

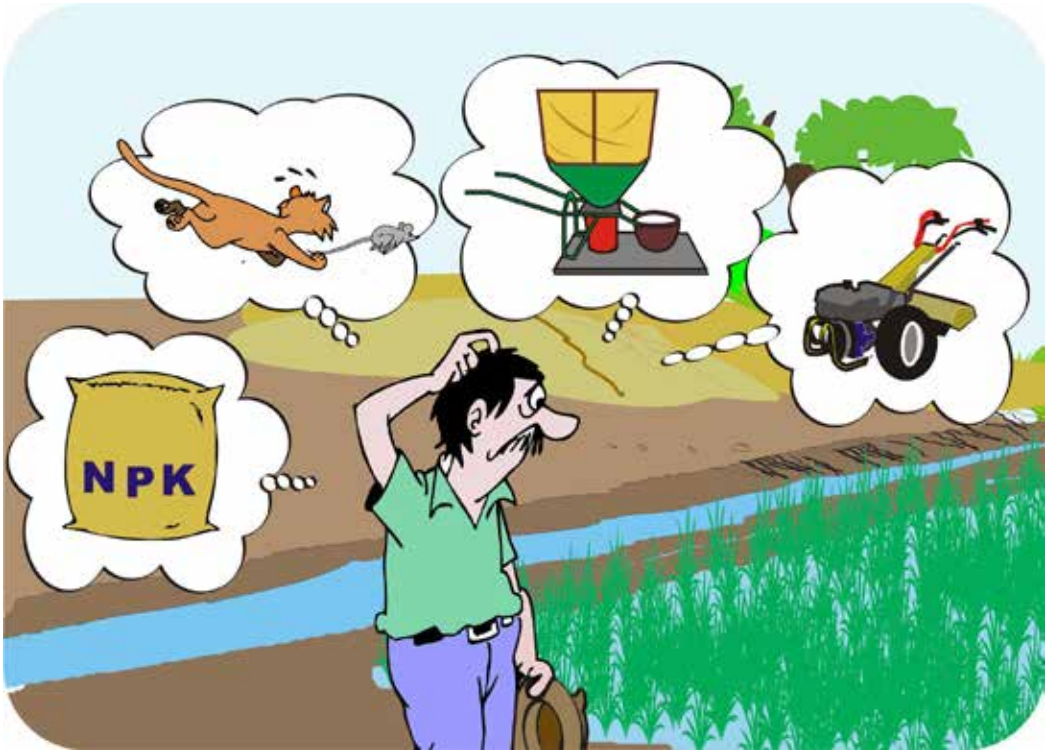
* This is usually the amount required to fill a vehicle, such as 1–3 tonnes for a pickup, 5–10 tonnes for a truck, etc. Traders often offer best prices for specific volumes. In the market visit, find out if traders are interested in collective sales. See also **Step 5** on collective marketing.

LESSON 8. ANALYZING PRODUCTION

IN THIS LESSON

After this lesson you will be able to:

- Describe possible ways to improve production of a crop or livestock product
- Help farmers to choose a set of production technologies.



IMPROVING PRODUCTION AND VALUE

Once farmers understand the market demand for one or more products, it is time for them to look at how they can produce these products and sell them at a competitive price. As a field agent, these are some things to consider:

- Find out about the new varieties of a product that traders or processors want to buy.
- Ask farmers to provide you with information on their current production methods and yields per unit area (acre, hectare, etc.).
- Discuss your information with larger or more commercial farmers and find out if they are using any new methods of production, or best practices to increase their yields
- Talk to local agriculture or livestock experts, including researchers, traders, and extension workers, to get tips on how to increase the levels of production and competitiveness of the product.
- Organize visits to other farmers who are already using improved technologies to produce more. Such visits are particularly important if the farmers do not have experience in growing a crop or rearing a specific type of livestock.

Some farmers produce more because they are doing several things right. They may not be doing anything that seems to be different from your farmers, but they get all the basics right, they make the right investments, are disciplined in their approach, and this makes them more competitive.

You can use a similar approach that you used in the market analysis (Lesson 7): help the farmers organize a small team to gather information on production and present it to the whole group.

Help the team think of ways they might improve their productivity and the price of their products. Table 21 give some suggestions on how they can do this for crops and livestock products. Exercise 8 gives one way to do this.

See also the courses on *Understanding natural resources* and *Managing natural resources* for more details on how to improve production techniques.

TABLE 21. POSSIBLE WAYS TO INCREASE PRODUCTIVITY AND SALES PRICES OF CROPS AND LIVESTOCK

STRATEGY	EXPLANATION AND ADVANTAGES	POSSIBLE DISADVANTAGES
Before planting		
Increase land area	The most common way to raise production	Suitable land may not be available
Improved crop variety or animal breed	The new variety or breed may yield more, be resistant to specific pests and diseases, grow quickly, mature early (so allowing farmers to sell before the main harvest), or have a new feature that commands a higher price	Investment in new varieties or breeds needed. New varieties or breeds may require technologies such as irrigation, fertilizer and fodder. If these are not available, the new variety or breed may perform worse than the local alternative
Staggering planting dates	Avoids harvest at peak periods, or spreads harvesting into early and late season. Generally used for vegetables and fruits	May depend on rainfall or irrigation
Planting in rows	Increases crop density and makes weeding easier	May raise labor costs and labor requirements from the family
Seedling preparation	For some crops such as rice, vegetables, the farmer can improve germination and helps the crop to grow quickly by having a nursery for seedlings before planting into the main field	Requires additional labor and investment in the time to learn new skills
Seed dressing	Chemical treatment of seed to avoid losses through pests and diseases	Availability of chemicals and cost of chemicals, need to learn how to use chemicals properly
After planting		
Fertilizer	Organic or inorganic fertilizer can boost yields. A combination of new varieties and fertilizer has raised yields across the world	Farmers need access to fertilizer and have to use them correctly
Irrigation	Increases production and extends production season	Costly, water may not be available
Mulch or plastic covers	Used for high-value, fresh produce. It accelerates early growth, suppresses weeds and takes advantage of early and late seasons prices	Labor and cost
Regular weeding	Reduces yield losses due to weeds	Laborious, high labor costs
Chemical herbicides	Reduce weeds or allow zero tillage (which cuts soil erosion and costs of land preparation)	Cost of chemicals, health hazards
After harvest		
Drying floors	Reduces time for drying, and reduces trash in final product	Costly
Sorting areas	Allow for cleaning and sorting before sale	Requires some investments and labor
Grading	Makes it possible to sell best-quality grades at higher price	May soak up labor costs and not be rewarded in markets that do not provide quality premiums
Bulking produce	Selling in bulk attracts premium prices from traders.	Many farmers may be needed to supply enough produce
Processing	Increases the value of the product, and often makes it less perishable. Examples: threshing, de-husking, boiling, drying, fermenting	May require special equipment
Storing	Avoids peak sales times and takes advantage of rising prices when supply is short	Requires suitable storage facilities. Not possible for some products

QUIZ 8

Answers at the end of the guide.

1. Match the activity with the correct timing.

ACTIVITY	WHEN?
A. Preparing seedlings	1. Before planting
B. Regular weeding	2. After planting
C. Bulking produce	3. After harvest
D. Storage	
E. Expanding the planted area	

2. Match the strategy to increase production with its possible disadvantage.

STRATEGY	DISADVANTAGE
A. Regular weeding	1. Water not available
B. Expanding the land area	2. Takes a lot of work
C. Irrigate	3. Cost of seed
D. Plant new varieties	4. Land needed for other crops

3. The farmers' group is considering ways to increase their income. Which of the following is likely to increase their output?

   A. Selling in bulk
   B. Regular weeding
   C. Expanding the land area
   D. Processing
   E. New crop variety

4. The farmers' group is considering ways to increase their income. Which of the following is likely to increase the product price?

   A. Selling in bulk
   B. Regular weeding
   C. Expanding the land area
   D. Processing
   E. New crop variety

5. Here are some ways in which the farmers' group might increase production. Match the strategy with the corresponding advantage.

STRATEGY	ADVANTAGE
A. Improved crop variety	1. Higher yield and better disease resistance
B. Staggering planting dates	2. Avoids losses from pests and diseases
C. Planting in rows	3. Avoids harvest at peak periods
D. Seed dressing	4. Higher plant density

6. Here are some ways that the farmers' group can improve their postharvest handling. Match the strategy with the corresponding advantage.

STRATEGY	ADVANTAGE
A. Drying floor	1. Traders will pay more if they can buy in large quantities
B. Grading	2. Avoids having to sell at times when price is low
C. Bulking	3. Makes it possible to sell better-quality produce at a higher price
D. Storing	4. Reduces drying time and contamination of grain

EXERCISE 8. CHOOSING A PRODUCTION TECHNOLOGY PACKAGE

This exercise guides a small team of farmers to analyze the production technologies for their priority products.

OBJECTIVE

After this exercise the participants will be able to:

- List the improved technologies they need to produce a particular crop or livestock product

EQUIPMENT NEEDED

- Flipchart, marker pens

EXPECTED OUTPUTS

- List of improved technologies needed to produce the participants' priority products
- Description of the technology package for each product

TIME REQUIRED

- Several days

PREPARATION

- Ask the farmers' group to nominate a small team to analyze production technologies.
- Bring the list of priority crops and livestock products selected in Lesson 5.

SUGGESTED PROCEDURE

1. Explain to the team that they should consider the most appropriate ways to produce the products they are considering.
2. Ask the team to discuss ways of improving how each product is produced. See Table 21 for some ideas. The suggestions should be realistic and within the farmers' own capabilities.
3. Ask the team to fill in Table 22 for their product. You will have to adapt the table for livestock.
4. Invite the team to present its results to the full group. Facilitate a discussion of the findings.

QUESTIONS TO STIMULATE DISCUSSION

- Does the crop grow well in this area?
- Are there any new varieties or technologies that we could use to increase production?
- What are the production costs?
- Can we expand production, if there is a market to buy the produce?
- What is the seasonality of this crop?
- What are the investment costs to start the process?
- What are the technology needs?

NOTES

For existing products, the team may be able to fill in the required information itself. For new products, you might need to ask an expert to provide information they do not have.

The team should gather as much information as possible and seek assistance from local experts if necessary. Make sure that the team focuses on the most important issues.

TABLE 22. FORM FOR RECORDING THE REQUIREMENTS OF A CROP PRODUCT

THE PRODUCT				
Type of product				
Is this a new or existing product?	Existing ☐	New ☐		
Name of variety				
Seed	Hybrid/ exotic ☐	New ☐	Farmers' own ☐	
Type of land preparation required	Hoe ☐	Ox plow ☐	Tractor ☐	Other (specify) ☐ _____
When is the main rainy season?	Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐			
Approximate planting date	DD/MM/YYYY			
Approximate harvest date	DD/MM/YYYY			
MATERIAL INPUTS				
Before planting				
Production				
After harvest				
Marketing				
Other				
LABOR NEEDS				
Before planting				
Production				
After harvest				
Marketing				
Other				
TECHNICAL NEEDS				
Technical needs	Low ☐	Medium ☐	High ☐	
Water needs	Rainfed ☐	Irrigation ☐		
mm of water needed				
Altitude where this product grows				
Soil requirements				
Major pests				
How to control pests				
Major diseases				
How to control diseases				

LESSON 9. SURVEYING AND FOSTERING BUSINESS SERVICES

IN THIS LESSON

After this lesson you will be able to:

- Describe how business services support value chains
- Describe how to foster business services
- List ways to help farmers get financial services so they can invest in their enterprises.

SURVEYING BUSINESS SERVICES

In the last two lessons, we have analyzed the markets for products and the production system. It is now time to do the same for business services.

Farmers who grow crops need supplies of seeds, fertilizer, agrochemicals, and equipment. They may also need advice on how to grow a new crop, and on how to manage pests and diseases. Farmers who keep livestock or fish need feed and services such as veterinary advice and medical supplies. Nearly all farmers need advice and access to financial services. And they need things like labor for tilling the land, weeding, harvesting and sorting the crop, sacks or crates to store it, and transport to take it to market.

There are businesses that provide these services are often called "business support services" or "business development services." Here, we simply call them **business services**. They are not "core chain actors", as they do not buy or sell the product grown by the farmers. See the course on *Marketing basics* for more information.

NGOs often make the mistake of providing these business services for free. But if the market chain is functioning well, farmers pay for them: they buy fertilizer and feed, pay interest on loans, pay laborers a wage, and pay a fee for advice.

It is very important that as field agents, you work with local business services to access specific service needs, rather than provide them yourself. Everything that you give free to farmers as part of "project support" will not be available free to farmers when the project ends. To build sustainable agro-enterprises, we need to adopt the mindset that was outlined in the "crossing the river" exercise (see *Introduction to SMART skills for rural development* Lesson 4) and also avoid being a "Father Christmas" (Lesson 3 of this manual).

Here are some ways to evaluate business services:

- Review the market map exercise that was done by the farmers in the marketing section, but this time, work with the farmers to identify and prioritize service needs (Exercise 9).
- Interviewing farmers and service providers (you can help the farmers' marketing team do a survey similar to the market survey in Exercise 7b).

The purpose is to help the farmers identify the essential services they need to run a specific enterprise, prioritize them, and find out how to get those services and how much to pay for them. The farmers can then compare the costs and quality of services from different providers, and decide which services are vital, which services are desirable. The point of this exercise is to find out which services farmers are able and prepared to pay for.

Help the farmers marketing team and other local experts to assess:

- Is the service essential for farmers to produce their products and access markets in a sustainable way?
- How frequently will the farmers need this service?
- What are the technical, financial, and business benefits?
- What are the risks of not using this service?
- What are the costs? How can farmers cut their costs? Costs reduce profit, so remove all but the essential ones.
- What financial services will the farmers need (savings, loans, grants, co-investments)?

WHAT HAPPENS IF FARMERS CANNOT ACCESS ESSENTIAL SERVICES?

Based on the analysis in Exercise 9, you may find the following situations:

Services are available, but weak, distant or too expensive for the farmers to use.	▶	Consider providing training and short-term subsidies to help rebuild the services.
Services are not available.	▶	Select a different product that has services which are available or Work with local private-sector actors to build up the required service.

Think of yourself as a business advisor, not as Father Christmas! Resist the temptation to provide goods and services to farmers. Instead, find ways for farmers to access goods and services through the market.

FOSTERING BUSINESS SERVICES

Here are some ways to foster business services.

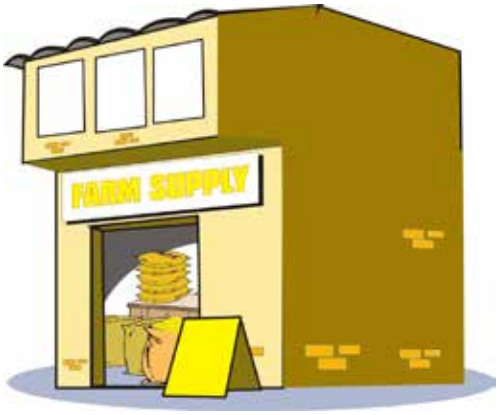
Build demand for business services. Link farmers to the providers of services they need. For example, the project can help get groups of farmers to agree to buy

fertilizer in bulk from a local business, and then give the farmers vouchers to pay for part of the amount they need. This stimulates demand for essential goods and services. Over time, the level of subsidy can be reduced, leading farmers to pay for services that make their enterprise more profitable.

Help business services develop. You can help the local service provider build their business plans and link them with project farmers. For example, maybe a local storekeeper who sells household goods is interested in selling farm inputs. You could link the storekeeper with a big supplier in town, and help broker a franchise deal so the storekeeper can get goods on credit. You could also train the storekeeper about the products and the farmers' needs. You can get the farmers and the storekeeper to exchange phone numbers so they can get in contact when the farmers need an item or if the storekeeper has the item in stock.

Train farmers to provide services. As a last resort, if it is not possible to find local businesses to provide services, the project may need to enable the farmers to provide the service themselves. You can identify and train a farmers' group to provide the service to their members for a fee. Farmer cooperatives, for example, often supply inputs, market information, and financial advice to their members.

EXAMPLES OF FOSTERING BUSINESS SUPPORT SERVICES



Here are some examples of how to work with business services.

Seed supply. Introducing new and improved varieties is a way of boosting crop productivity and avoiding losses through pests and disease. But support agencies are not seed companies. So try not to hand out free seed! Instead, you can:

- Identify a source of new seed, through links to research institutions or business.
- Find out the price of seed delivered to farmers.
- Include the costs of seed in the farmers' business plan.

In the short term, it may be possible for farmers to travel to a distant supplier to fetch the first lot of seed. But in the medium term you will need to find ways for the farmers to buy seed through local suppliers. Alternatively, you might work with a small group of farmers to produce seed to sell to the others. In this case, the seed supply becomes an enterprise: it is planned for and executed as part of a larger long term approach.

Seed fairs. CRS started seed fairs to help stimulate local seed supplies. Before the fair, the project team will identify seed suppliers and agree prices with them. You

provide farmers with vouchers for a certain value, say $20. The suppliers come to a specified marketplace, where the farmers can exchange their vouchers for seed. This gives markets to the seed suppliers, introduces an element of competition into the sales, and provides buyers with a choice of seeds and suppliers.

Livestock inputs. Many projects supply starter animals such as chickens, sheep, goats, and cattle for farmers to raise and breed. But without the right veterinary care or disease control, these animals often die. Farmers, especially those with little experience of animal husbandry, need training in animal care, need to have land to supply feed and have access to veterinary services and medicines. Veterinary care may be available from the government or the private sector. Make sure that the costs involved are included in the business plan that comes with the animals. If veterinary services are not available or are too expensive for farmers, do not invest in animals. Select another product for the agroenterprise instead.

Use vouchers. Generally it is better to arrange for an animal sale and give farmers vouchers to buy livestock, rather than buying and delivering the animals to farmers. All animals should be inspected at the time of purchase. Farmers who receive animals should be given intensive training in livestock husbandry, pests and diseases and appropriate use of medicines. Regular inspections by veterinary services should be a part of any animal business plan.

Market information. Farmers need information about markets so they can negotiate reasonable prices for their goods. They can get this information through government services or market contacts. They need advice on how to access, understand, and act upon market information. Mobile phones and short messaging services (SMS) have made getting such information much simpler. Support agencies can bulk-buy SMS airtime for farmers and sell it to them cheaply, or train them how to get data via SMS. Or you can help build a list of local traders, transporters, processors, etc., that farmers can call to find out latest prices and conditions. Farmers should always compare prices from two or three sources. They should complement phone calls with regular visits to markets to gain a better idea of market trends price changes and demand.

FINANCING

Nearly all agroenterprise projects require some form of investment. Therefore farmers will need to find ways of financing basic inputs, production, and marketing costs. Here are some ways to help farmers get financial services:

- Savings groups
- Savings and loans
- Loans to individuals
- Loans to farmer groups
- Farmer group financial delivery.

Savings groups. By saving, groups of farmers can reduce the costs of investing in their agroenterprise. They pay a small amount every week into a common pot. The treasurer keeps a record of how much each person has saved. At the start of the season, the money is distributed to the members so they can buy seed and other inputs. That means they do not have to borrow from a moneylender.

Group savings schemes are a highly effective way for poor people to save regularly so they can buy things they need. It takes several months to build up enough cash to pay for seed. It is possible to save and arrange for payouts just before planting so the farmers can buy seed.

Savings and loans. Many savings groups also combine regular savings with lending schemes. Small groups save small amounts of cash every week or month. The savings are then offered as loans to group members at an agreed interest rate. After, say, 6 months or 1 year, the entire pot of savings is shared out among the members. They can decide whether to spend this money, invest it in a business, or re-invest some in the savings group.

Such "loans and internal lending" schemes are an excellent way for farmers to learn financial skills. They allow people to save if there are no microfinance institutions or banks nearby. The loans are fairly small and can pay for short-term needs only. Bigger loans are needed for large capital items or to pay for storage and marketing.

Individual loans. A producer or entrepreneur who has collateral or a financial history may be able to write a business plan and get a loan from a bank or microfinance institution.

Group loans. A group of farmers may approach a bank or microfinance institution for a loan. They may ask the lender to consider their savings scheme as a form of credit history. Sometimes a support agency may guarantee the loan, so reducing the risk to the lender. The farmers do not know of the guarantee scheme, as this may encourage them not to repay the loan.

Group-managed financial services. The farmer group or an association of farmer groups, (such as a cooperative or secondary association) can borrow money from a bank or microfinance institution (or use its own funds) to provide smaller loans to its members. To do this, it needs strong management and governance. To assess the ability of a group to manage lending methods, you can help by checking the group's accounts, advising the group in the negotiations with the lender, and helping it decide how to loan money to the members.

We will look at credit in more detail in Lesson 11.

CONCLUSION

This lesson has focused on a vital group of actors: business services. These include a range of services: input supplies, market information, transport, financial services, and so on. Without them, the farmers would not be able to produce and market their products. We have looked at how to help farmers find out about business services, and decide which ones they need and can pay for. We have also looked at ways you can help build links to and strengthen such services.

QUIZ 9

Answers at the end of the guide.

1. Which of the following are business services?

   A. Input supplier
   B. Trader
   C. Transporter
   D. Microfinance institution
   E. Farm laborer
   F. NGO
   G. Veterinarian

2. Which of the alternatives below will help strengthen local business services?

   A. Persuade a local storekeeper to sell farm inputs.
   B. Take farmers to a research station in the capital city to get the latest seed varieties.
   C. Help the farmers organize to sell their produce in bulk.
   D. Make a list of phone numbers of local input suppliers and give this to the farmers.

3. You help a group of farmers get a loan from a bank. The group then uses this money to lend small amounts to its members. What type of financial service is this?

   A. Savings group
   B. Savings and loans
   C. Individual loan
   D. Group loan
   E. Group-managed financial service

4. A group of chicken farmers saves money every week. They lend the week's savings to one of their members, who invests in some day-old chicks. The borrowers repay the loan with interest. What type of financial service is this?

   A. Savings group
   B. Savings and loans
   C. Individual loan
   D. Group loan
   E. Group-managed financial service

5. A group of tomato farmers saves money every week. They distribute the money at the start of the planting season so they can buy seed and fertilizer. What type of financial service is this?

   A. Savings group
   B. Savings and loans
   C. Individual loan
   D. Group loan
   E. Group-managed financial service

6. You help a storekeeper write a business plan and get a loan to start selling farm chemicals. What type of financial service is this?

   A. Savings group
   B. Savings and loans
   C. Individual loan
   D. Group loan
   E. Group-managed financial service

EXERCISE 9. IDENTIFYING AND PRIORITIZING SERVICE NEEDS

Business services are vital for both production and marketing and for the sustainability of an agroenterprise. This exercise raises farmers' awareness of the value of these services.

OBJECTIVE

After this exercise the participants will be able to identify the services they need to produce and market their crops and livestock.

EQUIPMENT NEEDED

- Large sheets of paper, marker pens, cards

EXPECTED OUTPUTS

- Prioritized list of business services

TIME REQUIRED

- 2 hours

PREPARATION

- None

SUGGESTED PROCEDURE

1. Explain to the participants what you mean by business services – the provision of equipment, goods, and services needed to produce and market a product.
2. Take the earlier market maps that were drawn by the farmers and ask them to review these market maps. Then either using the same market map if possible, or a new sheet of paper, redraw the market chain, and ask the farmers to add in any business services that are available to support specific aspects of the market chain.
3. Ask the farmers to focus on one product at a time.
4. Ask each group to write each type of service on one card.
5. Ask the groups to sort the cards into piles according to what stage they need the service: for market analysis, before production, during production, after harvest, and for marketing. Allow them to add services they may have forgotten.
6. Get each group to list the contents of the cards on the left side of a large sheet of paper so the group will gradually build up a table like Table 23.
7. Ask the groups how essential the service is for producing and marketing the product. Is it essential, merely desirable, or not needed? Ask them to fill this information in the "Required" column in the table.
8. Then ask the groups what priority the service has – how important is it that the farmers get the service? Ask them to fill in the "Priority" column in the table accordingly.
9. Ask the groups to say who supplies the service, and how far away it is. Ask them to fill this in the "Supplier" and "Distance" columns in the table.
10. Invite the groups to discuss the capacity of each service provider. Ask them to categorize each service as "strong," "medium," or "weak," and to fill this information in the table.
11. Ask the groups to say whether farmers get each service for free (e.g., free extension advice) or whether they have to pay for it (e.g., buying fertilizer, hiring transport). For those services they pay for, ask them whether they typically use their savings (or cash in hand), whether they borrow money (from a bank, savings-and-loan group, moneylender, trader), or whether they get a grant (e.g., from an NGO). Fill this information in the last two columns in the Table 23.
12. Invite the groups to present their findings to the plenary.
13. Facilitate a discussion to correct any errors or omissions, and to compare among the different products. Which services are vital but not available? What can the farmers do to obtain them? Which products can they produce because they can get all the services they need? Which products are not an option because there are not enough services to make them viable?

QUESTIONS TO STIMULATE DISCUSSION

- What kinds of equipment, goods, and services do you need at each stage in the production and marketing season?
- What do you need before you decide what to produce (e.g., information about potential markets for the product)?
- Before you start planting (e.g., seed, plowing, loan to buy inputs)?
- During the growing season (e.g., irrigation water, livestock medicine, veterinary advice)?

TABLE 23. BUSINESS SERVICES NEEDED FOR PRODUCTION AND MARKETING

Product type						
TYPE OF SERVICE	**PRIORITY**	**SUPPLIER EXISTS?**	**DISTANCE**	**CAPACITY OF SERVICE**	**COST**	**HOW PAID?**
	1 = essential 2 = desirable 3 = not needed	Yes / No	km	1 = strong 2 = medium 3 = weak	Free / Paid	Savings Loan Grant
Market analysis						
Research						
Pre-production						
Seed						
Extension						
Veterinary						
Irrigation						
Finance						
Production						
Tractor/ox hire						
Fertilizer/ feed						
Extension/ veterinary advice						
Pest and disease control						
Weeding						
Finance						
After harvest						
Grading						
Packaging						
Storage						
Finance						
Telephone						
Transport						
Finance						

- During and after harvest (e.g., labor for harvesting, packaging materials)?
- For marketing (e.g., airtime for phone, transport)?
- How important is this service for you? Can you produce the product without it? How much would yields or quality decline if you did not get it?
- Does the provider offer a good, reliable service? Does it have supplies of its product (e.g., seed, fertilizer) available at the right time and in the right amounts?

LESSON 10. TOOLS FOR FINANCIAL ANALYSIS

IN THIS LESSON

After this lesson you will be able to:

- Describe how to get information about farmers' costs
- Identify the two types of materials costs, and give examples of each type
- Give examples of labor and services costs
- Calculate a farmer's total costs
- Calculate a farmer's income and profit.

WHY LEARN ABOUT FINANCE?

It is vital for any business to keep track of investments, costs, and income. In order to make good decisions, business managers – in this case, the farmers – have to know how much material and labor cost, how much money comes in, and how much profit to expect. This information will enable the farmers to put together a viable business plan. This lesson will describe how to collect this information, and lead you through some simple calculations you need to prepare a business plan.

You can calculate this information using pencil and paper or a spreadsheet. Or you can also use the profitability calculator, part of CRS's Farmbook software (https://farmbookhub.crs.org/).

If you find budgets and finance difficult, try to get help from a financial specialist. It is always worth asking people with experience in finances to check your figures. A local shopkeeper can help you and the farmers with these calculations.

WHERE TO GET FINANCIAL INFORMATION

You need an estimate of the costs of producing and marketing products. Here are three ways to get this:

- Using farmer records
- Researching existing information
- Collecting information from farmers and traders.

USING FARMER RECORDS

The best way to get costs is from farmer records. For a field agent this is ideal, as you simply have to check through the financial records of farmers who are willing to share their information. Unfortunately, very few farmers keep good records – so you will have to use one of the other two methods below. But throughout the project, do everything you can to encourage farmers to keep records of their costs and expenses so they can make informed business decisions.

RESEARCHING EXISTING INFORMATION

Some countries have detailed surveys that have been undertake to measure the yield and costs of production of key value chains. These records are often that the national level, but there are large national surveys that can provide information down to the district and county levels. These sources of information are very helpful as a guide, but they are also often out date. Prices change due to market conditions, and so whilst published data is very helpful, unless it has been recorded very recently, then you will have to verify it with farmer information.

GATHERING INFORMATION FROM FARMERS AND TRADERS

Gathering price information from farmers and traders is not easy. You will find that in your first interviews, that farmers often give inaccurate information on costs and income. Some do not want to share information that they think is sensitive and others are not sure what the real figures are, so they guess.

So be careful when recording information. Ask clear questions, double-check the answers, and ask for probes if you are not convinced. Discard figures that are obviously wrong, inflated, or misleading. To facilitate the process of recording information, try doing two things:

- Before you ask your farmers about their costs, visit a lead farmer in the area and ask him or her to go through the costs of production with you. Spending time with a well-organized commercial farmer can help you learn about all the equipment, best practices and costs. Keep in mind, however, that this commercial farmer may get better input prices than other smaller farmers.
- It is also very helpful to visit an agri-dealer in the region and write down the costs of

things that farmers need such as seed, fertilizer, basic equipment, and agro-chemicals. Having a list of costs will help you cross reference what farmers say against what input suppliers are selling. To help with this fill in the table shown in Annex 4.

Some farmers are cautious when asked sensitive questions about money. Explain clearly why you want this information. Make it clear that you are not a tax official! Show that the farmers will get a better understanding of their business if they provide accurate numbers for this calculation.

In addition, remember that farmers may be embarrassed by financial questions if they cannot read or write or if they have only a very basic understanding of their costs of production. Some will not understand what you are doing and why. So explain the method you are using in simple terms that are relatable to the farmers. If they are all illiterate, ask them to bring along a relative who can help them with the calculations.

See Exercise 10a for a way to calculate the costs of the enterprise. Try to make the analysis fun! Tell farmers about the benefits of knowing their costs of production. If they see the value of this work in the future they will do it themselves.

You can do costs of production calculations on paper, but it is often quicker to use a calculator or a computer. A spreadsheet program such as Microsoft Excel is very useful. The CRS Farmbook program can also help you do these calculations. Get more information on Farmbook at https://farmbookhub.crs.org/.

Women and men may have very different views of the costs and the amount of work needed to produce and market a particular product. Women are often more precise and careful in keeping track of money and work time. Be sure to work with women to get their costs if you are going to set up agroenterprises with women's groups.

One-on-one interviews. To avoid distractions and farmers providing inaccurate data, conduct cost interviews with single farmers. When you talk to individual people about costs, they are usually more honest or accurate. Getting accurate cost data is also improved significantly if you actually know some of the costs already and can cross check specific costs with farmers.

USING SAMPLED COST DATA TO PREDICT COSTS OF OTHERS

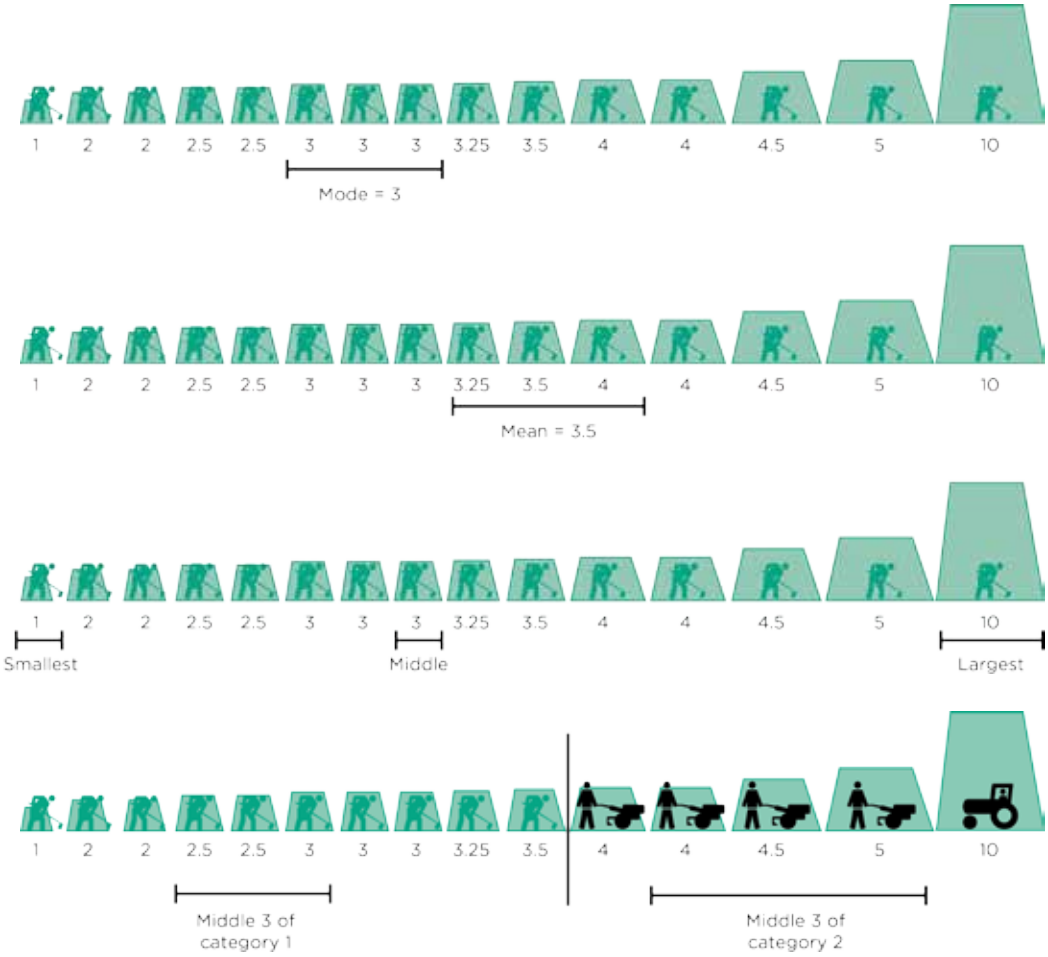
If you are working with many farmers and several groups it will take a long time to create individual cost data for everyone. To estimate the costs for many farmers, you can gather information from a number of representative farmers and then use this sample to generate the approximate costs for other farmers in a group.

For example, you can gather information from three farmers, take the average and use this to estimate the costs of other farmers, taking into account their area of production for the same crop, and their location. But you must be careful about how you collect the sample information. You will need to use a sampling method to generate an average you can used to estimate costs for others.

If the farmers have similar areas and use similar production methods. In this case, you can use a sample of three representative farmers. Choose the farmers to sample based on their land area. You can select them in a number of ways:

- Select the **mode** (the most common farm size), and interview three farmers with that size of farm.

FARMERS SELECTED FROM THE GROUP ACCORDING TO FARM SIZE



- Calculate the **mean** size of all the farms, then interview three farmers with that size of farm,
- Select the **smallest, middle and largest** farmers, calculate the average, and interview three farmers with that farm size.

Interview the three selected individuals about their costs of production. Calculate their costs per acre or hectare, then calculate the average of the three farmers.

Use the average cost of production per hectare (or per acre) to estimate the costs for each of the farmers in the group. Do this by multiplying the average costs per unit area by the size of land that each farmer plans to grow the crop on that season. Add up the costs for all the farmers to get the total for the group as a whole.

If the farmers have very different areas or use different production methods. If some farmers use irrigation but others do not, they will incur different costs. The same is true if some use fertilizers but others do not. Similarly, farmers who cultivate 1 hectare will have different costs from those who have 10 hectares. Using the average for the whole group is not realistic.

In such situations, you may need to divide farmers into sub-groups. For example, you might divide the farmers into those who have more than 5 ha of land and those with less. Work out the average costs for a sample of farmers in each category. You can then use these averages to estimate the costs for the other farmers in the same category.

Instead of using land area, you might divide the farmers into categories based on the production technology they use: with and without irrigation, or with and with fertilizer.

COST OF MATERIALS

Interview the farmers to gather information about their costs. You will need to ask about their **consumable items, durable items,** and **labor costs.**

Consumable items are things that get used up in the production cycle or year. These include the costs of renting land and buildings, hiring equipment, and using irrigation, seeds, fertilizer, agrochemicals, fuel, transport, veterinary products, bags, string, and packaging materials.

Other items to include here:

- **Market fees, taxes and bribes.** Some of these may be illegal, but they are still real costs that the farmer must pay.
- **Service fees,** such as a visit from a veterinarian or a mechanic to fix an irrigation pump.

See Table 24 for an example of expenses on consumables.

Durable items are things that last a long time. Some items are expensive, but last for many years. Examples are buildings such as grain stores and tree seedlings, equipment such as hoes, wheelbarrows, pumps, mills, and mobile phones, and livestock such as draft and milking animals. In this case you need to estimate how many years the item will last, and then divide the cost by this number of years.

For example, if an irrigation pump costs $200, and you expect it to last 10 years, the cost of the pump for one year is $20. (Note that the fuel for running the pump is a consumable.)

Note: When you estimate costs for different land areas, be aware that costs of durable items increase at a lower rate than consumable materials, as the land area increases in size. For example, the costs for a plow will not change for modest increases in farm sizes such as 1–2 acres, whereas the costs of fertilizer will increase proportionally with land area.

TOTAL MATERIAL COSTS

The combination of the consumable material costs and the durable material costs provides the total cost of materials, as shown in Table 26.

TABLE 24. EXAMPLE OF ESTIMATING THE COSTS OF CONSUMABLE MATERIALS

1 acre of maize, Sanya Juu, Tanzania

DATE	MATERIALS	UNITS	QUANTITY	PRICE PER UNIT	COST
		Eg, kg, bags		**$**	**$**
			A	B	A × B
	Hybrid seed	2 kg packets	4	5	20.0
	Fertilizer	50 kg bag	1	40	40.0
	Bags	100 kg bags	15	1	15.0
	Transport to market	transport	15	0.5	7.5
	Market fees	Fees per bag	15	0.5	7.5
Total consumables					90.00

TABLE 25. EXAMPLE OF ESTIMATING COSTS OF DURABLE ITEMS

1 acre of maize, Sanya Juu, Tanzania

DURABLE ITEMS	UNITS	QUANTITY	PRICE PER UNIT	YEARS USED	COST PER YEAR
			$		$
		A	B	C	A × B / C
Plow	Item	1	100.00	10	10.00
Hoes	Item	2	6.00	4	3.00
Machetes	Item	2	9.00	3	6.00
Baskets	Item	5	1.00	5	1.00
Storehouse	Building	1	300.00	20	15.00
Mobile phone	Item	1	25.00	5	5.00
Total cost of durable items per year					40.00

TABLE 26. TOTAL MATERIAL COSTS

	$
Total costs of consumable materials per year	90.00
Total cost of durable items per year	40.00
Total cost of all materials per year	130.00

TOTAL MATERIAL COSTS = CONSUMABLE ITEM COSTS + DURABLE ITEM COSTS

COST OF LABOR

Labor includes payment for people to do tasks such as nursery preparation, land clearing, plowing, seed-bed preparation, planting, weeding, irrigating, applying fertilizer, hiring of spray gangs, animal feeding, milking, herding, crop harvesting teams, threshing gangs, packing, storage handling, negotiating with traders, and transport to market.

Other items to include here:

Family labor. The work of family members is a vital part of many farm enterprises, but they often do not get paid in cash. Instead, they are paid in kind – in the form of food and accommodation. Given that family labor needs to be accounted for, work with farmers to estimate how much this would cost in money terms. If farmers are not sure, use the general local daily rate for hired labor.

Note that as farm size increases past a certain point, family labor will remain constant and all remaining labor needs will be filled by hired labor.

Payments in kind, such as the costs of harvesters or others who are paid with a portion of the yield.

The cost of labor may vary during the season or with the type of job. Make sure you include the right wages when calculating the labor cost for the various activities. See Table 27 for an example of calculating the cost of labor.

TOTAL COSTS

By adding together the costs of consumable and durable materials and labor, you can calculate the total costs.

TABLE 27. EXAMPLE OF ESTIMATING COSTS OF LABOR

1 acre of maize, Sanya Juu, Tanzania. Currency: US dollars

DATE	ACTIVITY	PERSON-DAYS		COST/DAY ($)		COST ($)		
		Hired	Family	Hired	Family	Hired	Family	Total
		A	B	C	D	E = A × C	F = B × D	E + F
Pre-production								
	Plowing	1	1	4	4	4	4	8
	2nd plowing	1	1	4	4	4	4	8
Total pre-production costs						**8**	**8**	**16**
Production								
	Planting	0	3	2	2	0	6	6
	Weeding	1	4	2	2	2	8	10
	2nd weeding	1	4	2	2	2	8	10
Total production costs						**4**	**22**	**26**
Postharvest costs								
	Harvesting	2	2	2	2	4	4	8
	Drying, sorting	0	6	2	2	0	12	12
Total postharvest costs						**4**	**16**	**20**
Marketing costs								
	Transport	0	4		2	0	8	8
Total marketing costs						**0**	**8**	**8**
Total labor costs						**16**	**54**	**70**

TABLE 28. TOTAL COSTS

1 acre of maize, Sanya Juu, Tanzania

		$
Total materials costs (consumable and durable)	A	130
Total labor costs	B	70
Total costs	A + B	200

TOTAL COSTS = MATERIAL COSTS + LABOR COSTS

Exercise 10a helps you work out how much producing and marketing a particular amount of the product will cost – for example, 1 ha of maize, or 100 chickens. Each farmer can use the same procedure to calculate his or her own costs.

ESTIMATING INCOME

Once you have calculated the costs of producing and marketing a particular product, you need to calculate the income they can earn from the product. This is easier. You need the following pieces of information:

- Amount of the product the farmer expects to produce and sell.
- Price the farmer expects to get for selling the product.

Multiply these together to get the total income (Table 29).

Make sure you use realistic estimates of the amount to be sold and the price. It is better to be conservative about production and prices (and be pleasantly surprised if they turn out to be higher) than to be disappointed (and in debt) if you are too optimistic. If you have information on output and prices from the last few years, use these as a basis for the estimates.

If the farmer has written down how much he or she received from selling produce in the previous year, you can use this information to estimate the income. In our example (Table 30), the farmer sold her maize in three separate batches. Add these figures to obtain the total income.

When using information from previous years, it is best to take the average, giving more weight to the most recent years. Check what a farmer is saying against the national or regional average yield. For prices, you can use for example a five-year average for the price. Use these figures as a basis for the estimates. Or if you have information on output and prices from the last few years, use these as a basis.

TABLE 29. ESTIMATING INCOME (ONE-TIME SALE)

1 acre of maize, Sanya Juu, Tanzania

INCOME	DATE SOLD	UNIT	NO. OF UNITS	PRICE PER UNIT ($)	INCOME ($)
			A	B	A × B
Sale of maize	15th August	90-kg bags	15	28	420
Total income					420

TABLE 30. ESTIMATING INCOME (MULTIPLE SALES)

1 acre of maize, Sanya Juu, Tanzania

INCOME	DATE SOLD	UNIT	NO. OF UNITS	PRICE PER UNIT ($)	INCOME ($)
			A	B	A × B
Sale of maize	5th August	90-kg bags	5	27	135
Sale of maize	15th August	90-kg bags	5	28	140
Sale of maize	30th August	90-kg bags	5	29	145
Total income			15		420

ESTIMATING PROFIT

You can then calculate the **gross margin** (the profit) to expect: the difference between the total income and the total cost (Table 31).

By comparing the expected costs, income and profit among several products, the farmers can make an informed decision on what products they wish to pursue in their agroenterprise.

TABLE 31. ESTIMATING PROFIT

1 acre of maize, Sanya Juu, Tanzania

		$
Total income	A	420
Total materials costs	B	130
Total labor cost	C	70
Total costs	D = B + C	200
Profit (gross margin) per acre	A – D	220

TABLE 32. ESTIMATING PROFIT EXCLUDING FAMILY LABOR

1 acre of maize, Sanya Juu, Tanzania

		$
Total income	A	420
Total materials costs	B	130
Total labor and services costs (excluding family labor)	C	16
Total costs	D = B + C	146
Profit (gross margin) per acre	A – D	274

FAMILY LABOR

Farmers often do not count the cost of family labor. However, it is important to account for it when planning an agroenterprise for the following reasons:

- Family members working in the farm may get sick or may need to be absent from their farm duties. A farmer will have to hire outside labor to compensate this absence.
- One enterprise option such as tomatoes, may require a lot more family labor than another enterprise option such as maize.
- Certain members of the family (especially women) may be burdened with more work and children will may not be available for farm duties during the school year.
- If family members can earn more money elsewhere (for example by moving to town in search of work), they may do so. They may not be available to do vital work such as planting, weeding and harvesting when needed.

MULTIPLE HARVESTS

It is relatively simple to calculate the costs, income, and profit for some types of products. Maize, for example, is grown and harvested in a single season but can be stored and sold throughout the year.

Other products are more complicated:

- **Vegetables** can be planted and harvested several times in a season with multiple production cycles and sales, but because they are so perishable storing them is much harder.
- **Chickens** produce more than one product. They produce eggs for 2-3 years, and then meat at the end of their laying lives.

You can adapt the tables in this lesson to allow for these products with multiple production cycles or more than one output for sale. For example, you can add rows to the table for calculating income as shown in (Table 30) to allow for weekly harvests of vegetables. Remember that the price of the product may change over time: vegetables usually fetch more when they are out of season.

STORAGE

Some products (especially grain) can be stored for weeks or months until the price rises. Make sure you include the costs of storage and the losses due to spoilage.

SLOW-MATURING PRODUCTS

Products such as fruit trees and livestock take more than a single season to start producing, but then continue producing over a number of years. The farmer must pay many of the costs up front, and wait for the trees to grow or the cows to mature.

GROWING FOR FOOD AND INCOME

Many farmers try to grow all the food they need, and then sell any surplus. In the major maize growing areas of Africa, for example, a family of six needs to produce about ten 100-kg bags of maize to feed the family before they have surplus to sell. For many crops, a part of the production is kept on farm for internal consumption. Think of this as the cost of the fuel (calories, vitamins, and minerals) a family needs to work in the farm.

If we use the data from the previous example, but this time we consider the food security needs of the family, they will retain 10 bags with a market value of $280. The family will sell 5 bags with a market value of $140. As it cost $150 to produce the 15 bags, plus $16 in hired labor, the maize enterprise on the farm for a one acre plot is now showing an overall financial loss of minus $6 dollars (Table 33).

TABLE 33. ESTIMATING PROFIT WITH HOUSEHOLD CONSUMPTION

1 acre of maize, Sanya Juu, Tanzania

		$
Total value of all 15 bags	A	420
Value of 10 bags retained on farm	B	280
Total income from sale of 5 bags	C = A – B	140
Total materials costs	D	130
Total labor and services costs (excluding family labor)	E	16
Total costs	F = D + E	146
Profit (gross margin) per acre	C – F	–6

Is this a problem? Well, the most important part of the equation is that by keeping part of the harvest, the family has enough maize to feed themselves. An adequate diet means that everyone in the farm will be healthy and able to work hard. Moreover, the maize may have even cost more if the family had to buy it at the market. However, the other part of the equation shows that the farm is not making a profit with such low yields and a small plot size.

OPTIONS TO BALANCE FOOD AND FINANCIAL SECURITY

To improve the productivity and profitability of their maize enterprise, farmers have a number of choices, the methods below outline ways in which farmers can improve both their food and financial security:

EXTENSIFICATION

For farmers with access to underutilized land, their first option to increase production is to grow more of that crop, for example maize, by planting on additional land. The ability of farmers to extend their production of a crop depends on whether they have additional available land, or they can rent land at a price that would make a larger area profitable. But note that the additional land may be more marginal or less fertile, and the additional area will increase the costs of materials, labor and loans.

INTENSIFICATION

Increasing yields per unit area is the next most common alternative. This can be achieved by improving production practices. This generally means a combination of:

- Increased use of technology, which requires investing in things like seed, fertilizer, irrigation, or equipment
- A more disciplined approach to the farming activities required to grow a crop, including preparing land on time, planting on time, use of recommended rates of seed and fertilizer, weeding on time etc.

This approach is both technology and knowledge intensive.

DIVERSIFICATION

Another alternative is to use a part of the available land to grow higher-value crops, or keep livestock. Depending on market conditions, products such as horticultural crops can provide a higher return to the land and labor costs, compared with growing more maize.

Diversification is an essential strategy for millions of smallholder farmers, who are farming ever diminishing plots of land. Helping farmers make choices about diversification options requires field agents to have a sound understanding about profitable options and working with farmers to make sound production and financial decisions.

REDUCING COSTS OF PRODUCTION

This approach can increase profitability, through lowering costs or making efficiency gains. Once farmers know their costs of production for a crop, they can explore ways of reducing costs. Examples include micro-dosing fertilizer (which costs less than broadcasting it), better use of water to ensure crops do not suffer from drought, or spraying herbicides to cut the labor costs for weeding.

SAVING

It costs money to borrow money for farming. Farmers who save more to invest in their farming system can reduce the amount they have to borrow and so reduce on their loan costs.

OFF-FARM EMPLOYMENT

Increasing populations over the past 30–40 years has meant that as average plots sizes have declined. Millions of farmers, particularly those with less than 4 hectares (10 acres) now have insufficient land to farmer grain crops at a commercial scale. Farmers with less than 1 hectare (2.5 acres) may not be able to make ends meet. These farmers must find additional ways to make money outside the farm. Off-farm incomes may include providing labor to neighboring farms, working in a village shop or on a plantation during harvest season, or working on construction sites or manufacturing firms.

COMPARING AMONG FARMERS

You can help farmers understand and analyze their production options and costs using the approach above. Many farmers are not familiar with such analysis. They tend to grow what they have always grown. As they begin to understand their market options and become more commercial in their outlook, they can use their new skills to optimize their food and income opportunities.

Every farm is different, and every farmer has different costs of production. That means they can learn a lot from one another. You can help the best farmers explain to other farmers how they invest in their crops, where they pay more money and where they keep their costs down. This will help farmers to see how others manage their money to increase their production and income. Making comparisons between good farmers and others is often called “benchmarking” because you collect information on different farmers, find good farmers to use as a benchmark, and use them to help others learn.

CONCLUSION

This lesson has covered a lot of ground. We have learned how to gather information about costs and how to calculate the costs of producing and marketing a product. We then covered how to calculate income and profits, and to compare among various products.

This lesson also includes a lot of arithmetic. Many people find numbers confusing, so be prepared to explain slowly and repeat your explanations using simple examples where possible. If they find it hard to begin with, remind them that it gets easier with practice. Do not worry if all the costing numbers are not totally accurate, or if you have missed a few minor items. It is better to be roughly right than precisely wrong!

It is important that farmers gain the skills covered in this lesson. They will need them repeatedly as they plan and manage their agroenterprises.

QUIZ 10

Answers at the end of the guide.

1. The farmer has won the lottery and wants to buy some new stuff! Match each cost with the correct category.

COST	CATEGORY
A. Hybrid seed	1. Durable materials
B. Hand-tractor	2. Consumable materials
C. Veterinary advice for his sick camel	3. Labor and services
D. The latest mobile phone	

2. "I have been farming for all my life. I've never kept track of costs, and I'm not going to start now." How should you respond?

   Select all that apply.

   A. "That's fine – it's not important. You are welcome to join the group anyway."

   B. "I understand your position. But the younger members of the group need experienced farmers like you to guide them. It would really help them if they could understand your costs."

   C. "Sorry, if you think like that there's no way you can join the group. Goodbye."

   D. "Every business depends on a solid understanding of income and expenses. Here, let me help you. How many bags of maize did you harvest last year?"

3. A farmer says it took her three days to plow her half-hectare field, one day to sow seed, two days to weed the plot, and a day to harvest it. The cost of labor in her village is Rs 30 a day. How much should she count as the cost of her labor?

   A. Rs 210 per hectare

   B. Rs 30 per hectare

   C. Rs 420 per hectare

   D. Nothing – it's not necessary to count family labor.

4. A farmer calculates that to grow 5 quintals of teff, he must spend a total of birr 1,500. He can sell the teff for birr 1,200 a quintal (teff prices are high at the moment!). What is his profit?

   A. Birr 300

   B. Birr 4,500

   C. Birr 6,000

   D. Birr 1,500

5. When calculating the cost of labor, you should:

   A. Include the cost of family labor

   B. Include the cost of family labor only if the family members are paid in cash

   C. Ignore the cost of family labor

6. What is a farmer's gross margin?

   A. The farmer's total income

   B. The farmer's total income minus materials costs

   C. The farmer's total income minus materials and labor costs

EXERCISE 10A. CALCULATING COSTS OF PRODUCTION AND MARKETING

This exercise guides the farmers through the task of listing and calculating the costs of materials and labor. This exercise is designed for a focus group of up to 8 farmers. You can also adapt it for interviews with individual farmers.

You will need to repeat this exercise for each of the products the farmers are thinking of producing. Or if you have enough participants, split them into small groups: one for each type of product they are considering.

OBJECTIVE

After this exercise the participants will be able to:

- List all the costs farmers incur in producing and marketing a product
- Calculate the material costs of production and marketing.

EQUIPMENT NEEDED

- Large sheets of paper, marker pens, cards

EXPECTED OUTPUTS

- List of costs of materials, labor, and services
- Calculation of materials costs
- Expected income from future sales

TIME REQUIRED

- 3 hours

PREPARATION

- Prepare blank tables like Table 34, Table 35 and Table 36 on large sheets of paper.

SUGGESTED PROCEDURE

1. Explain to the participants that they will be calculating the costs of producing and marketing a particular product. Explain why they need to do this – to help them decide whether it is a good idea to produce this product.
2. Ask them to think of producing a standard amount of the product. For maize, this might be one hectare of the crop. For chickens, it might be 100 chickens.
3. Ask them to list all the items they need to produce and market the product – these will include material costs such as seed, fertilizer, land rental, irrigation, and labor costs for plowing, sowing, weeding and so on. Prompt them if necessary. Sort the cards into three piles: consumable items, durable items, and labor and services.
4. For the consumable items, ask them to say how much of each item they need, and the price of each unit (e.g., renting 1 ha of land, buying 1 kg of seed). List these in the "Quantity" and "Price per unit" columns of Table 34.
5. For each item, get the farmers to calculate the total cost (the last column in the table).
6. Repeat these steps for the durable items, remembering to ask how many years (or production cycles) the item can be expected to last. Write this information in the appropriate section of Table 35.
7. Then repeat these steps for labor and services, so filling in Table 36.
8. Check back that the farmers have not forgotten any items. Double-check the calculations.
9. Add the totals from Table 34, Table 35and Table 36:

   Total costs

   = Consumable material costs
   + Durable items cost per year
   + Labor

This is the total cost of production and marketing.

TABLE 34. FORM FOR ESTIMATING AND RECORDING COSTS OF CONSUMABLE MATERIALS

Product type		**Currency**			
Land area		**Currency per $**			
DATE	**MATERIALS**	**UNITS**	**QUANTITY**	**PRICE PER UNIT ($)**	**COST ($)**
		Eg, kg, bags	A	B	A × B
Pre-production					
	Tools				
	Land rental				
	...				
Total pre-production costs					
Production					
	Seed				
	Fertilizer				
	Agrochemicals				
	...				
Total production costs					
Postharvest					
	Bags				
	...				
Total postharvest costs					
Marketing costs					
	Transport to market				
	Market fees				
	Communications				
	...				
Total marketing costs					
Total consumable materials costs					
Total consumable materials costs ($)					

TABLE 35. FORM FOR ESTIMATING AND RECORDING COSTS OF DURABLE ITEMS

Product type		**Currency**			
Land area		**Currency per $**			
ITEM	**UNITS**	**QUANTITY**	**PRICE PER UNIT ($)**	**YEARS USED**	**COST PER YEAR ($)**
	E.g. hoes, buildings	A	B	C	A × B / C
Total cost of durable items per year					
Total cost of durable items per year ($)					

TABLE 36. FORM FOR ESTIMATING AND RECORDING LABOR COSTS

Product type				**Currency**				
Land area				**Currency per $**				
DATE	**ACTIVITY**	**PERSON-DAYS**		**COST/DAY ($)**		**COSTS ($)**		
		Hired	**Family**	**Hired**	**Family**	**Hired**	**Family**	**Total**
		A	B	C	D	E = A × C	F = B × D	E + F
Pre-production								
	Land clearing							
	...							
Total pre-production costs								
Production								
	Cultivation							
	Fertilizer application							
	Weeding							
	...							
Total production costs								
Postharvest costs								
	Harvesting							
	Drying							
	Threshing							
	Storage							
	...							
Total postharvest costs								
Marketing costs								
	Packaging							
	Cleaning							
	Sorting / grading							
	Produce to market							
	...							
Total marketing costs								
Total labor costs								

EXERCISE 10B. CALCULATING INCOME AND PROFIT

This exercise uses the information generated in Exercise 10a to calculate the expected income and profit for different products. It enables farmers to see whether producing a product is likely to be profitable, and to compare the profitability of various products.

OBJECTIVE

After this exercise the participants will be able to:

- Calculate the income and profit they can expect from different products

EQUIPMENT NEEDED

- Large sheets of paper, marker pens and a calculator

EXPECTED OUTPUTS

- Calculation of income and profit for different products

TIME REQUIRED

- 2–3 hours

PREPARATION

- Use Exercise 10a to help farmers calculate the costs of producing and marketing various products.

SUGGESTED PROCEDURE

1. Explain to the participants that they will calculate the income and profits from the products they are considering producing. They need to do this so they can see whether producing each item is likely to be profitable. It will also help them choose among the products.
2. For each product, ask how many units they expect to be able to produce. For example, how many bags of maize per hectare, or how many chickens per production cycle? Write these figures in the first row of Table 37.
3. Ask them what price they can expect per unit of output. Write this amount in the second row.
4. For each product, multiply the amount of output by the price. Write this amount in the third row.
5. Write the total costs (from Exercise 10a) in the fourth row.
6. Calculate the expected profit for each by subtracting the costs from the income.
7. Discuss the results with the farmers. Are the estimates realistic? Do they conform to their experiences? Which product is best from this point of view?

TABLE 37. CALCULATING EXPECTED INCOME AND PROFIT FROM VARIOUS PRODUCTS

		PRODUCT 1 (E.G., MAIZE)	PRODUCT 2 (E.G., CABBAGE)	PRODUCT 3 (E.G., BEANS)
No. of units of output (e.g., bags)	A			
Expected price per unit	B			
Total income	C = A × B			
Total costs	D			
Expected profit from 1 ha	C – D			

LESSON 11. DECIDING ON CREDIT

IN THIS LESSON

After this lesson you will be able to:

- List the sources of credit in your area
- Explain what is meant by “principal,” “interest rate,” “installment,” “default,” and other terms
- Explain why farmers take loans
- Calculate whether it is profitable for a farmer to take a loan
- List the five things a bank or microfinance institution will consider before approving a loan.

PLACES TO GO TO GET CREDIT

One of the main reasons farmers do not produce more is because they do not have enough money to pay for the inputs they need. They have to pay for things like seed, plowing, and fertilizer right at the start of the season. But they earn money only at the end of the season, when they can harvest and sell their crops. There are several solutions to this problem:

- **Individual savings.** Farmers try to save money from selling their products to pay for inputs in the next season or production cycle. But many farmers find it hard to save enough to pay for all the inputs. That means they produce less to sell – so earn less. The result: a vicious cycle of underinvestment and underproduction.
- **Borrowing from family members.** Relatives often lend each other money at zero or low interest rates.
- **Internal savings and loans.** Members of the farmers’ group save money regularly by paying small amounts into a group account. When they need money, they can withdraw this money, and perhaps get a loan from the group account. Farmers can also borrow from other savings groups.
- **Loans from a moneylender.** Individual farmers often borrow money from local moneylenders. Such loans are convenient, but the interest rates are often high. Farmers are usually familiar with these loans and the conditions attached to them.
- **Loans from an input supplier or customer.** Stores that sell inputs and traders who buy the products sometimes offer loans to farmers. Both may require the farmers to sell them the produce at a lower price as a condition of the loan.
- **Credit from a bank or microfinance institution.** Individual farmers, or the group as a whole, may be able to get a loan from a lending institution such as a bank, a microfinance institution or a development project. Such organizations generally charge lower interest rates than moneylenders, but usually require the borrower to prepare a business plan, provide references, collateral, or credit history. In addition, these agencies will seek legal means to recover loans that are not repaid.

Where farmers get money is often a mystery to outsiders. Farmers may be reluctant to talk about it. Since moneylenders are a major source of finance, consult them to find out how much interest they charge and how repayments are scheduled.

This lesson looks at the last source of money: credit from banks and microfinance institutions.

CREDIT WORDS

Here are some important terms to know:

- **Principal.** The amount of money the lender lends to the borrower.
- **Loan cost.** The cost of borrowing the principal amount, (e.g., it may cost a farmer a capital cost of $20, to borrow a principal of $100 for 4 months).
- **Loan period.** The length of time the borrower has before repaying all the money.
- **Interest rate.** The fee charged by the lender. This may be calculated per month (e.g., 5% per month for 4 months) or over the whole loan period (e.g., 20% over 4 months).
- **Repayment.** The amount of money the lender must pay back. The repayments may be in regular installments (e.g., a small amount every month), or in a lump sum at the end of the loan period.

- **Installments.** These are the amounts of money that a borrower pays to the lender on a regular basis. For example, the borrower has to repay the lender an installment of $10 per week, for ten weeks, to cover the full repayment of a $100 loan.
- **Default.** If the borrower does not repay, he or she "defaults on the loan."
- **Collateral.** In order to ensure that the borrower repays, the lender may demand collateral. This is an asset (such as land or equipment) that the lender can seize and sell if the borrower does not repay.
- **Social collateral.** Many borrowers do not have anything they can offer as collateral. So microfinance institutions often rely on "social collateral." The borrowers must be organized in a group, and the group as a whole guarantees that each member will repay their loans.

EXAMPLE OF A CREDIT ARRANGEMENT

Reginald borrows $100 from the Agricultural Bank at 5% interest a month for 4 months. He must repay the principal plus interest in a lump sum after the harvest (Table 38).

TABLE 38. EXAMPLE OF A CREDIT ARRANGEMENT

		$
Principal		100
Interest rate	10% per month	10
Loan period	4 months	
Total interest due (the cost of the loan)	$100 × 10% × 4	40
Total to repay at end of loan period		140

Credit arrangements are often more complex than this. For example:

- Before a lender will provide a loan, they may require the borrower to have a history of having saved money, to make a **deposit** up front, or pay a one-time fee.
- If the borrower repays in installments, the **interest** may be charged only on the remaining amount owed, not on the full principal.
- The **repayment schedule** may be flexible. For example, the borrower may be able to repay part or all the loan amount as a lump sum rather than in regular installments.

When they negotiate a loan it is important that the farmers clearly understand the terms and conditions.

TYPES OF LOANS

Banks and microfinance institutions may offer various types of loans. The most common types are:

- **Seasonal loans for working capital.** These loans are used to pay for production inputs such as seed and fertilizer, to rent land, and to hire laborers. The farmers must repay the loan after the harvest.
- **Harvest loans.** These are short-term loans to hire laborers or equipment at harvest time. They may also be used to cover the costs of marketing.
- **Short-term improvement loans.** These are used to pay for relatively small investments such as an irrigation pump. They are repaid over a period of 1 or 2 years.
- **Long-term investment loans.** These are loans used to buy land, buildings, or equipment for long-term use. They are also used to pay for livestock or tree crops that take several years before they start to produce an income.
- **Multi-phase loans.** These are loans which are not given as a lump sum, but where disbursements are made at specific times in the production and marketing season to coincide with the needs of farmers. For example, from the loan agreement funds are given at the time of planting, when weeding is done, at harvest, and at storage time. The benefits of the multi-phase loan is that farmers get funds when they need it, which reduces funds being spent on unintended needs, and farmers only paying interest when the various portions of the loan have been disbursed, which reduces interest payments.

SHOULD FARMERS BORROW?

Farmers should not borrow too much money as they may find it difficult to repay, or they may eat up all their profits in loan repayment. But if they borrow too little, they may not be able to buy inputs that will increase their productivity. Improving their productivity will help them to diversify and this will increase their overall farm income as well as providing their food security.

Borrowing is always risky. If the crop fails due to drought, pests, or disease, the farmers will not be able to repay their loans. To pay back the money, they may have to borrow from a moneylender, at a higher interest rate. That may drive them deeper and deeper into debt.

So farmers should borrow only if:

- They will be able to use the money to **increase their profit,** and
- They are reasonably sure they will be able to **repay the loan**.

You as the field agent should be able to advise farmers on sensible amounts of money that a farmer could borrow and discuss with the farmers if this is a reasonable risk to take on.

A bank or microfinance institution may also help the group do the loan calculations. But the group should have an idea first of the amount they want to borrow and how much they will have to repay. A good business plan should include borrowing scenarios so farmers can understand the impact of getting a loan of $100 vs one of $500.

A reputable financial institution will not lend to a group that it thinks will not be able to repay its loan.

HOW MUCH SHOULD THE FARMERS BORROW?

The farmers can calculate approximately how much money they will need for the production and marketing (Table 39).

They can then decide the amount of the loan they need. This may be the same amount as the amount of money needed. Or they may want to borrow more (to cover additional expenses, including any deposit required to get the loan) or less (for example, they may not want to include some costs in the loan portion, or they may be able to access part of a loan from another source).

- The amount borrowed is called the **principal.**
- The cost of borrowing money is called the **loan cost.**

See Table 40 for an example of the costs of a loan.

TABLE 39. ESTIMATING THE AMOUNT OF MONEY A FARMER NEEDS

1 acre of maize, Tanzania

		$
Total costs (not including family labor)	A	146
Amount of money available in savings	B	30
Amount of money needed	C = A – B	116

AMOUNT OF MONEY NEEDED = TOTAL COSTS – AMOUNT OF MONEY AVAILABLE

TABLE 40. CALCULATING THE COST OF A LOAN

1 acre of maize, Tanzania

			$
Amount of loan	D		116
Interest rate per month	E=D x 10%*	10% per month	11.60
Number of months	F	4 months	
Cost of loan	G = E × F		46.40
Amount to be repaid	D + G		162.40

* This rate is fixed by the lender.

COST OF LOAN = AMOUNT OF LOAN × INTEREST RATE PER MONTH × NUMBER OF MONTHS

AMOUNT TO BE REPAID = AMOUNT OF LOAN + COST OF LOAN

HOW MUCH WILL THE LOAN COST?

Farmers can calculate this from the size of the loan, the interest rate per month, and the number of months of repayment. The amount to be repaid is the interest (the cost of the loan) plus the amount borrowed (the principal).

INVESTING TO PRODUCE MORE

Farmers can produce more, and earn more, if they apply inputs such as improved seed and fertilizer. Let us look at an example from Tanzania (Table 41). These maize farmers have several choices:

- They can apply fertilizer or not.
- They can choose among the seed they have grown themselves, or buy either open-pollinated variety or a hybrid.

Which should they choose?

First, compare the yields with and without fertilizer (column A). The yields are higher if the farmer has applied fertilizer.

Second, compare the types of seed used. The hybrid seed produces more than the open-pollinated variety. The farm seed yields less.

Now look at the costs of production (column B). The costs of using fertilizer are higher because the farmer has to buy the fertilizer (and maybe seed too). And the hybrid seed costs more than the other two types.

But higher yields mean higher income (column C). With fertilizer is better than without, and hybrid seed produces a higher income than open-pollinated, which is better than farm seed. So when we look at the gross margin (column D), we see that

TABLE 41. CALCULATING GROSS MARGIN OF 1 ACRE OF MAIZE

		YIELD	COSTS OF PRODUCTION	INCOME	GROSS MARGIN
		100 kg bags	**$**	**$**	**$**
		A	B	C	D = B + C
No fertilizer	Farm seed	5	90	140	50
	Open-pollinated	8	98	224	126
	Hybrid	11	106	308	202
With fertilizer	Farm seed	7	130	196	66
	Open-pollinated	13	138	364	226
	Hybrid	15	146	420	274

this is higher if the farmers apply fertilizer than if they do not. And hybrid seed results in higher income than the open-pollinated variety, which is better than the farm seed.

But careful! Look closely at the gross margin figures for farm seed. With fertilizer, the farmer earns a gross margin of $66. Without fertilizer, she earns $50. So if she uses farm seed, and if fertilizer costs increase, it's not very clear that she will always get a good return on investing in fertilizer when combined only with low yielding local seed.

The most profitable option would be to buy both hybrid seed and fertilizer. That would cost $146, but could be expected to produce a yield of 15 bags an acre, and an income of $420, giving a gross margin of $274 (last row of the table).

IS IT PROFITABLE TO TAKE A LOAN FOR INPUTS?

Of course, farmers would love to produce more and make more money. But they cannot do so because they do not have the money to invest in seed, fertilizer, and other inputs. Supposing they can get a loan to cover the costs of these inputs, is it worth it? Let us look at this question now.

NET PROFIT = TOTAL INCOME – TOTAL COSTS – COST OF LOAN
= GROSS MARGIN – COST OF LOAN

The higher the net profit, the better. If the net profit is negative, it is not worth getting a loan!

Let us imagine that the farmers have to borrow the full amount in Column B. Please Note that borrowing for all costs is a slight exaggeration as most farmers do not have to borrow for all their costs every year. Table 42 shows the same information as in Table 41, but we have added another couple of columns. In Column E we have calculated the cost of a loan to cover the full amount, using our earlier formula:

COST OF LOAN = AMOUNT OF LOAN ×
INTEREST RATE PER MONTH × NUMBER OF MONTHS

We have used an interest rate of 10% a month, and repayment after 4 months. So to get a loan of $90 (first row, column B), the farmer would have to pay back $36 (first row, column E):

COST OF LOAN = $90 × 10% × 4 MONTHS = $36

TABLE 42. CALCULATING THE PROFITABILITY OF A LOAN

1 acre of maize, Morogoro, Tanzania

		YIELD	COSTS OF PRODUCTION (LOAN AMOUNT)	INCOME	GROSS MARGIN	COST OF LOAN	NET PROFIT
		100 kg bags	$	$	$	$	$
		A	B	C	D = B – A	E	F = D – E
No fertilizer	Farm seed	5	90	140	50	36.00	14.00
	Open-pollinated	8	98	224	126	39.20	86.80
	Hybrid	11	106	308	202	42.40	159.60
With fertilizer	Farm seed	7	130	196	66	52.00	14.00
	Open-pollinated	13	138	364	226	55.20	170.80
	Hybrid	15	146	420	274	58.40	215.60

The last column shows the farmer's net profit. If the farmer uses farm seed and does not apply fertilizer, the net profit is reduced down to on $14. This suggests that taking a loan looks risky, as the profit only just covers the costs of production!

Things are similar if the farmer does decide to apply fertilizer, but still uses her own seed (the second cell with dark shading). Her net profit will be only $14.

The other options are better: the net profit is positive. And if the farmer buys hybrid seed and applies fertilizer, she can expect a net profit of $215.60.

That's good, but it could be better. If the farmer has some savings to invest, she will need a smaller loan. Let us now suppose she has saved $30. Instead of a loan of $166 (to buy hybrid seed and fertilizer) she will now need to borrow $136.

Table 43 shows this possibility. Now, the risks for all farmers are reduced and it would be profitable to get a loan for any of the options. The best option is still hybrid seed and fertilizer: it gives a net profit of $227.60.

WHAT WILL THE BANK OR MICROFINANCE INSTITUTION LOOK FOR?

When a bank or microfinance institution, or a savings group lends someone money, it wants to be sure that the borrower will pay it back. It will look at the following types of questions, known as the **Five Cs**:

- **Capacity** to repay
- **Character** of the borrower
- **Capital** invested in the enterprise
- **Collateral**
- **Conditions**.

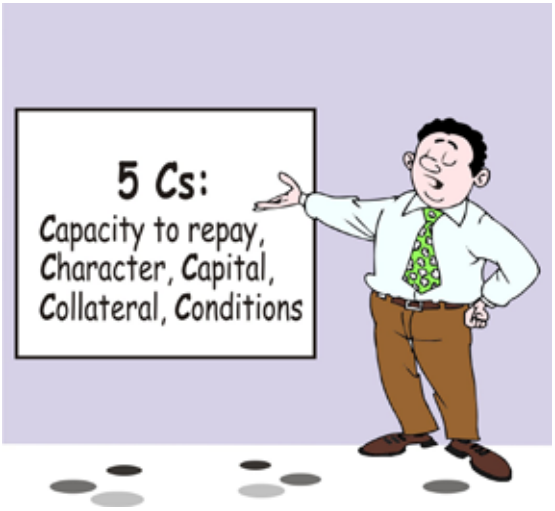


TABLE 43. CALCULATING THE PROFITABILITY OF A SMALLER LOAN

1 acre of maize, Morogoro, Tanzania

		YIELD	COSTS OF PRODUCTION	INCOME	GROSS MARGIN	WITH $30 SAVINGS		
						Loan amount	Cost of loan	Net profit
		100 kg bags	$	$	$	$	$	$
		A	B	C	D = B – A	E	F	G = D – F
No fertilizer	Farm seed	5	90	140	50	60	24	26
	Open-pollinated	8	98	224	126	68	27.2	98.8
	Hybrid	11	106	308	202	76	30.4	171.6
With fertilizer	Farm seed	7	130	196	66	100	40	26
	Open-pollinated	13	138	364	226	108	43.2	182.8
	Hybrid	15	146	420	274	116	46.4	227.6

CAPACITY: ABILITY TO REPAY THE LOAN

The basic question here is, "Is the borrower able to repay the loan?"

- What does the business plan say about the enterprise's income and profitability?
- Can the enterprise generate enough cash to make the loan payments with interest?
- Will there be enough extra cash or collateral in case of problems?
- When will the enterprise be able to repay the loan?
- What other expenses does the enterprise have?
- What effects on income and expenses might variations in price and production have?
- How does the enterprise compare to others?

CHARACTER: INTEGRITY OF THE ENTERPRISE

The basic question here is, "Will the borrower do everything it can to repay the money?"

- How is the enterprise managed?
- Are the managers and group members honest and trustworthy?
- Is the group organized in a suitable way?
- Has it repaid bills and previous loans on time?
- Does it spend money on inappropriate things (big salaries, inadvisable benefits for members, etc.)?
- Is the enterprise innovative, and does it look for new business opportunities?

CAPITAL: MONEY INVESTED IN THE BUSINESS

Here the basic question is, "Does the borrower have enough resources to withstand a problem that may arise – such as a drought or pest attack?"

- What money and assets are invested in the enterprise?
- Does the group reinvest its profits in the enterprise?
- Does the group have the ability to deal with problems such as drought or pest attacks?

COLLATERAL: BACKUP SOURCES OF REPAYMENT FOR THE LOAN

The basic question here is, "If the borrower does not repay the loan, what can the lender do to get its money back?"

- Are the personal guarantees of the group trustworthy?
- What assets can the group offer as collateral – which the lender can take and sell as a last resort if the group does not repay the loan?
- If a member of the group defaults, will the other members pay the amount due?
- Are the assets of the group and the personal guarantees of the member enough to cover the loan if necessary?

CONDITIONS: FACTORS THAT MAY AFFECT THE BORROWER'S ABILITY TO REPAY THE LOAN

- Is the enterprise likely to make a profit by investing the loan?
- Is the business plan ground on realistic cost and revenue projections?
- Is the market for its product adequate and stable?
- Are the loan terms (loan period, interest rate, etc.) suited to the group's ability to repay?
- What risks might affect the price of the product or the level of production?
- What are the general market trends of the sector?

QUIZ 11

Answers at the end of the guide.

1. Amina wants to rent some land so she can grow vegetables. She wants to borrow some money from the Farm Bank. The bank offers her what type of loan?

   A. A short-term improvement loan

   B. A seasonal loan for working capital

   C. A long-term investment loan

   D. A harvest loan.

2. Amina borrows $100 from the Farm Bank for 4 months. The bank charges 3% interest a month. What is the cost of the loan?

   A. $100

   B. $100 × 3% = $3

   C. $100 × 3% × 4 = $12

   D. $100 + ($100 × 3% × 4) = $112

3. Amina borrows $100 from the Farm Bank for 4 months. The bank charges 3% interest a month. How much in total does Amina have to repay?

   A. $100

   B. $100 + ($100 × 3%) = $103

   C. $100 × 3% × 4 = $12

   D. $100 + ($100 × 3% × 4) = $112

4. Match the Five Cs with the right question.

THE FIVE CS	QUESTION
A. Capacity to repay	1. If there is a drought, will the borrower be able to repay the loan?
B. Character of the borrower	2. Is the borrower able to repay the loan?
C. Capital invested in the enterprise	3. What things may affect the borrower's ability to repay?
D. Collateral	4. Does the borrower want to repay the loan?
E. Conditions	5. If the borrower does not repay, what assets can the bank take possession of?

5. Match the descriptions with the correct definitions.

DEFINITION	DESCRIPTION
A. Principal	1. The cost of borrowing the principal amount
B. Loan cost	2. An asset (such as land or equipment) that the lender can seize if the borrower does not repay
C. Loan period	3. The amount of money the lender lends to the borrower
D. Interest rate	4. The borrowers must be organized as a group, and the group as a whole guarantees that each lender will repay their loans
E. Repayment	5. The fee charged by the lender
F. Installments	6. If the borrower does not repay, he or she "defaults on the loan"
G. Default	7. The length of time the borrower has before repaying all the money
H. Collateral	8. The amounts of money the borrower pays to the lender on a regular basis
I. Social collateral	9. The amount of money the lender must pay back

6. Match the descriptions with the correct definitions.

DEFINITION	DESCRIPTION
A. Seasonal loans for working capital	1. Used to buy land, buildings, or equipment for long-term use
B. Harvest loans	2. Used to pay for small investments such as an irrigation pump
C. Short-term improvement loans	3. Disbursements are made at specific times to coincide with the needs of farmers
D. Long-term investment loans	4. Used to pay for inputs such as seed and fertilizer
E. Multi-phase loans	5. Short-term loans to hire laborers or equipment at harvest time, or to cover the costs of marketing

EXERCISE 11. CALCULATING THE COST OF A LOAN

This exercise uses the information generated in Exercise 10a and Exercise 10b to calculate the costs of a loan.

It enables farmers to see whether it is a good idea to apply for a loan.

You can do this exercise in two ways – either for individual farmers to work out their own credit needs, or for all the participants to work out the credit needs of the group.

OBJECTIVE

After this exercise the participants will be able to:

- Work out the cost of a loan
- Decide whether it is a good idea for them to apply for a loan.

EQUIPMENT NEEDED

- Large sheets of paper, marker pens.

EXPECTED OUTPUTS

- Calculation of the cost of loans with different conditions.

TIME REQUIRED

- 2 hours

PREPARATION

- Use Exercise 10a and Exercise 10b to help farmers calculate the costs and profit of producing and marketing various products.
- If possible, find out from local banks or microfinance institutions their terms and conditions for seasonal loans for working capital. If this is not possible, estimate the interest rates, loan periods, repayment rates, and other conditions for the loan to make the exercise as realistic a possible.

SUGGESTED PROCEDURE

1. Ask the farmers where they normally go if they need to borrow money. How much money can they borrow? When do they have to pay it back? What is the interest rate? Is borrowing a good idea?
2. Ask the farmers to name some situations when they borrow money. Ask them to describe how they decide whether to borrow money and how much to borrow.
3. Discuss the different possible sources of capital: own savings, borrowing from family members, group savings and loans, or loans from moneylenders, input suppliers, buyers, or financial institutions. Ask the farmers to discuss the advantages and disadvantages of each. Get them to write the interest rates, loan periods, and other terms and conditions on a big sheet of paper (like Table 44).
4. Explain to the farmers that they will be working out the costs of various loans from a microfinance institution or a bank. (Make sure they understand if the terms and conditions are real or imaginary.)
5. Ask the farmers to select a product they would like to produce, and say what it would cost to produce and market it (see Exercise 10a and Exercise 10b for details). Use your data from previous gross margin analyses with the farmers.
6. Ask them to say how much money they have available to pay for these costs.
7. Get them to calculate the shortfall:
8. Amount of money needed = Total costs – Amount of money available
9. Ask them to say how much they would like to borrow. This may be the same as the shortfall, or more, or less
10. Ask them what they will spend the money on in terms of technologies and the expected gains from using these technologies.
11. Get the farmers to work out the cost of loans from each of the sources of capital they have named (Table 45). (Not all the sources of capital will be useful, so the farmers should decide which ones to consider.)

COST OF LOAN = AMOUNT OF LOAN × INTEREST RATE PER MONTH × NUMBER OF MONTHS

AMOUNT TO BE REPAID = AMOUNT OF LOAN + COST OF LOAN

12. Invite the farmers to compare the various sources of capital. Which one would they choose? Might a combination (e.g., of borrowing from a family member and from another source) be an option?

TABLE 44. EXAMPLES OF LOAN CONDITIONS FROM DIFFERENT LENDERS

In this example, we have used dollars, but consider using your local currency with farmers.

LENDER	MAXIMUM LOAN ($)	REPAYMENT	OTHER CONDITIONS	INTEREST RATE
Family member	10	Repay in 1 month		None
Moneylender	50	Up to 6 months		6% per month
Trader	20	Repay at harvest	Must sell produce to trader at 10% lower price	4% per month
Postal Bank	50	Up to 6 months	Must have business plan Deposit of $20	7% interest over 6 months

TABLE 45. COMPARISON OF LOANS FROM DIFFERENT LENDERS

LENDER	LOAN AMOUNT	INTEREST RATE PER MONTH	NUMBER OF MONTHS	COST OF LOAN	AMOUNT TO BE REPAID
	$ A	% B	C	$ D = A × B × C	$ A + D
Family member					
Moneylender					
Trader					
Postal Bank					

LESSON 12. CHOOSING AN AGROENTERPRISE

IN THIS LESSON

After this lesson you will be able to:

- Help farmers choose an agroenterprise and a market strategy.

IT'S CRUNCH TIME!

The farmers have gathered information about the markets, production, and business services for various products. They have calculated the costs, income, and profit they can expect from the same products as well as the credit options available to them. They will now have a much better understanding of the opportunities and risks associated with these products. It is now time to bring all this information together and to make a big decision: **What product should they produce?**

By now you and the farmers will have a lot of information available. Do not present it all again: that would be confusing. Pull out the most important and relevant information so that the farmers can make a final decision about the product type and market, and agree what investments they will need to make.

The meeting should come to a consensus on which product to produce and where to sell it. Use the **four Ps** as your guide: what is the best market opportunity in terms of **product type**, **prices**, how to sell and **promote** the product, and which **place** to sell the product? See the *Marketing Basics* manual for details.

There are two types of criteria for selecting an agroenterprise: fundamental and additional:

FUNDAMENTAL CRITERIA

- Is there a good **demand and market access** for the product?
- Can we produce the product with the **land, soil, and water** resources that we have

available? Can we continue producing the product without degrading these resources?

- Will we be able to access the **inputs**, the technical and business **support**, and **financial resources** we need?
- Will we cover all our costs and make a **profit**?

The answers to all four questions must be "yes" for an agroenterprise to be economically viable and sustainable.

ADDITIONAL CRITERIA

What if several products fit all four fundamental criteria? Then the farmers can choose between them based on **additional criteria.** Here are some examples of things to consider:

- **Risk.** Remember that the riskiest option is to produce a new product and sell it into a new market. The safest option is to stick with the familiar: producing an existing product for sale to a market they already know. Other options (existing product/new market and new product/existing market) are in between (see Lesson 8 in the *Marketing Basics* manual for details).
- **Alternative uses.** Can the product contribute to the farm families' diet as well as generate income? For example, women farmers often see egg or poultry production attractive as the eggs and chickens can be sold and improve the family's nutrition.
- **Cultural appropriateness.** Are there any cultural, religious or ethical objections to producing the product? For example, in mixed Muslim and Christian communities, producing pigs might be socially divisive.
- **Unused resources.** Can the product be produced on land that is not used, or is underused at the moment? For example, certain crops require less fertile soil than others and can be grown on underused land.
- **Policies and incentives.** Is the product favored by any particular government policies or regulations? Sometimes governments or private companies provide incentives to grow certain crops or raise specific animals.
- **Labor.** Does the product fit well with other farming activities in terms of labor availability? For example, a new irrigation scheme may generate employment during the dry season when there was little to do before.
- **Women.** Does producing or marketing the product disadvantage women farmers? Women often have restricted access to certain assets – such as carts and draught animals – that can make it difficult for them to produce certain crops, or they may have to hire labor to perform some particularly heavy jobs.

See Exercise 12 for a way to manage this meeting.

EXAMPLES OF MARKET STRATEGIES TO SELL SELECTED PRODUCT

Increased volume of an existing product in an existing market. This is the lowest-risk option for farmers: it aims to sell more of what they already grow into the same market. They earn more by producing more and bulking it into easy-to-buy lots. They can produce more by planting a larger area, growing new varieties, or by managing water and fertilizer better.

Better prices for existing product in a new market. Farmers may be able to attract better prices by selling an existing product into a different market. This may be a bigger, more distant market, or a larger trader or a processor. To do so, the

farmers usually need to be better organized, and work together to bulk their goods. Sometimes this approach is described as "cutting out the middleman." In remote rural areas, supply can be made more efficient by reducing the numbers of people in a market chain. But when considering this option, remember that when someone is cut from the chain, this may mean taking on additional costs and responsibilities. The gain in income by cutting out a chain actor, must be large enough to cover any new costs and risks.

Better prices and volume from a new product in an existing market. While selling a new product into an existing market may seem complicated at first, it may actually be quite simple. For example, farmers may learn from talking to traders that the variety of green beans they grow is not the one that fetches the highest price. Or they may realize that the trader will pay more if they sort and package their tomatoes in crates. These simple changes represent new products: the new bean variety has different characteristics from the current variety, and sorting and packing adds value to the tomatoes.

The changes may be bigger. The farmers may learn that a bean trader is also interested in buying onions. The farmers already have a relationship with the trader, so they are confident she will continue buying their produce. Before making the decision, they need to check that they can produce the new crop and make a profit from selling it.

Better prices and volume from a new product in a new market. A market survey may reveal that farmers can earn more by supplying a new product to a new market. Consumer demands are always changing and new products come onto the market to fulfill these needs. However, this is a high-risk strategy as the market may be volatile. Farmers with experience in market linkages may want to take on this risk.

Extending the production and harvesting period. Farmers often complain that prices for their goods are lowest at harvest. This is when markets are oversupplied and traders cannot find customers to buy the surplus. Farmers may be able to earn more by producing off-season, but this usually means investing more (for example, in irrigation or greenhouses). The farmers need a good knowledge of the price fluctuations, and the product's growing cycle, so they can match harvest time with high prices.

Storage and processing. Many smallholders do not have access to adequate storage facilities, so cannot keep their product in the hope that prices will go up. Storage is not a guaranteed way of increasing profits as it costs money, and the stored crop may get damaged by humidity, pests, or diseases. If the crop is sufficiently dried beforehand, and if the store is dry and well managed, it may be possible to make a profit by storing it for several months until prices go up. As with the other strategies, farmers must also know when to sell by accessing market information on this and last year's prices.

CONCLUSION

This lesson has brought together the information that the farmers have gathered about the various agroenterprise options they are considering. They will have used this information to selected one or two of the options to take forward. They will now know which product they want to produce for which market. The next step is to prepare a business plan showing how they will do this.

QUIZ 12

Answers at the end of the guide.

1. The farmers have been considering several possible agroenterprises. They have matched each one against several criteria.

   All enjoy good demand, the farmers have suitable land for them, and they are confident they can get technical and other inputs. Here are some other criteria they are considering. Which option should they reject?

	CAN MAKE PROFIT	FREE OF RISK	ALTERNATIVE USES	FITS WOMEN AND MEN
A. Cotton	Yes	Yes	No	Yes
B. Maize	Yes	Yes	Yes	No
C. Tomatoes	Yes	No	Yes	No
D. Milk	No	Yes	Yes	Yes

2. The men of the village really want to grow cotton, while the women are not interested: they would prefer to start a tree nursery. Which should you support?

   A. The men: cotton is a profitable crop, and you are confident that the men will make it a success

   B. The women: they have identified a market for tree seedlings and have the skills they need

   C. Both: both ideas look as if they can be viable

   D. Neither: let them fight it out and see if they can come up with a single product

3. Two of these criteria are fundamental to the choice of a product and market. Which ones?

   A. The farmers have to have access to the inputs they will need to produce and market the product

   B. The product has to be culturally appropriate

   C. The product has to make use of resources that are currently unused or underused

   D. There has to be demand for the product in the target market

4. The farmers are considering increasing their output of onions to supply a trader they already sell to. This is...

   A. Risky

   B. A low-cost option

   C. A low-risk option

   D. Better than any other options

5. Which of these considerations are fundamental for selecting an agroenterprise, and which are additional criteria to consider?

CATEGORY	CRITERIA
A. Fundamental	1. Good demand and market access for the product
B. Additional	2. Adequate land, soil, and water resources
	3. Women
	4. Labor
	5. Policies and incentives
	6. Unused resources
	7. Access to the inputs, the technical and business support, and financial resources needed
	8. Cover all our costs and make a profit
	9. Risk
	10. Alternative uses
	11. Cultural appropriateness

6. After lots of hard work, the farmers are finally ready to choose an agroenterprise and marketing strategy. How can you help them make a final decision?

   Select all that apply

   A. Pull out the most important and relevant information so that the farmers can make a final decision about the product type and market, and agree what investments they will need to make

   B. Present all the material again

   C. Have everyone vote for their choice of agroenterprise, and choose the one with the most votes

   D. Select the lowest risk option

   E. Use the meeting to come to a consensus on which product to produce and where to sell it

EXERCISE 12. CHOOSING A PRODUCT AND MARKET

This exercise helps the farmers evaluate the information they have gathered about potential products and markets, and choose one or two agroenterprises to work on.

This is an important meeting! Make sure that all the important people who need make the decision are there.

OBJECTIVE

After this exercise the participants will be able to:

Select one or two agroenterprises from among a set of options identified earlier.

EQUIPMENT NEEDED

Large sheets of paper, marker pens

EXPECTED OUTPUTS

Choice of one or two agroenterprises

TIME REQUIRED

3 hours

PREPARATION

Gather together the information you and the marketing team have collected about the various agroenterprise options in the surveys of the market (Lesson 7), production (Lesson 8), business services (Lesson 9) and finance (Lesson 10). Pull out the most important and relevant information and summarize it on a series of large sheets – one sheet per type of agroenterprise.

SUGGESTED PROCEDURE

1. Explain the purpose of the meeting – to decide on the agroenterprise that the farmers wish to pursue. Explain that they will have to choose one (or perhaps two) enterprises on the basis of the information they have gathered.

2. Discuss the four fundamental criteria that the farmers should use in making their decision:

    - Is there a **good demand** in the market for the product?

    - Can we produce the product with the **land, soil and water** resources that we have available? Can we continue producing the product without degrading these resources?

    - Will we be able to access the **inputs,** the technical and business **support** and **financial resources** we need?

    - Will we cover all our costs and make a **profit**?

3. Invite the marketing team to review the agroenterprise options under consideration, using the summaries on the large sheets of paper. Make sure the information is presented in a way that is transparent and is not biased towards the team's favorite option.

4. Discuss whether the options fulfill the criteria. Eliminate those that do not.

5. If more than one option remains, invite the participants to discuss their advantages and disadvantages. See the "Questions to stimulate discussion" below for some aspects to discuss.

6. Invite the farmers to select the agroenterprise they wish to pursue, after having considered all the evidence and arguments.

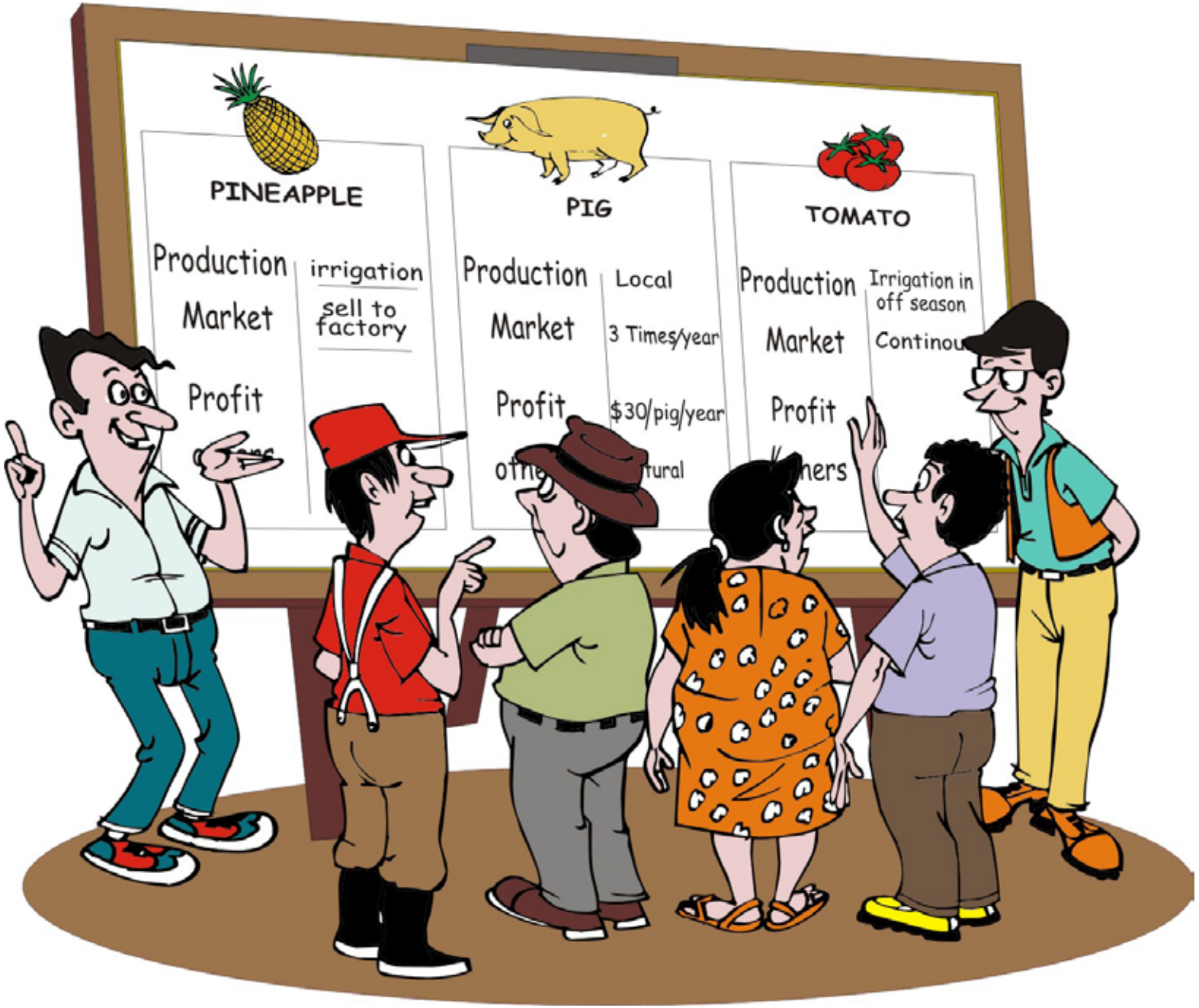
NOTES

Men and women farmers may have different opinions on these additional criteria, so get them to discuss them in separate groups. Where the groups agree, there is a good chance of men and women working successfully together in that agroenterprise. Where there are differences, it may be best for men and women to manage their enterprises separately.

QUESTIONS TO STIMULATE DISCUSSION

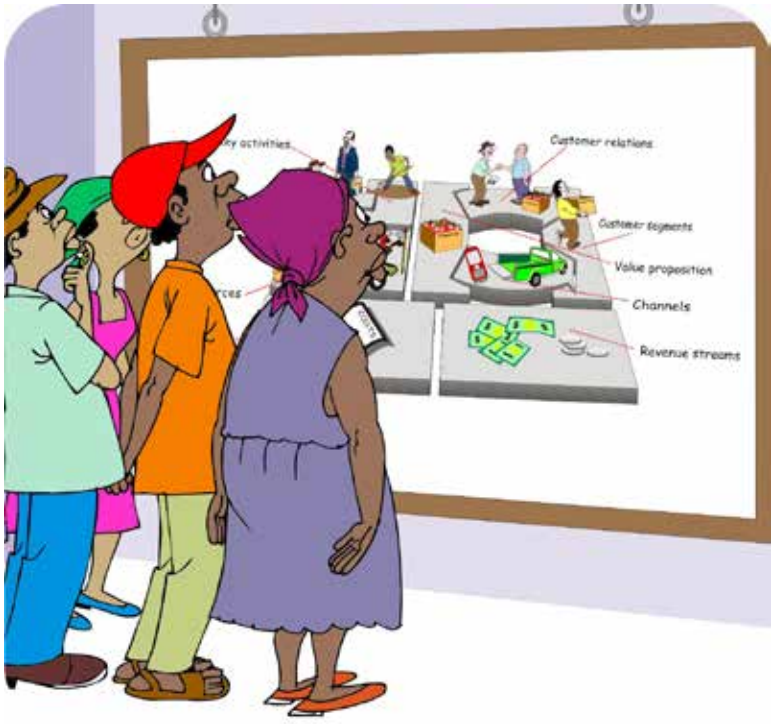
- How risky is the strategy?
- Can the product contribute to the farm families' **diet** as well as generate income?
- Are there any cultural, religious or ethical **objections** to producing the product?
- Can the product be produced on **land** that is not used, or is underused at the moment?
- Is the product favored by any particular government or private-sector **policies** or regulations?
- Does the product fit well with other farming activities in terms of **labor** availability?
- Does producing or marketing the product disadvantage **women** farmers?

These are just some examples of criteria to use. Ask the farmers to come up with their own list of criteria.


PINEAPPLE
Production
irrigation
Market
sell to factory
Profit
PIG
Production
Local
Market
3 Times/year
Profit
$30/pig/year
TOMATO
Production
Irrigation in off season
Market
Profit

Step 4. Building a business plan

Writing a business plan can be a daunting task when you are faced with a blank sheet of paper. Fortunately it does not have to be that difficult, as the group can draw on the various pieces of information they have already collected and the analysis they have done



This step helps you lead a farmers' group through the writing process.

- **Lesson 13** summarizes the contents of a business plan and the reasons for writing one, and gives you some tools to help generating ideas and putting them into words and numbers. You can choose those tools that are most appropriate for the situation your groups.
- **Lesson 14** describes an approach, the "business model canvas," that brings together many of the pieces of information and analysis the group has already collected for use in a business plan.
- **Lesson 15** walks you through each section of a business plan and shows you what pieces of information go where. You can follow these instructions using pen and paper, a word processor, or CRS's special business planning software.
- **Lesson 16** describes an implementation plan, which is how you will put the business plan into action.

At the end of this step you will have:

- Helped the farmers' group understand why they should develop a business plan
- Helped the group write a business plan
- Helped the group to understand their credit needs and if necessary get a loan
- Helped them to plan detailed activities for the production cycle.

LESSON 13. TOOLS FOR BUSINESS PLANNING

IN THIS LESSON

After this lesson you will be able to:

- Describe what a business plan is and why a farmers' group should write one
- Conduct a visioning exercise to help farmers plan their enterprise
- Conduct a market mapping exercise
- Conduct a problem analysis exercise to help farmers identify and analyze their problems
- Help a farmers' group plan how much each member should grow to reach a production target
- Identify ways to improve the steps from production to marketing.

WHAT IS A BUSINESS PLAN?

This lesson explains what a **business plan** is and describes several tools you can use to help farmers' groups to prepare their business plan. We suggest you read through these descriptions, as well as the **business model canvas** in Lesson 14 and the details of the business plan in Lesson 15, before deciding which, if any, of these tools to use.

A business plan is a document about an enterprise's future. It describes the enterprise, what it produces and how it produces them, how it markets its products, the risks its faces and how to deal with them, and its financial situation and financing needs.

A typical business plan consists of three parts, each with several subsections:

Part 1: An outline of the business

1. Introduction
2. Business organization
3. Product
4. Marketing strategy
5. Risks
6. Business operation plan

Part 2: Financial data and analysis

7. Marketing costs
8. Income streams
9. Profit and loss analysis

Part 3: A loan analysis (if the group wants to borrow money)

10. Financial requirements.

A typical plan for a farmers' group is about 5–10 pages long, but plans can be from 2–3 pages up to 50 pages, depending on the need.

WHY WRITE A BUSINESS PLAN?

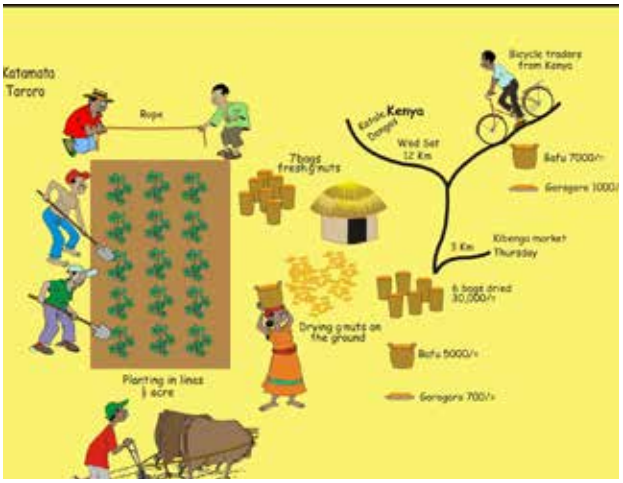
Writing a business plan is important for several reasons:

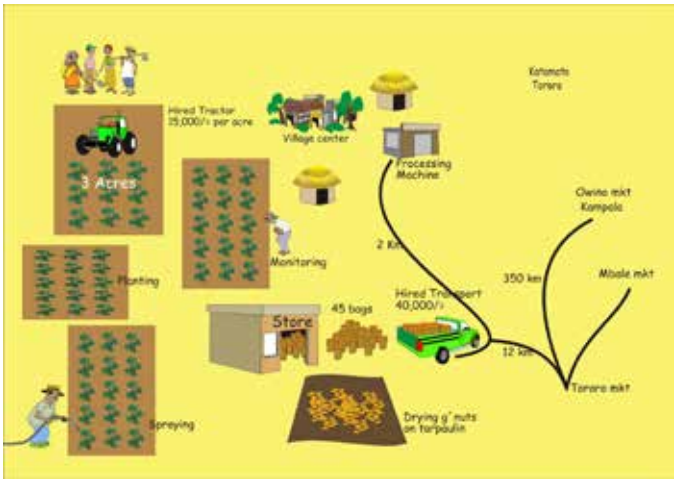
- **To guide the enterprise over the long term.** So far, the group has made a series of decisions about their product and market. A business plan brings your ideas and decisions together and puts them in concrete form in one document to guide the group's direction.
- **To facilitate understanding and agreement.** Despite intensive discussions, members of the group may have different understandings of what the group aims to do. An agreed business plan helps identify and remove such misunderstandings.

- **To improve organization and decision making.** Because a business plan follows a certain structure, it helps the group make sure it has gathered the information it needs and has organized it in a suitable way. That makes it easier to make decisions.
- **To test and strengthen financial feasibility.** The business plan requires the group to compare its resources and income with its costs and expenditures. It shows whether the enterprise can make a profit.
- **Measure performance.** The business plan gives the group clear targets. The members can use these targets to monitor their performance and make changes in the production season if the original plan needs to be amended.
- **To ensure continuity.** Farmers' groups elect their officials every year or two. A business plan ensures that a new group of managers can take over operations smoothly, reducing the risk of disruptions and abrupt changes in direction.
- **To "sell" the enterprise.** Business partners such as major suppliers, contract partners, big customers and business services may want evidence that the group has thought through its business plan and will be a viable concern. A business plan gives them the information and assurance they need.
- **To convince lenders and donors.** Banks and microfinance institutions want evidence that the group's enterprise will be profitable before they will agree to lend it money. They usually require a business plan as a condition for a loan. Donors also want to be confident that the group is viable. A business plan is evidence of this.
- **To guide implementation.** The business plan shows what the group needs to do to achieve its goals. It keeps the members and the management focused on what has been agreed. It acts as a framework for the group's implementation plan (the list of tasks and activities the group members have to do each year or production cycle).

MARKET MAPPING (EXISTING VERSUS FUTURE)

Early in the agroenterprise development process (Lesson 7 and Exercise 7b) the farmers drew a sketch map showing their initial understanding of where the product is produced, where it is sold, who buys it, and how it is used, as well as steps such as processing and transport.





You can use a similar technique to help them redraw the map with information they have gathered since. The group can use their new information to draw a second map showing the marketing situation they would like to see. This would show the chosen product, changes in the production and processing, the volumes produced and prices of the product, and changes in the marketing channels and customers.

Exercise 13a describes how to work with farmers to create such a market map.

VISIONING

Visioning is a technique we discussed in Exercise 2a use to help the farmers think of what they want to achieve in the future. We will use this method again to help build the business plan. To being your visioning session start with a long-term vision, by asking the farmers to imagine what they would like their production and marketing to be like in, say, 5 years. This is a useful way of finding out the group's ambitions. Remember that different types of farmers or segments of the community may have different outlooks and aspirations.

Once they have done this, you then ask them to think of what the situation will be like in a shorter time frame – such as 3 years – and to ask them what they need to do to put these changes into effect. This forces the farmers to be more realistic, and to prioritize activities.

You then ask them to shorten the time frame again: what will things be like in 1 year. Again, ask them to say what they will need to do to make these changes happen.

PROBLEM ANALYSIS

In this approach you help the farmers list the problems they face in producing and marketing their selected product. They then describe how they currently address these problems, before thinking of ways they might overcome them in the future. See Exercise 13c for a way to facilitate this analysis.

SETTING PRODUCTION TARGETS

Setting targets for the next season or production cycle is an important step for the group. Doing so forces farmers to think of what they need to do to achieve these targets. That in turn means they have to think of realistic changes in their production, postharvest, and marketing activities, as well as work out the financial and other services they will need.

Targets may be set:

- **By the group itself,** based on what they think they can produce and the market they think they can serve.
- **By a larger group,** for example, if the group is a member of a farmers' marketing association.
- **By a buyer,** for example, a trader who agrees to buy truckload of grain, or a super-market or factory that orders a regular supply of the product throughout the season.
- **By a donor or lender,** which may require the group to sell a certain amount of product in order to qualify for support or a loan.

The target is likely to be higher than current production in terms of volume or quality. The group will have to decide what they need to do to achieve it. Should they:

- **Increase the output per member,** for example by planting a larger area or raising more animals?
- **Increase the yield** per hectare or per animal?
- **Add more farmers** to the group?
- **Improve the quality** of the yield somehow – for example, by managing pests and diseases better?
- **Extend the supply period** by changing the timings of planting and harvesting?
- **Process the output** in a different way – to reduce wastage or improve quality?

The group should set targets before each season or production cycle, and then review these targets regularly to check if they are on track and to anticipate and solve problems.

It is best to aim to produce more than the amount a buyer wants, in case of low yields caused by poor weather, pest, or disease. For many products, the surplus can be sold on the local market, or even to the same buyer. Planning for slight over production is important when selling to a buyer who has clear quality standards, as not all the production will meet market standards.

TABLE 46. EXAMPLE OF PLANNED PRODUCTION TARGETS AND OUTPUT MONITORING

FARMER	BEFORE SEASON		DURING SEASON		AT HARVEST	
	Target area planted	Target output	Area actually planted	Expected output	Area harvested	Actual output
	ha	tons	ha	tons	ha	tons
Farmer 1	1.0	3.0	0.8	2.4	0.8	2.2
Farmer 2	0.5	1.5	0.5	1.5	0.5	1.4
Farmer 3	0.5	1.5	0.4	1.2	0.4	1.3
Farmer 4	0.4	1.2	0.4	1.2	0.2	1.1
Farmer 5	0.6	1.8	0.5	1.5	0.5	1.7
Total	3.0	9.0	2.6	7.8	2.4	7.7
Amount required by buyer		8.0		8.0		8.0
Difference		+1.0		–0.2		–0.3
Bought from other sources						0.3

Equally important is to monitor progress towards the production targets and adapt to potential problems. In the example in Table 46, the buyer wanted the group to deliver 8 tons grain. The farmers in the group assigned amounts to each farmer to produce, with a target of 9 tons. But the weather was bad and some of the farmers did not plant the agreed area of land, and the production coordinator realized halfway through the season that they could realistically produce only 7.8 tons. This estimate was not far off: at the end of the season, actual production was 7.7 tons. The group was able to meet its target only by buying grain from other farmers.

Exercise 13d shows how to help farmers plan their production targets.

PATHWAY ANALYSIS

Pathway analysis helps the farmers think through the specifics of how to get from their current situation to their desired goal in production and marketing. The "pathway" is the route from "where we are now," through a series of improvements, to "where we want to be."

Exercise 13e describes how to do a pathway analysis.

QUIZ 13

Answers at the end of the guide.

1. "Our group doesn't need a loan, so we don't need to bother with writing a business plan!"

   A. You are right. A business plan is only necessary if you need to convince a bank or microcredit institution to lend you money

   B. Not really. Writing a business plan is a good idea for any enterprise because it helps you think through what you will do and plan it in detail

2. In visioning, you should start with...

   A. The short term, as that is closest and easiest to deal with

   B. The medium term, as it is easy to work out both the long and short term from there

   C. The long term, as this will give you a direction in which you hope to go

   D. It doesn't matter

3. Fill in the blank: Setting _____ is the process of deciding how much to produce and then monitoring whether you are on course to achieve this.

   A. Problem analysis

   B. Pathway analysis

   C. Production targets

   D. Visioning

4. Fill in the blank: _____ is the process of helping farmers imagine the future of their enterprise, then working out how to get there in the long, medium, and short terms.

   A. Problem analysis

   B. Pathway analysis

   C. Production targets

   D. Visioning

5. Fill in the blank: _____ is working out what you need to do at each stage in the production and marketing process in order to achieve your enterprise goal

   A. Problem analysis

   B. Pathway analysis

   C. Production targets

   D. Visioning

6. Fill in the blank: Setting _____ is identifying challenges and looking for ways to overcome them.

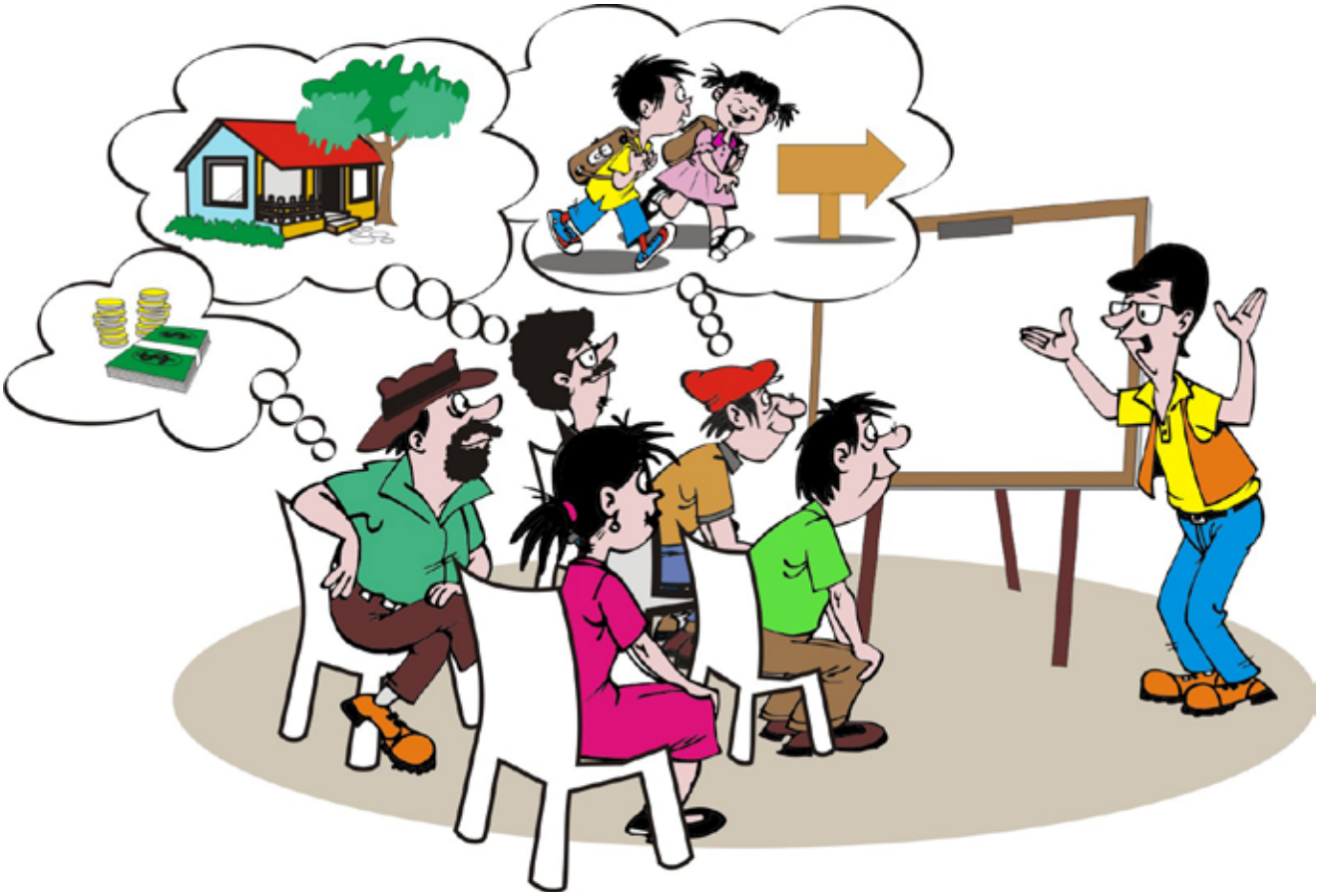
   A. Problem analysis

   B. Pathway analysis

   C. Production targets

   D. Visioning

EXERCISE 13A. VISIONING



Through visioning, the farmers imagine what they would like their enterprise to be like in the long term, then decide what steps to take in the short term to achieve this.

OBJECTIVE

After this exercise the participants will be able to:

- Set a desired future for their enterprise
- Identify the steps they need to take to reach this desired situation.

EQUIPMENT NEEDED

- Large sheets of paper, marker pens

EXPECTED OUTPUTS

- A long-term goal for the enterprise, and a series of concrete steps to achieve this goal

TIME REQUIRED

- 2 hours

PREPARATION

- None

SUGGESTED PROCEDURE

1. Ask the farmers to summarize their current production situation (type and amount of product produced), their postharvest handling (drying, storage, packaging) and marketing activities (buyers, sales agreements), and the business services (input suppliers, microfinance institutions, etc.) they currently use. Summarize these on a sheet of paper under the headings "production," "postharvest," "marketing," and "business services."
2. Ask the farmers to imagine what they would like their enterprise to be like in the long term, in 10 or 15 years' time. What will they be producing? How much of the product, and at what price? How will they be producing it? How will they market it, and who will they sell it to? List these goals on a second sheet of paper under the same headings.
3. Ask them to think of the long-term activities

they will need to do in order to reach this goal. For example, will they need to bring more land into cultivation? Install irrigation? Expand the group membership? Build a processing shed or storage warehouse? Get a loan from the bank? List these activities on another sheet of paper.

4. Ask the farmers to repeat this exercise, but this time to think of activities in the medium term – say, 5 years from now. Get them to be more specific and realistic about their suggestions. Their suggestions should lead them towards the long-term goals they have just set out. Record their answers on another sheet of paper.

5. Now get them to repeat the exercise for short-term activities, to do in the next year or production cycle. This time they should be very specific and realistic about what activities they will undertake, who will do what and when, and what types of support they will need. Record their ideas on another sheet of paper.

6. Mark which activities they can do themselves with their existing resources, and which will require external support.

7. Summarize the results of the discussions and notes in Table 47.

QUESTIONS TO STIMULATE DISCUSSION

Production

- What area of land will each farmer plant? How many animals will each farmer keep?
- What tools and equipment will we use?
- When do we need to plant crops (or breed animals)?
- What management practices do we need to change: seed type, variety, planting density, weeding methods, fertilizer application, irrigation usage, etc? For livestock, what are the breeding, feeding, veterinary care and housing we need?
- How will we monitor production to make sure we get the right amounts and quality?

Postharvest handling

- How will we harvest the product? When? Who will do the harvesting?
- How will we store the product? What facilities will we need?
- How will we sort grade, package and label the product?

Marketing

- How will we identify buyers? How will we market the product? Who will negotiate on behalf of the group?
- What transport will we need? What will the delivery schedule be?
- What price range will we negotiate for? What should the payment terms be? Do we need a bank account? Who will be the signatories for the account?
- How will the money be shared in the group?
- How much of the profit will we invest, and what will we invest in? How will we save money in order to invest?

Business development services

- What business services will we need? Input supplies, technical advice, financial services, marketing services, transport, etc?
- Which services are the most important?
- Which services need to be strengthened?
- Which services do we need to pay for? How will we pay for them?

TABLE 47. FORM FOR CONVERTING A LONG-TERM VISION INTO SHORT-TERM ACTION

	CURRENT SITUATION	SHORT-TERM ACTIVITIES	MEDIUM-TERM ACTIVITIES	LONG-TERM ACTIVITIES	LONG-TERM GOAL
	Where we are now	**In next year**	**In next 5 years**	**In next 10–15 years**	**Where we want to be in 10–15 years**
Production					
Postharvest					
Marketing					
Business services					

EXERCISE 13B. MARKET MAPPING

This exercise helps the farmers to visualize and map the future market for their product, and the changes in production and marketing they need to make in order to achieve this. The map on the desired future is a vision of what farmers would like to achieve. It becomes the basis for building a common plan on how to improve marketing opportunities.

OBJECTIVE

After this exercise the participants will be able to:

- Identify future market opportunities and marketing channels for their product(s)
- List the changes needed in production and marketing for them to sell their product(s) to this market.

EQUIPMENT NEEDED

- Large sheets of paper, colored marker pens
- Market map prepared in Exercise 7a
- Information on product prices and markets from the market survey and analysis (Exercise 7b and Exercise 7c)
- Information on production of the selected product (Lesson 8)
- Information on costs for the selected product (Lesson 10)
- Information used to choose the selected product (Lesson 12)

EXPECTED OUTPUTS

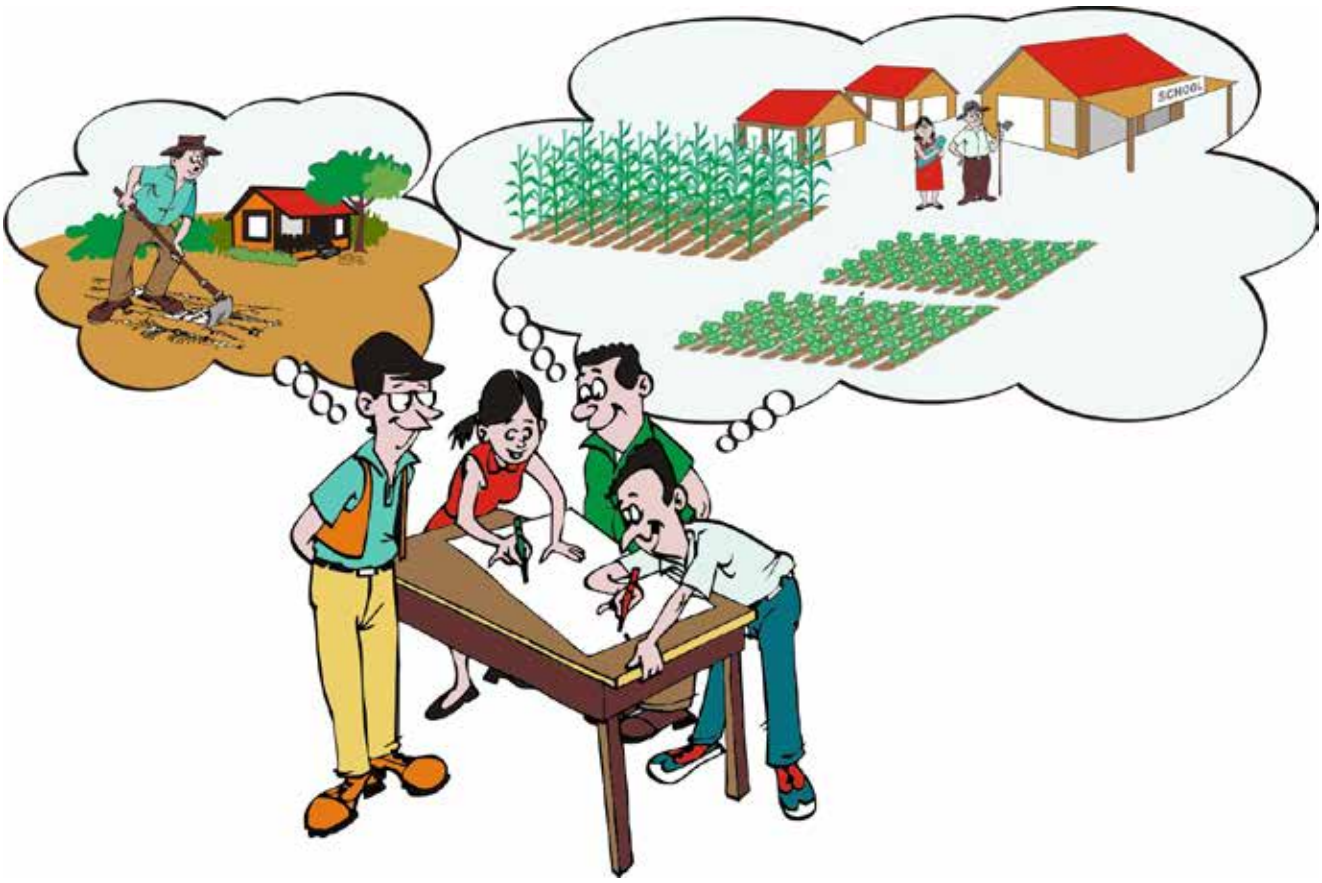
- Diagrams of actual and planned value chains and markets for the selected product

TIME REQUIRED

- 1 hour

PREPARATION

Bring the market map prepared in Exercise 7a, showing the farmers' initial understanding of the production and marketing of their product. Also bring the information gathered during the market survey and analysis (Exercise 7b and Exercise 7c), plus any other information the group has gathered about production (Lesson 8) and costs (Lesson 10) and the information used to choose their agroenterprise (Lesson 12).



SUGGESTED PROCEDURE

1. Ask the farmers to redraw the market map diagram (showing where they produce the product, and store and sell it) in the light of their current knowledge.
2. Ask the farmers to add information on costs, volumes, and prices to the diagram.
3. Now ask the farmers to draw a new diagram showing what they want their production and marketing to look like in (say) 5 years' time, after they have implemented all the changed they plan.
4. Ask them to start with the **product** volume, quality, and timing. Get them to write the details on the diagram.
5. Then ask them to consider the **production** steps and inputs they need to supply this amount of product at the right times. Get them to systematically consider each step in production and harvesting, paying attention to detail. They should include decisions made so far, but also consider things they have not yet thought of or discussed. Make sure they write the costs and amounts of inputs on the diagram.
6. Then switch to the **marketing** side of the diagram. Get them to think of what they need to do after harvest and before sale, and how to find a buyer and manage the sale.

QUESTIONS TO STIMULATE DISCUSSION

The product. How much do the farmers need to produce to serve their chosen market? What quality must the product meet? When should the product be ready for sale – all at one time, or at regular intervals throughout the season? Where should it be collected or delivered?

Production activities. What does the group need to do to produce this amount and quality of the product, at these times? How much product can each farmer produce? What inputs (seed, feed, fertilizer, agrochemicals, labor) are needed? What activities does each farmer (and the group) need to undertake? How are they different from what the farmers do now?

After harvest. What do they need to do after the harvest but before sale? What types of processing and storage are needed? Do they have to grade, sort and package the product? How about transport and communications? Think about the market, only grade if the market pays a premium for the graded produce!

Marketing. What arrangements and agreements need to be made for marketing? Is a buyer already identified, or how will they find a buyer? Does the group need a fixed agreement or contract, and what should the prices and terms be?

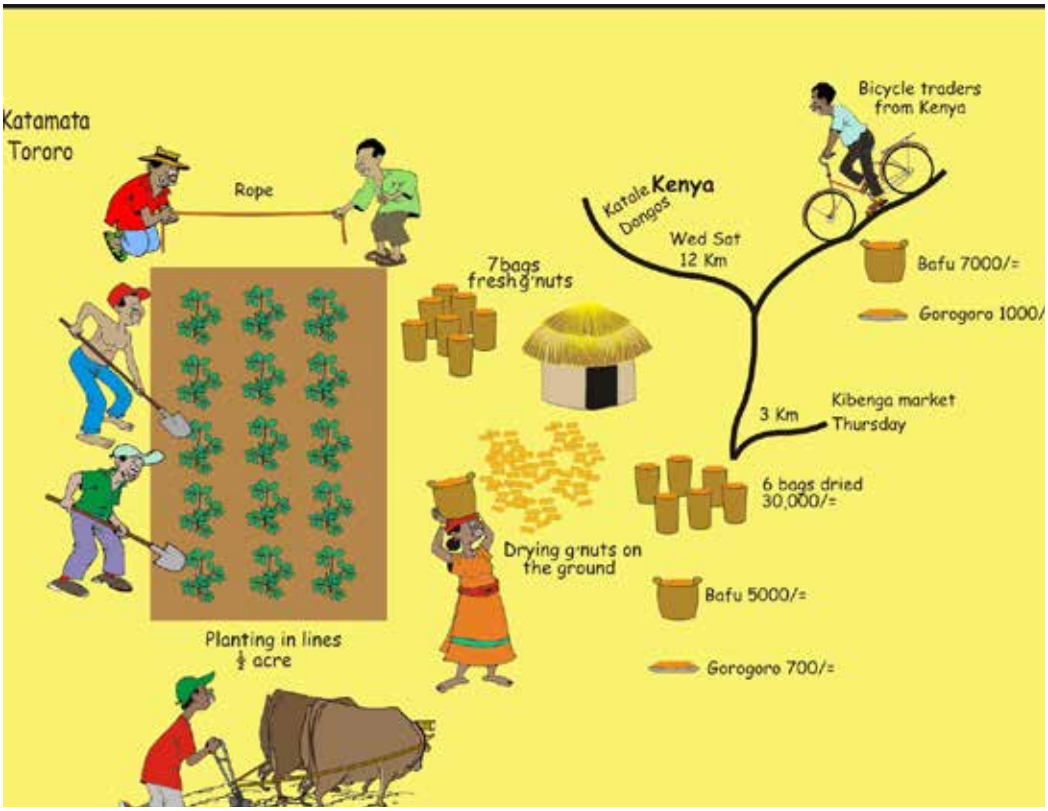
Costs and revenues. How much do the inputs cost? How much do production activities such as plowing, weeding and harvesting cost? What is the expected price?

NOTES

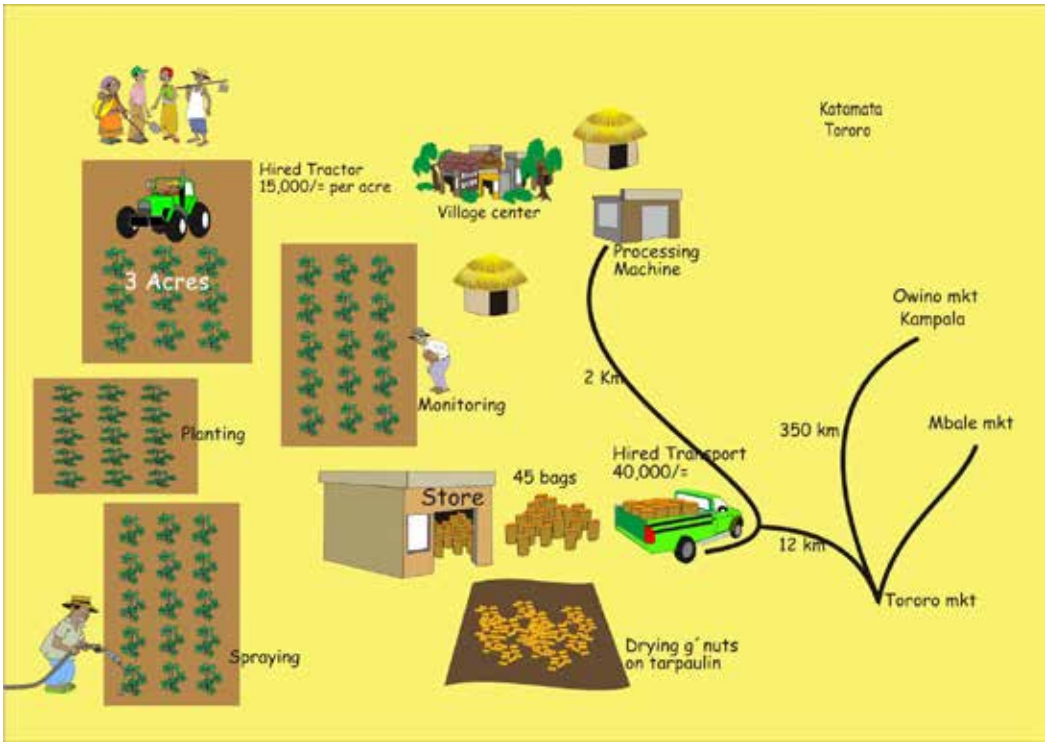
The figure shows the initial marketing map drawn by farmers in Embu district, Kenya, for groundnut. They produce a limited amount of groundnuts, mainly for subsistence, using hand hoes as their main tools. They lacked appropriate drying or storage facilities, and linked with intermediaries from outside the village to sell their produce.

The second figure shows the map they drew to show the changes in the production and marketing they will make to increase their production. This diagram shows the farmers working together, with access to tractors to plow the land. Crops are planted in rows and sprayed to control pests and diseases. The houses have tin roofs, so are therefore more suitable for storage. The farmers produce a lot of groundnuts, and sell them in bags in large consignments. They hire a pickup truck to take their groundnuts to more distant markets and to add value to the crop.

Market maps



MARKET MAP FOR DESIRED MARKETING OF GROUNDNUT IN EMBU DISTRICT, KENYA



MARKET MAP DRAWN BY FARMERS FOR GROUNDNUT IN EMBU DISTRICT, KENYA

EXERCISE 13C. PROBLEM ANALYSIS

This exercise enables farmers to identify the causes of problems they face, judge which are most important, and identify solutions.

OBJECTIVE

After this exercise the participants will be able to:

- Identify the causes of problems facing the group
- Identify those problems that are the most important and that the farmers can do something about
- Name solutions to the problems.

EQUIPMENT NEEDED

- Small pieces of paper, marker pens
- Large sheets of paper

EXPECTED OUTPUTS

- A list of problems in order of importance, along with a list of potential solutions

TIME REQUIRED

- 2 hours

PREPARATION

- None

SUGGESTED PROCEDURE

1. Ask the farmers to list the main problems they face that are related to production and marketing of their selected product. They should write each problem on a single piece of paper.
2. Ask them to put similar problems into groups. Give each group a name, such as "low prices," "pests and diseases," or "poor quality."
3. Write the names on the left side of a big sheet of paper (column 1 in Table 48).
4. Ask the farmers to describe what they currently do to deal with these problems. List their answers in column 2 of the table.
5. Ask the farmers to suggest how they might overcome the problems better – either by improving their current solutions, or by implementing new solutions. Write these possible future solutions in the column 3 of the table.
6. Invite the group to list the activities they will need to do in order to implement the solutions. Put these in column 4 of the table.
7. Help the group decide which of the solutions they will implement. Write these in column 5 of the table.

NOTES

Some of the problems (such as pests and diseases) may be technical – so it may be helpful to arrange for an agricultural specialist to advice farmers what is feasible.

TABLE 48. EXAMPLE OF A PROBLEM ANALYSIS

PROBLEMS	CURRENT SOLUTIONS	POSSIBLE FUTURE SOLUTIONS	ACTIVITIES TO IMPLEMENT SOLUTIONS	AGREED TO DO
Low prices	Do nothing	Bulk product and negotiate better price	Coordinate planting and harvesting	Yes
			Agree on collection point	Yes
			Appoint marketing agent to identify buyers and negotiate price	Yes
		Store until prices rise	Dry produce sufficiently after harvest	Yes
			Build warehouse to store produce	No
Pests and diseases	Spray insecticides	Integrated pest management	Get training on pest management methods	Yes
Poor quality	Sell in local market	Increase quality	Sort produce by quality	Yes
			Prevent contamination during harvest and processing	Yes

EXERCISE 13D. PREPARING PRODUCTION TARGETS

This exercise enables farmers to plan how much each individual should plant and harvest in order to reach a group production target. You can adapt this exercise to suit the production of livestock products such as live animals, milk, and eggs.

OBJECTIVE

After this exercise the participants will be able to:

- Plan and agree on production targets for individual farmers.

EQUIPMENT NEEDED

- Large pieces of paper, marker pens.
- Pocket calculator or computer with spreadsheet software (if available).

EXPECTED OUTPUTS

- An agreed set of production targets for individual farmers.

TIME REQUIRED

- 2 hours

PREPARATION

- Bring the business plan.

SUGGESTED PROCEDURE

1. Review the production targets with the group members. Explain that to achieve the target, that each of the members will need to produce a certain amount of the crop and deliver it on a particular date. That means each farmer needs to know how much to produce and when to plant and harvest it. Refer to the business plan for the specific amounts and dates.
2. Draw Table 49 on a large piece of paper. Fill in the delivery date and the amount required by the buyer.
3. Ask the farmers to say when they will need to plant and harvest in order to have the produce ready by the delivery date. Fill in these dates in the table.
4. Ask the farmers to say what yield per hectare (local units, such as bags per acre) they can expect. Write this in the table.
5. Ask each member to state how many tons (or kilograms or sacks) he or she can deliver. Write these amounts in "Target output" column of the table.
6. Add the target outputs from all the farmers to get the total. Compare this with the amount required by the buyer. Make sure there is enough expected surplus in case of a yield shortfall because of drought or disease.
7. If the target output is less than the amount required by the buyer, see if the farmers will agree to produce more, add more members to the group, start another group, or buy in the shortfall?
8. Work out how large an area each member must plant to get the target output.
9. Discuss with the farmers what to do if they produce too much (perhaps they can find alternative markets for the surplus). And what if they produce too little? (Perhaps they can buy produce from non-members to make up the shortfall, or negotiate with the buyer to deliver a smaller amount.)
10. Explain that the group can use this table to monitor production throughout the growing season. See Table 46 for an example of this.

NOTES

Shortfalls in production can occur for many reasons: drought, hail, pests, diseases, illnesses in a farmer's family, etc. Make sure that there is enough surplus to cover any such shortfall.

For some products, buyers want a regular supply of the product throughout the season. There are several ways of maintaining such a supply, two of the common methods are shown below:

- **One date, one farmer.** Each farmer plants his or her whole area on a different date. The farmer harvests the crop on the designated date and delivers it as agreed. The following day or week, the next farmer harvests and delivers his or her crop. You can adapt Table 49 for this situation by adding columns for "Planting date" and "Harvesting date." This approach is often used for fresh vegetables. It is convenient and easy to plan, but means that there may be a shortfall on a particular date if one farmer's crop fails.
- **One date, many farmers.** Each farmer harvests a small amount each day or week. This approach is used for items where production is continuous, such as eggs and milk.

TABLE 49. FORM FOR PLANNING PRODUCTION FOR A CROP

EXPECTED YIELD (TONS/HA)	PLANTING DATE	HARVEST DATE	DELIVERY DATE

FARMER	AREA TO PLANT	TARGET OUTPUT	ACTUAL OUTPUT
	hectares	tons	tons
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
Total			
Amount required by buyer			

EXERCISE 13E. PATHWAY ANALYSIS

Pathway analysis breaks the "pathway" from production to marketing down into steps, and looks for ways to improve each step in order to achieve your goals.

OBJECTIVE

After this exercise the participants will be able to:

- List aspects of the production and marketing process that need to be changed so they can achieve their goals
- Identify the actions they need to take to reach this desired situation.

EQUIPMENT NEEDED

- Large sheets of paper, marker pens

EXPECTED OUTPUTS

- A list of activities for the farmers to undertake to achieve their goals

TIME REQUIRED

- 2 hours

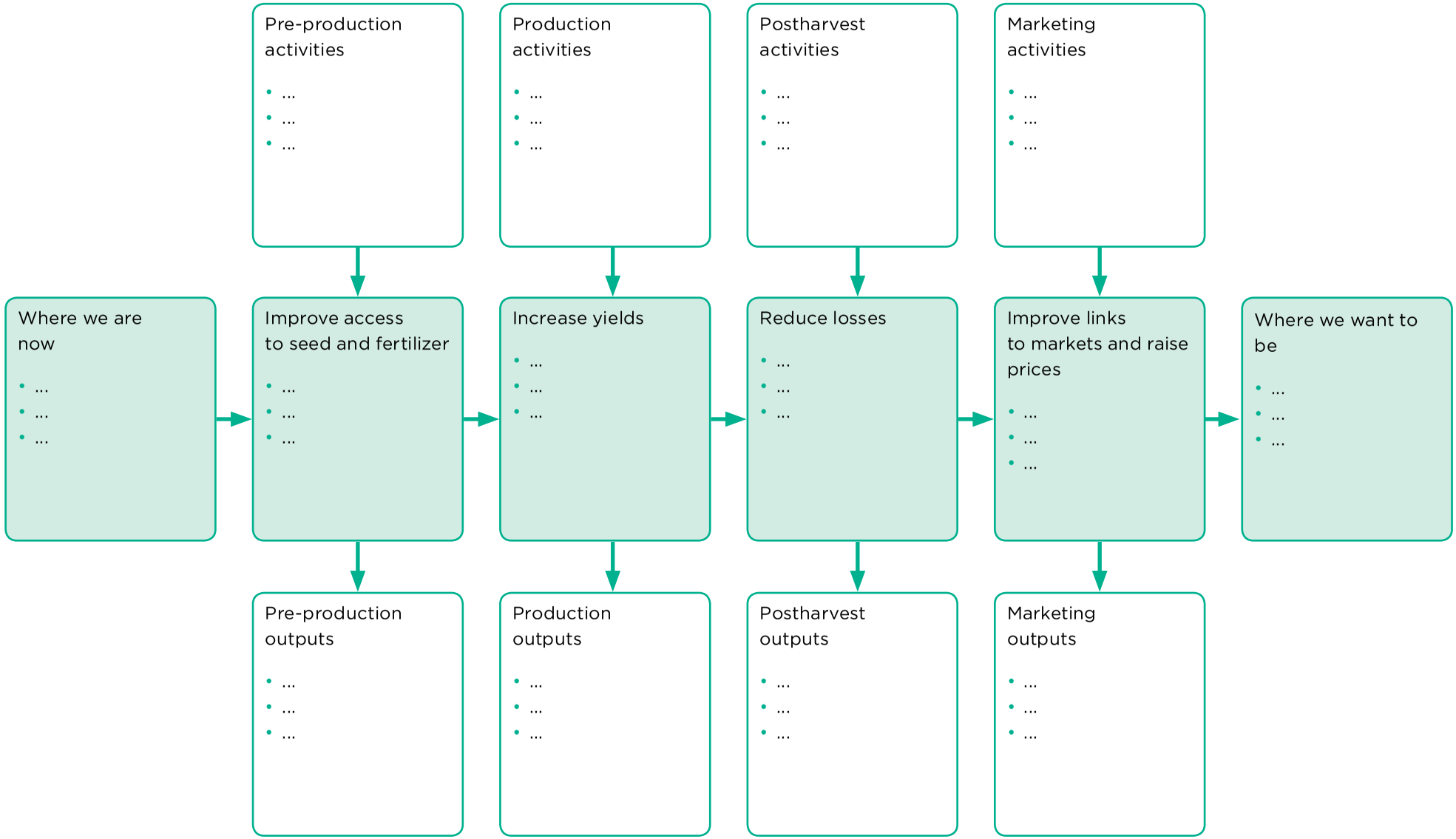
PREPARATION

- None

SUGGESTED PROCEDURE

1. Ask the farmers to summarize their current production and marketing situation. Write this on the left side of the diagram in the figure under "Where we are now."
2. Ask them to say what the desired situation or goal would be. Put this in the right side of the diagram under "Where we want to be."
3. Ask them to list the general improvements they need to make at each of the stages in pre-production, production, postharvest and marketing. For example, at the pre-production stage they may say they need to improve access to seed and fertilizer. At the production stage, the goal may be to improve yields. Put these improvements in the shaded boxes in the center of the diagram.
4. For the pre-production stage, ask them what activities they need to undertake in order to make the improvement. For example, they may say they have to buy seed from a certified dealer, and buy fertilizer in bulk from the local farm store. Encourage them to be as specific as possible. Write these activities in the box in the top row of the diagram.
5. Then ask what the output of these improvements will be. For the pre-production stage, the answer may be "better germination, higher yield potential." Write these responses in the box in the bottom row.
6. Repeat these two steps for the other stages in the production and marketing process: production, postharvest and marketing.

Pathway analysis for production and marketing



LESSON 14. THE BUSINESS MODEL CANVAS

IN THIS LESSON

After this lesson you will be able to:

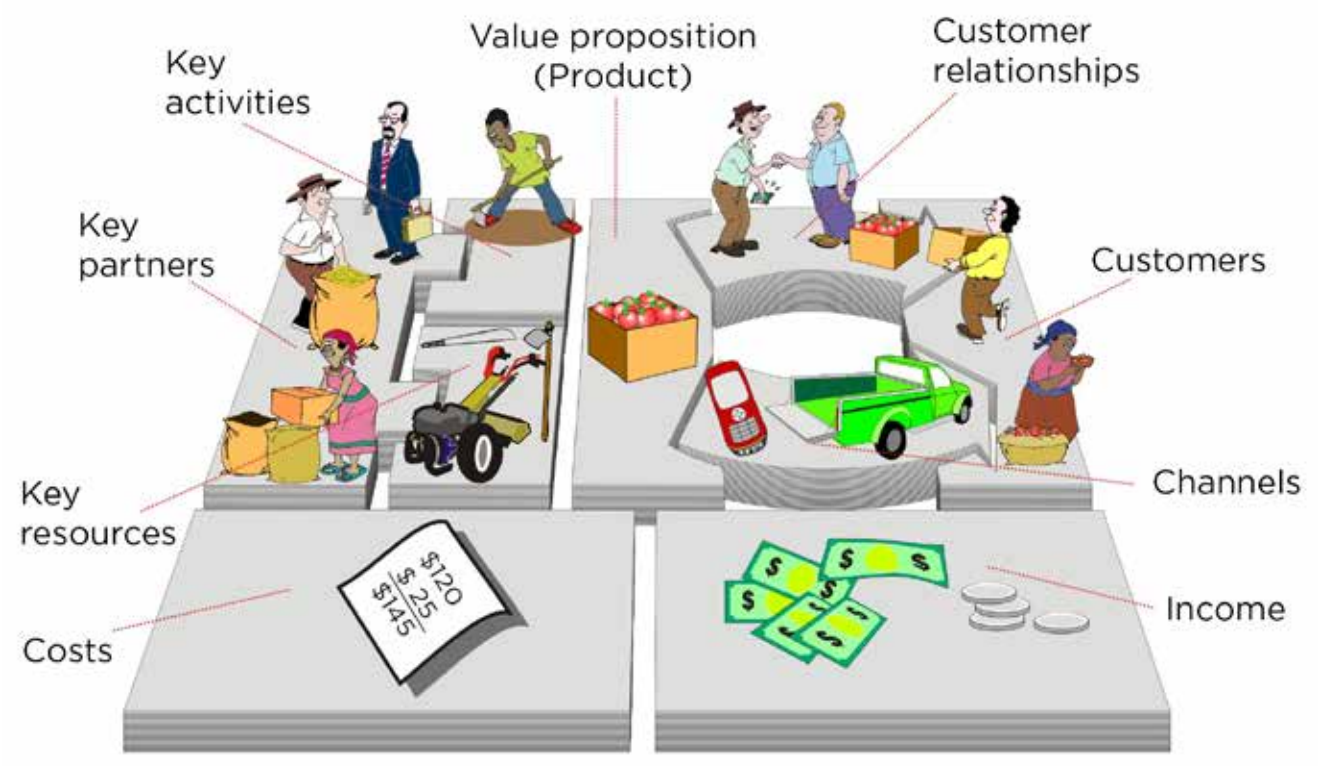
- Draw and label a business model canvas.
- Explain the meaning of each of the nine areas in the canvas.
- Use the business model canvas to analyze an existing production and marketing system.
- Use the canvas to prepare information on building a business plan.
- Transfer information from the business canvas into a written business plan

VISUALIZING A BUSINESS PLAN

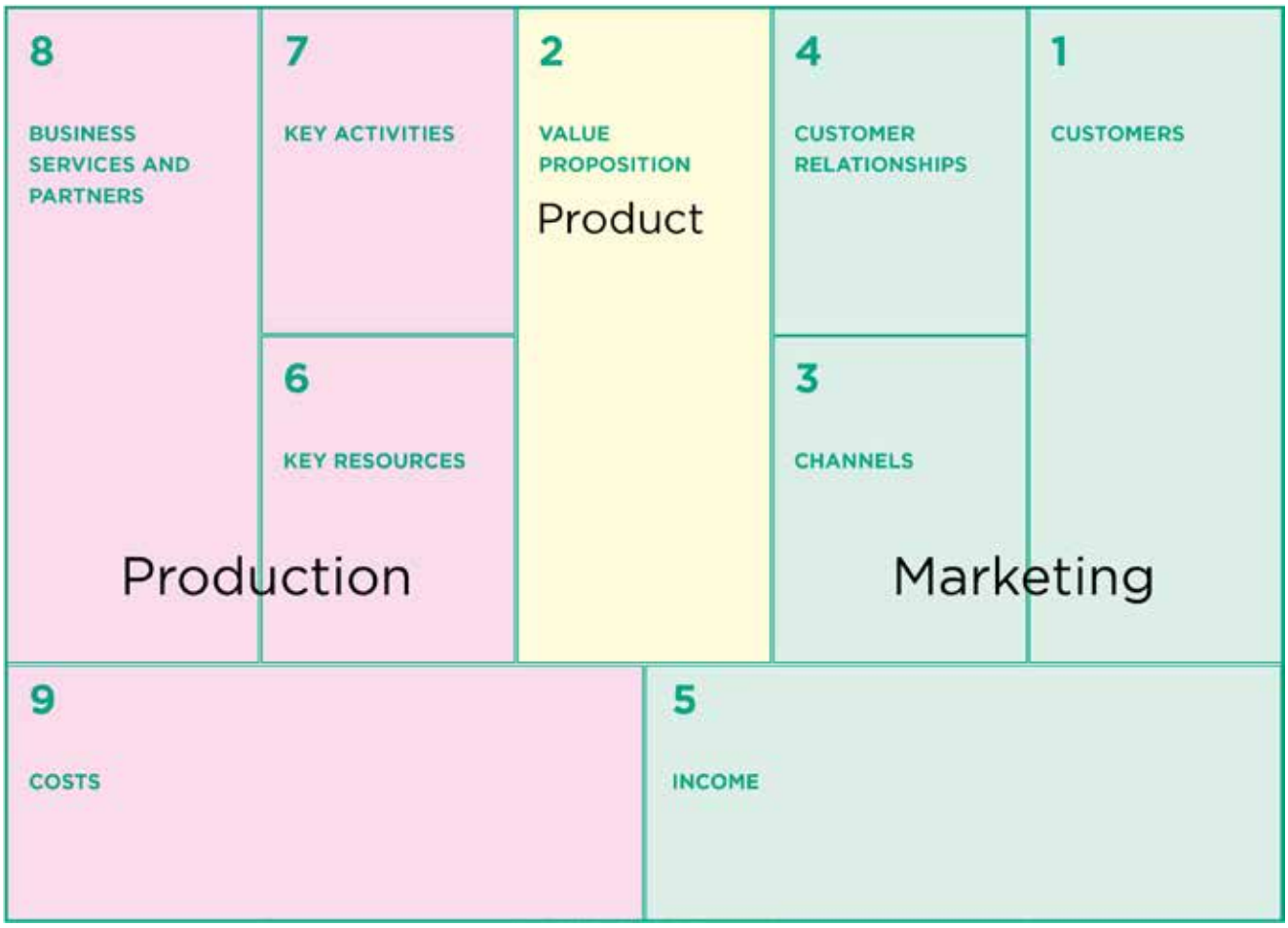
Before asking farmers to design and fill in a formal business plan, it is helpful to give them some tools to visualize what a business plan looks like. This will help them to gain an understanding about the component parts of a business plan and how each part of the business plan fits together.

A visual method to help design a business plan is the model canvas (see figure). Visualizing the parts of a business plan helps farmers to understand how a business plan is built from basic parts. We have adapted this method to fit the situation of small-scale farmers in developing countries.

The picture in the figure on the next page provides a helpful way for farmers to think about and plan their enterprise. The "canvas" consists of a large sheet of paper divided into nine areas, each representing one aspect of the enterprise.



HOW THE PARTS OF A BUSINESS PLAN FIT TOGETHER



THE BUSINESS MODEL CANVAS

THE NINE AREAS OF THE CANVAS

1. **Customers.** These are the buyers or customers of the product – such as traders or consumers. For most products there is more than one type of customer. For example, a supermarket market may buy the highest-grade output but the lower grades will have to be sold in a local wholesale market, lowest quality used to feed animals.

2. **Value proposition (product).** This is a statement that clearly and concisely describes the unique value of a firm or group's products and services. It states the firm / group's core objectives, which sets it apart from the competition. In most cases the value proposition will focus on a specific product or service that the farmers plan to produce or sell – for example products may include things like maize or milk, and a service may include drying and cleaning facilities or contract spraying.

3. **Channels.** These are how the group plans to deliver the product to the buyer – for example by having members deliver to a village collection center ready for pick-up. (In the Four Ps model (Lesson 9 in the *Marketing basics* module), this corresponds to Place.)

4. **Customer relationships.** These are how the group plans to identify buyers and create and maintains relationships with them. (In the Four Ps model, this corresponds to Promotion.)

5. **Income.** This is the money the group earns from selling the product.

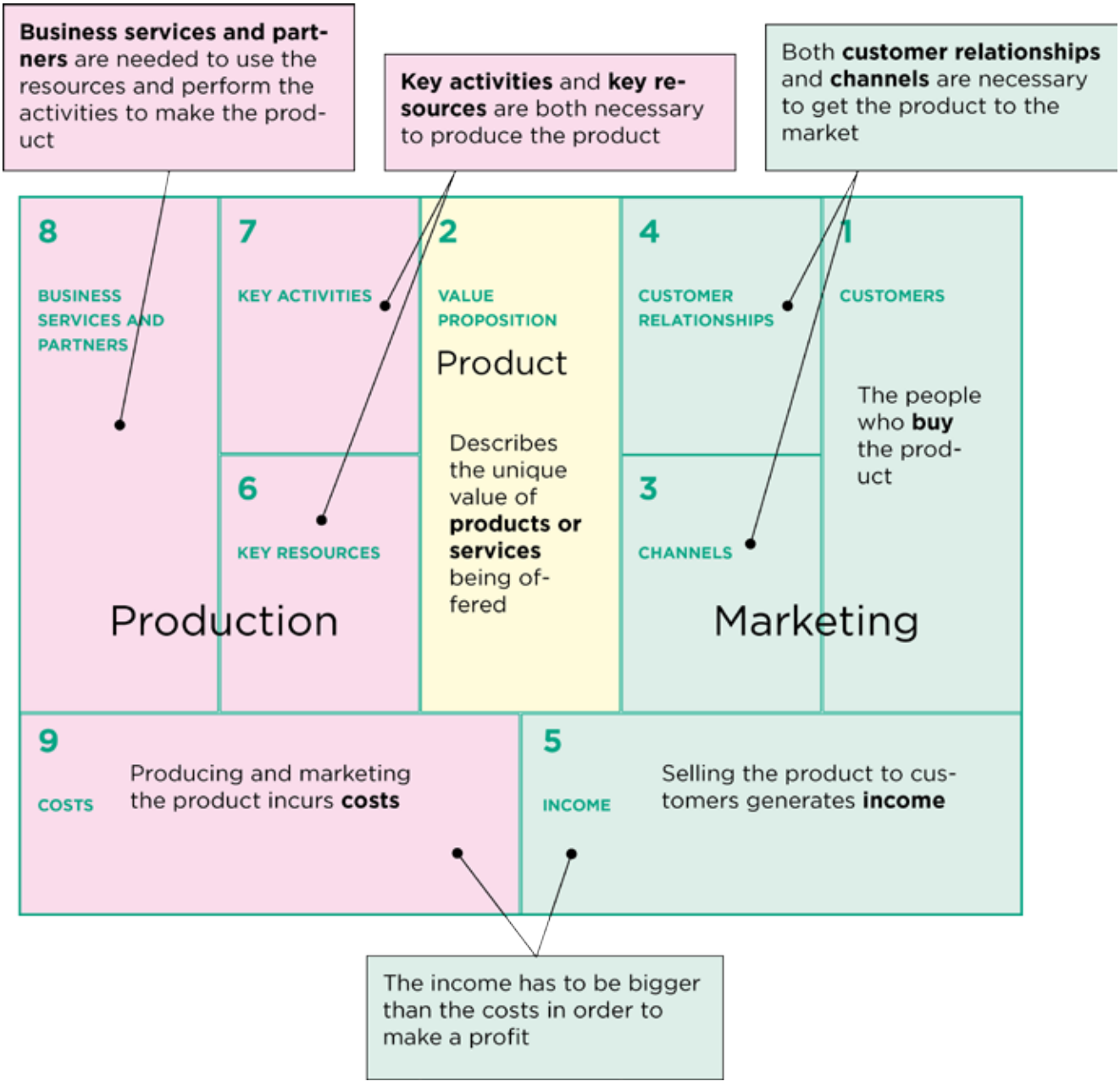
6. **Key resources.** These are the inputs and resources the group uses to produce the product – including land, equipment, seed, fertilizer and labor, as well as the group's internal organization.

7. **Key activities.** These are the activities the group plans to do to produce the product – such as planting, crop management, harvesting, and drying.
8. **Business services and partners.** They are the services and partners that the group uses to produce and market its product, such as input suppliers, the agricultural extension service, and a microfinance institution.
9. **Costs.** These are the costs that the group incurs in order to produce and market the product.

To make the case more practical for farmers we will refer to the value proposition as "the product" in following text

INTERPRETING THE CANVAS

The next figure shows the relationships between the different areas of the canvas.



USING THE BUSINESS CANVAS TO UNDERSTAND AND PLAN BUSINESS OPTIONS

The canvas is a useful business or agroenterprise planning tool. You can use it to:

- Help the **project team** understand their business situation
- Help the farmers gather and organize information for a **business plan**.
- **Explain a business plan** or an existing enterprise to other farmers, value chain actors, business service providers, or donors.
- Help the farmers show and **analyze their current production** and marketing system
- Help the farmers **plan improvements** to their current system.
- Help the farmers **plan a completely new** production and marketing system.

We discuss several of these approaches below.

Once farmers have understood the basic components of the business canvas, the next step is to work with farmers to organize the information they have gathered in Step 3 of this manual.

With your help, farmers can use sticky notes (or small pieces of paper and sticky tape) to write down their business ideas and information from their market surveys into these nine areas. The sticky notes allow the farmers to move and change the ideas around, until they settle on the best combination of ideas for their business plan.

They can then use the information on the sticky notes as a basis for analyzing their existing business situation, and as a platform for planning a new business venture.

The power of the business canvas is that groups or individuals can see all the components of the plan at one time, and arrange the information and use it to work on new ideas. The canvas is an important first step in arranging business information and then using these ideas to prepare a more formal, written business plan.

The next two figures show the business canvas being used to understand an existing market situation and being used to plan a new business for maize. In both cases the information for the maize business plans are laid out on the nine elements of the business canvas.

USING THE CANVAS TO ANALYZE A CURRENT PRODUCTION AND MARKETING SYSTEM

This example shows how a group of farmers can use the canvas to analyze how they currently produce and market their products.

1. **Customers.** Demand for maize is not well identified- the farmers sell individually on an occasional basis to traveling traders.
2. **Value proposition (product).** The farmers produce maize for subsistence, and occasionally some sell their surplus. Yields are low, sales are irregular, and quality is poor.
3. **Channels.** The traders come to the individual farms at harvest time to buy the maize. They pick up two or three sacks in their vehicles.
4. **Customer relationships.** The farmers know most of the traders, but they sell to the first one who comes along because they need money urgently and are afraid that they will not be able to sell if no other trader comes.
5. **Income.** Prices are low, example $10–15 per bag, and the farmers feel forced to ac-

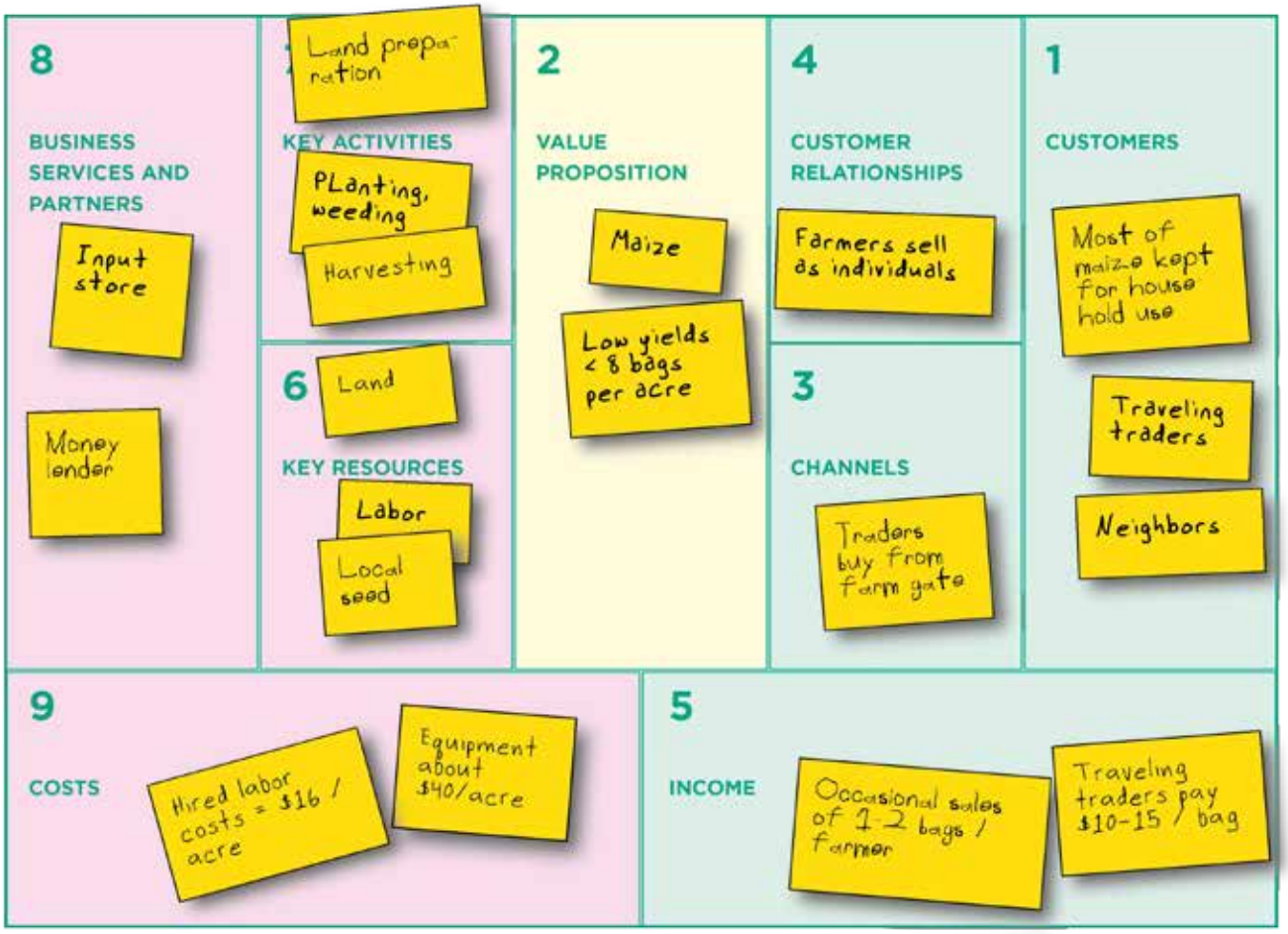
cept the price the trader offers. Traders pay in cash at time of sale.

6. **Key resources.** The farmers plant using home seed of local varieties. Some of the farmers use only a little fertilizer, as they cannot afford to buy any at the start of the season.

7. **Key activities.** These include plowing, digging, sowing, weeding, harvesting, de-husking, shelling, drying and bagging.

8. **Business services and partners.** The local store sells seed and fertilizer, bags and tools, but few farmers buy these inputs. Many farmers borrow money from the input supplier or the local money lender.

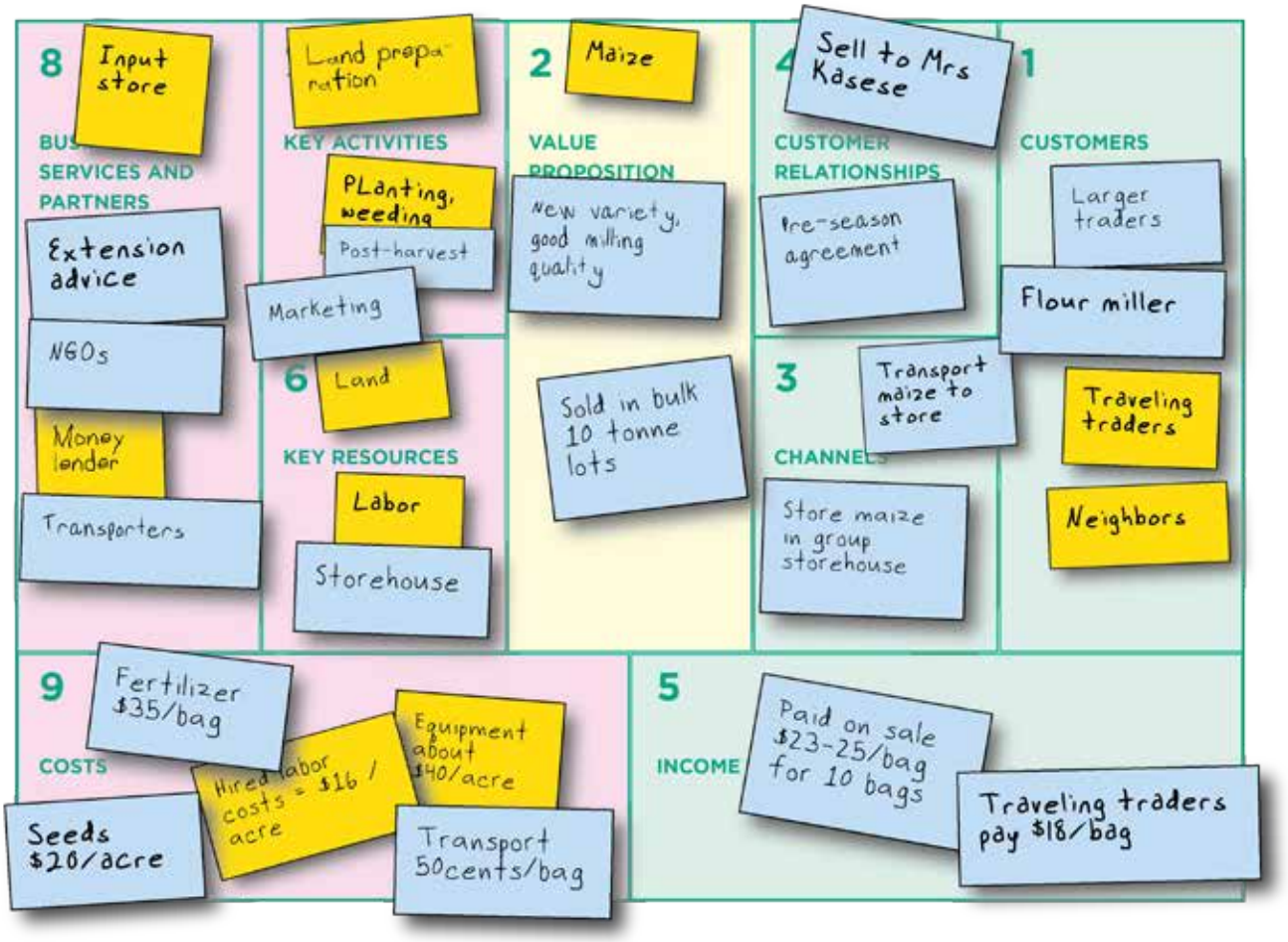
9. **Costs.** Costs are minimal as most of the work is done by family members. The only things to buy are hoes, fertilizer and bags.



EXAMPLE OF THE BUSINESS MODEL CANVAS SHOWING PRODUCTION AND MARKETING SYSTEM

USING THE CANVAS TO ORGANIZE INFORMATION FOR A BUSINESS PLAN

The next figure shows an example of how farmers have used the canvas to analyze their current system. In this case the farmers can use this information to determine how they can improve their marketing. The farmers have reworked their thinking to design a new business plan.



USING THE CANVAS TO BUILD A BUSINESS PLAN

You can use the canvas to gather and analyze the information needed for a business plan.

The nine areas of the canvas mostly correspond to the ten parts of a standard business plan. That makes it a valuable tool to use when writing the business plan. The main difference is that the business canvas does not have an introduction.

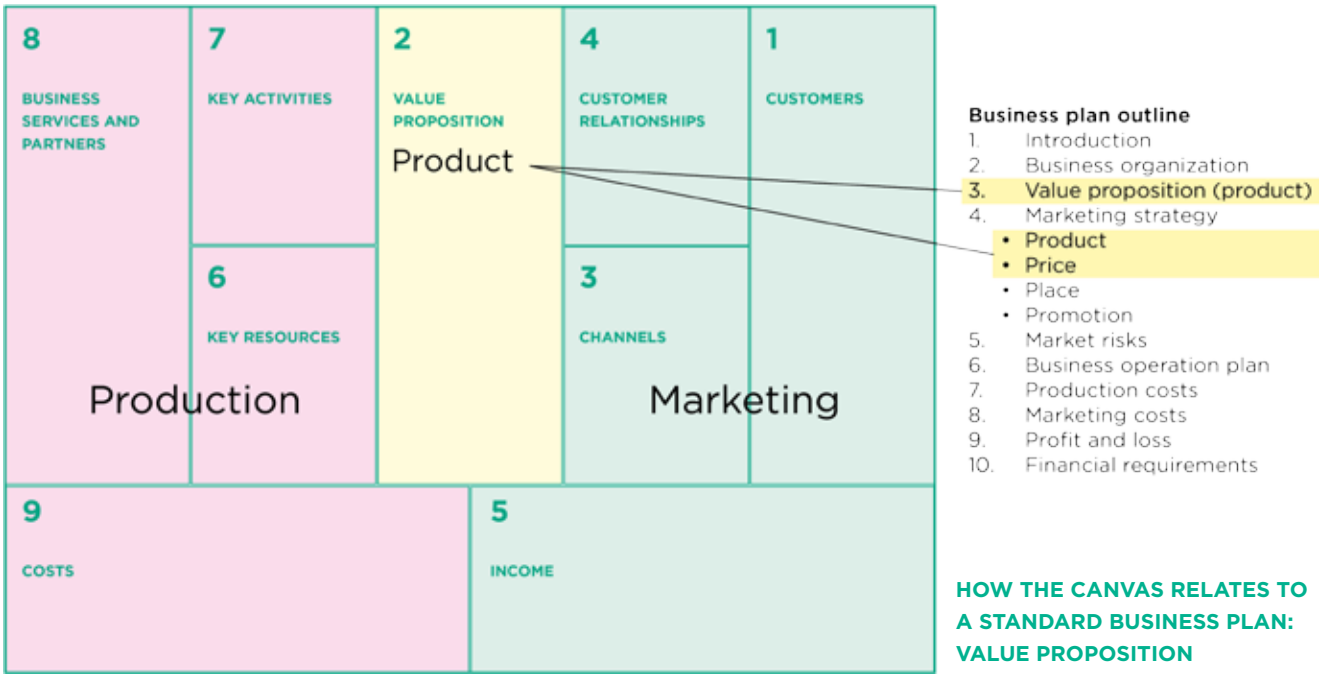
Business plan outline

1. Introduction
2. Business organization
3. Value proposition (product)
4. Marketing strategy
   - Product
   - Price
   - Place
   - Promotion
5. Market risks
6. Business operation plan
7. Production costs
8. Marketing costs
9. Profit and loss
10. Financial requirements

THE TEN PARTS OF A STANDARD BUSINESS PLAN

VALUE PROPOSITION

Broad information from the **Value proposition** area of the canvas goes into the **Value proposition** section of the business plan. The details go into the **Marketing strategy** section, under the subheadings **Product** and **Price**.



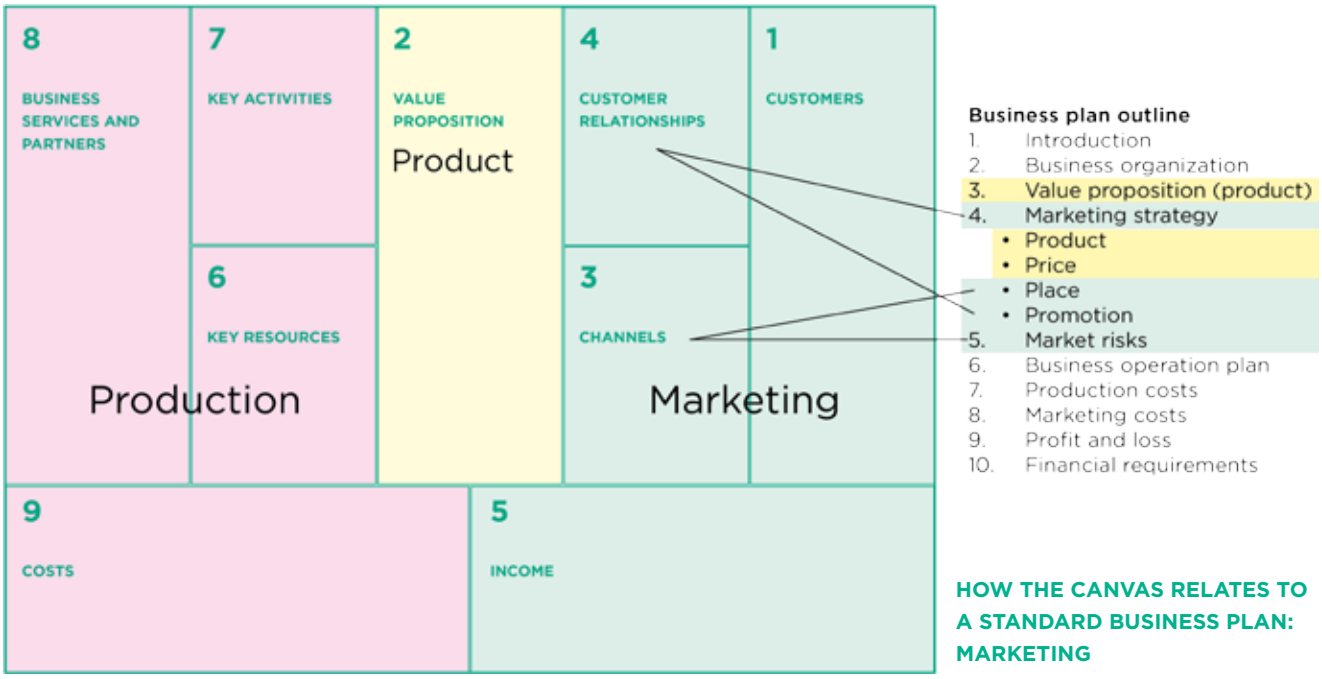
HOW THE CANVAS RELATES TO A STANDARD BUSINESS PLAN: VALUE PROPOSITION

MARKETING

Put information on the **Customers** into the **Marketing strategy** section of the business plan.

Put information from the **Customer relationships** area of the canvas into the **Customer relations** part of the business plan. You can also add **Market risks** at this point.

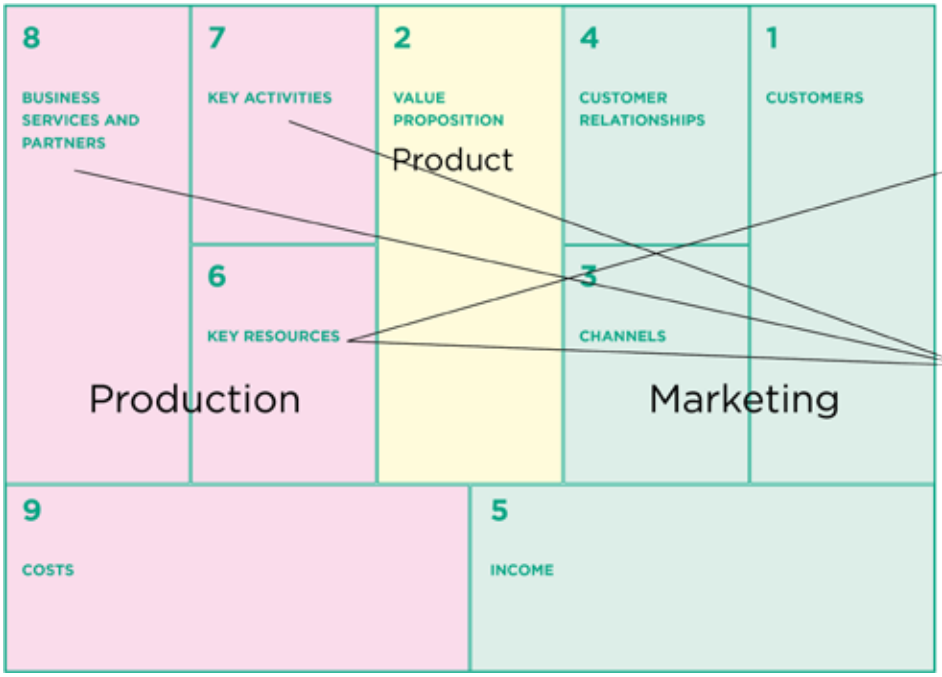
Describe the **Channels** in the **Place** part of the business plan.



HOW THE CANVAS RELATES TO A STANDARD BUSINESS PLAN: MARKETING

PRODUCTION

The information on **Key resources, Key activities** and **Business services and partners** all go into the **Business operation** plan section.



Business plan outline

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8. Marketing costs
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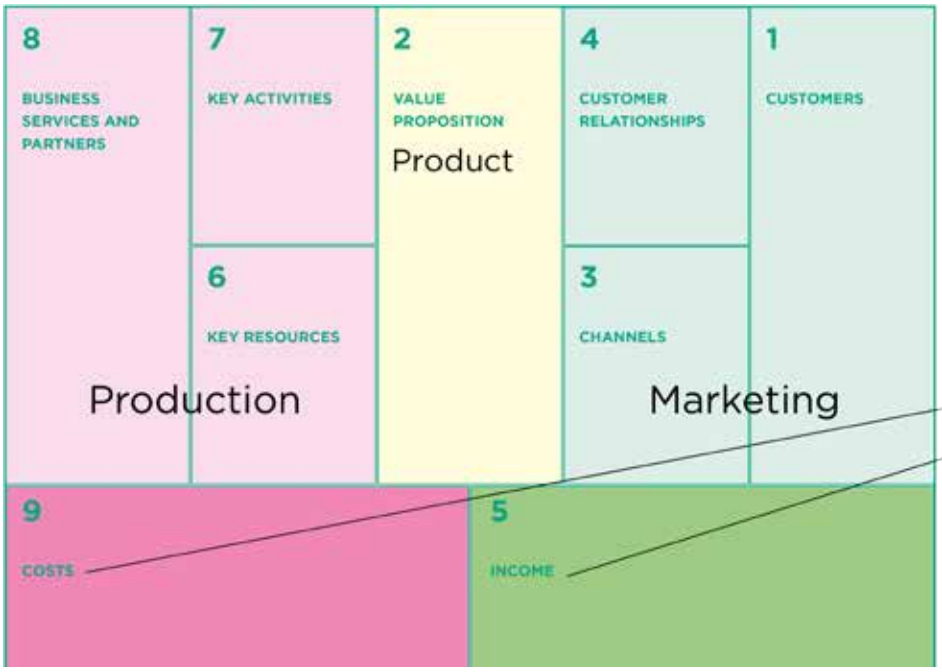
10. Financial requirements

HOW THE CANVAS RELATES TO A STANDARD BUSINESS PLAN: PRODUCTION

COSTS AND INCOME

Put the information on **Costs** into the **Costs** section.

A brief summary of the information on Income can go into the **Price** section of the business plan; put the details in the **Income** section.



Business plan outline

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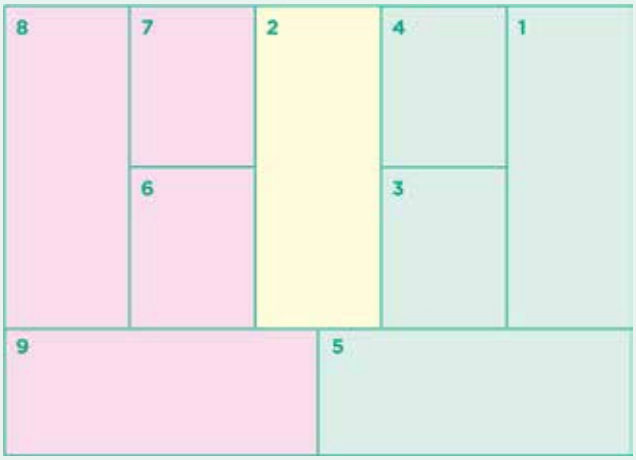
10. Financial requirements

HOW THE CANVAS RELATES TO A STANDARD BUSINESS PLAN: COSTS AND INCOME

QUIZ 14

Answers at the end of the guide.

1. Match the names with the correct areas of the business model canvas



A. Business services and partners
B. Channels
C. Costs
D. Customer relationships
E. Customers
F. Income
G. Key activities
H. Key resources
I. Value proposition (product

2. Match the description with the correct area of the business model canvas.

AREA OF BUSINESS MODEL CANVAS	DESCRIPTION
A. Customers	1. How the group plans to identify buyers and maintain relationships with them
B. Value proposition	2. How the group plans to deliver the product to the buyers
C. Channels	3. The activities the group plans to do to produce the product
D. Customer relationships	4. The product or service the group wants to sell
E. Income	5. The services and partners the group uses to produce and market the product
F. Key resources	6. The costs the group incurs to produce and market the product
G. Key activities	7. The inputs and resources the group uses to produce the product
H. Business services and partners	8. The money the group earns by selling the product
I. Costs	9. Buyers of the product

3. If you want to plan a completely new production and marketing system, in which part of the business model canvas should you start?

A. With the Customer, then move on to the Product
B. With the Value proposition (Product), then move to the other aspects of production, such as Key activities and Key resources
C. With the Income and Costs
D. It doesn't matter – you can start anywhere.

4. Match the areas of the business model canvas with the sections in a business plan.

AREA OF BUSINESS MODEL CANVAS	SECTION OF BUSINESS PLAN
A. Key resources	1. Business operation plan
B. Value proposition, Customers, Channels, Customer relationships, Income	2. Market risks
C. Channels	3. Marketing strategy
D. Business services and partners, Key activities, Key resources	4. Profit and loss
E. Income	5. Business organization

5. Here are some sticky notes. What part of the business model canvas should they go into?

STICKY NOTES	PARTS OF THE CANVAS
A. Maize grain, grade A	1. Customers
B. Improved seed variety	2. Value proposition
C. Better postharvest processing	3. Channels
D. Extension advice	4. Customer relationships
E. Farmers sell as a group	5. Income
F. Transport maize to collection point	6. Key resources
G. Large traders	7. Key activities
H. Cash on delivery, $15/bag	8. Business services and partners
I. Seed: $20/acre	9. Costs

6. What is the purpose of the farmers using sticky notes to write down their business ideas and information from their market surveys?

A. The sticky notes allow the farmers to move and change the ideas around, until they settle on the best combination of ideas for their business plan

B. The sticky notes allow the farmers to place their ideas in a hat and then pick one idea out of the hat to apply

C. The sticky notes help the farmers explain a business plan or an existing enterprise to other farmers

EXERCISE 14. USING THE CANVAS TO BUILD A BUSINESS PLAN

The canvas is a helpful way to visualize and order information to help farmers build a business plan.

OBJECTIVE

After this exercise the participants will be able to:

- Build a business plan using the business model canvas.

EQUIPMENT NEEDED

- Large sheets of paper, marker pens, sticky notes, scissors
- Information on the value proposition (product), market, business services, costs, expected income, etc. If you have a computer and printer, bring a printout of this information if possible.

EXPECTED OUTPUTS

- Large parts of a business plan

TIME REQUIRED

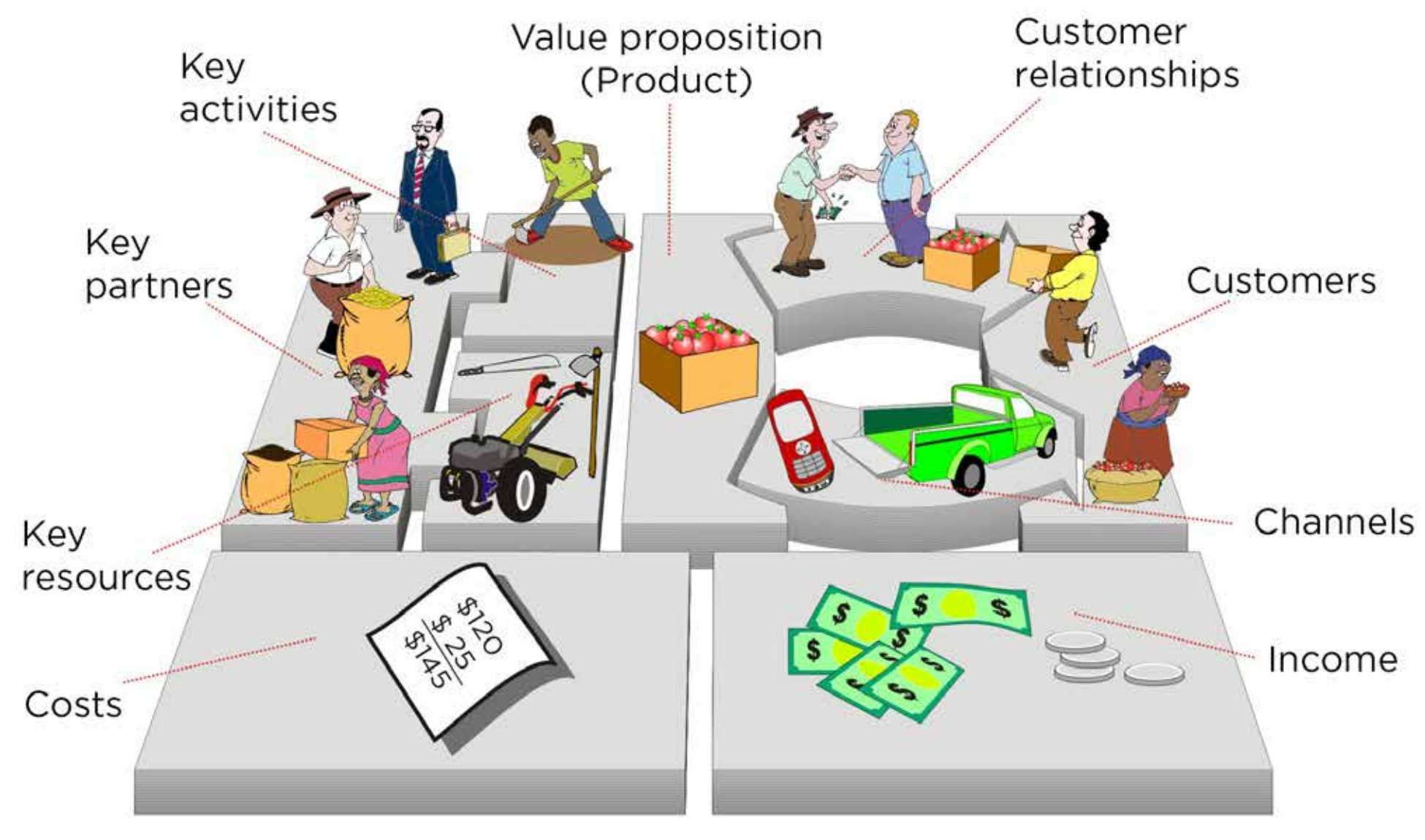
- 3 hours

PREPARATION

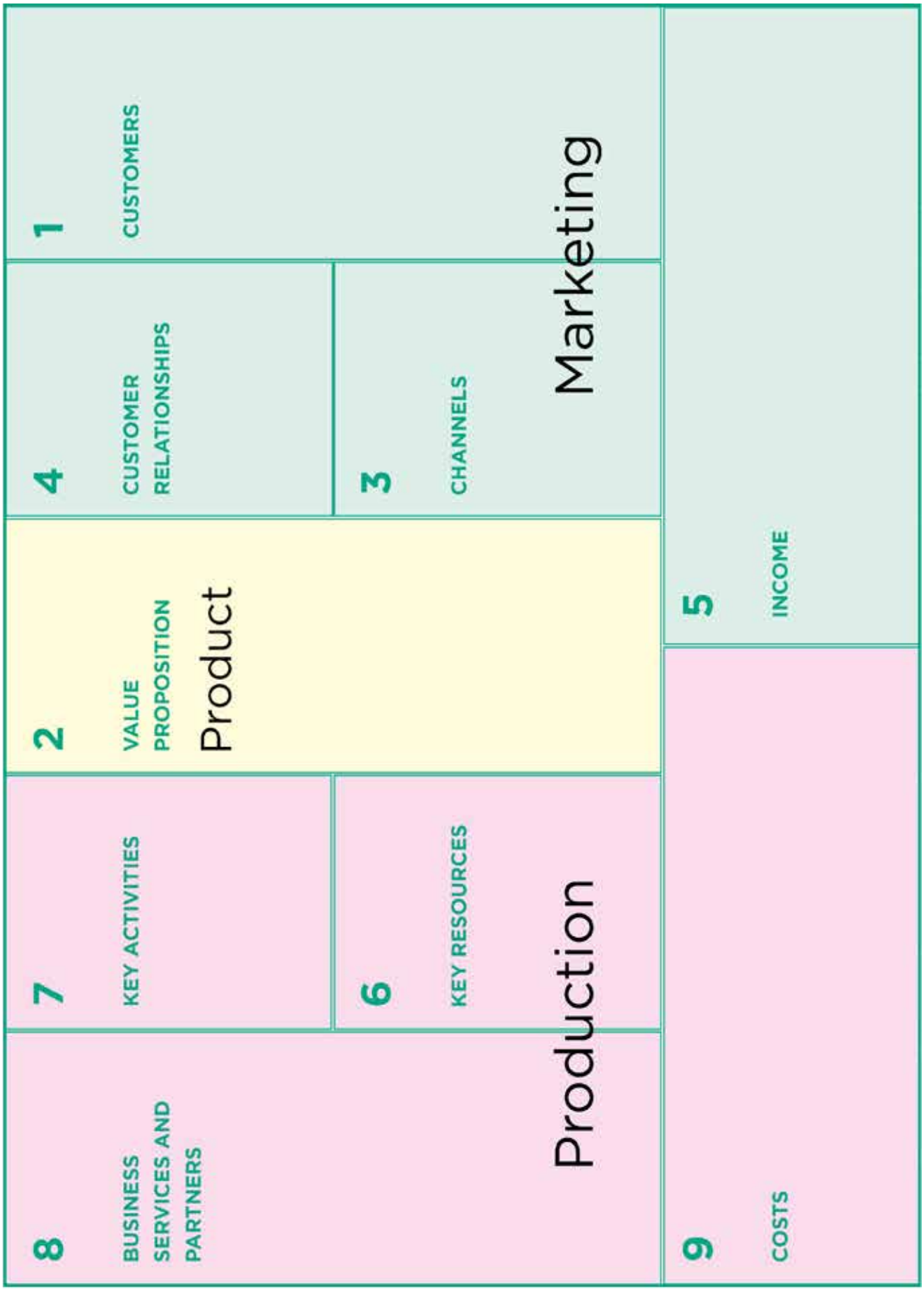
- Draw an empty canvas grid on a large sheet of paper, and label the nine areas.

SUGGESTED PROCEDURE

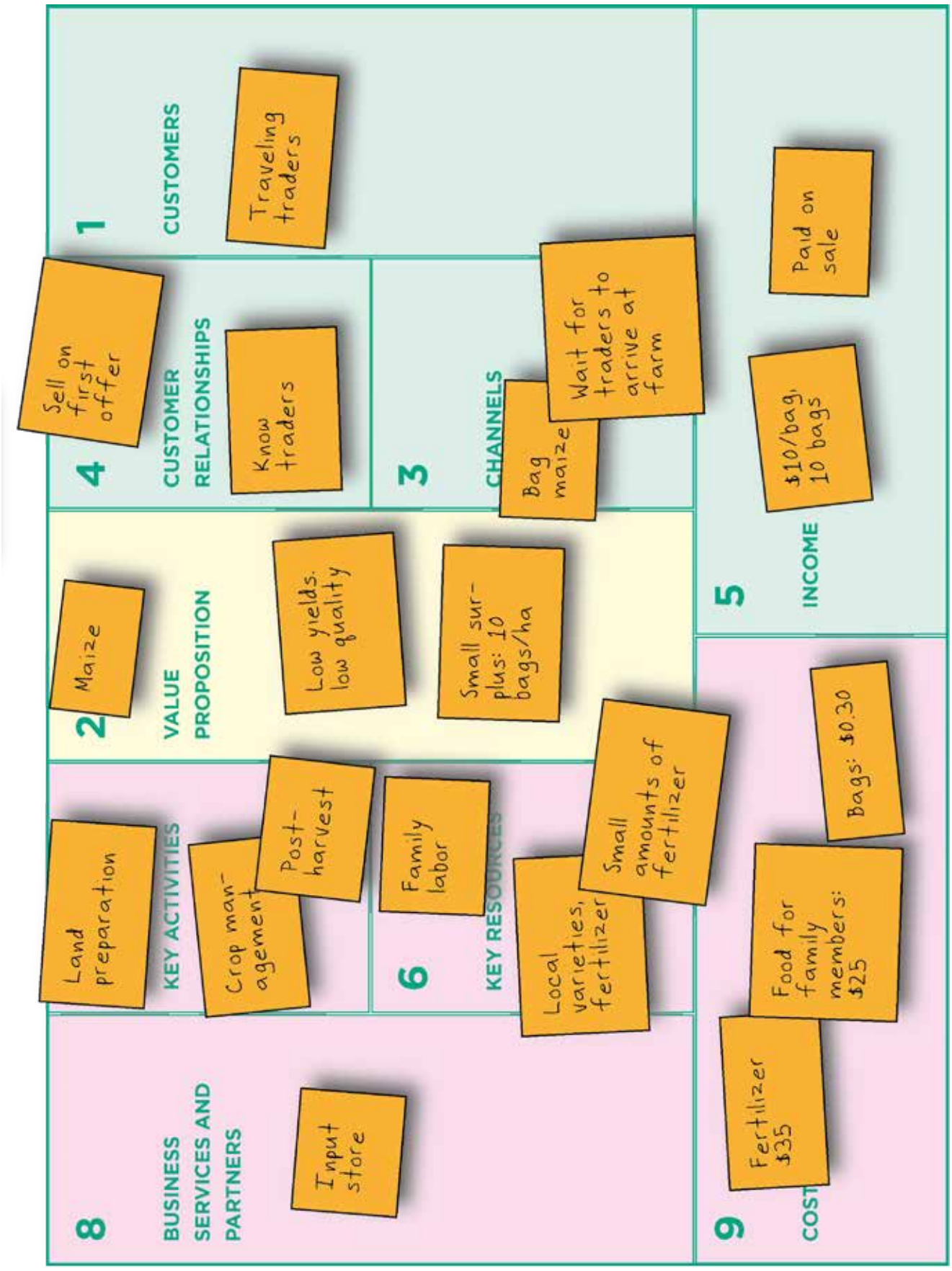
1. **Explain the purpose** of the exercise – to build a business plan based on the information the farmers have already collected and the decisions they have made. Now work with the farmers to fill in Sticky notes for each of the boxes.
2. **Value Proposition (Product):** Ask the farmers to describe the product: the type, volume, quality and so on. Ask them to write these ideas on sticky notes. Put them in the Product area of the canvas (1).
3. **Customers:** Now ask them to describe the Customers: who are they, how many are there, etc? Put this information on sticky notes in the Customers area (2).
4. **Channels:** Move to the Channels (3): make sticky notes on how the farmers deliver the product to the buyers.
5. **Customer relations:** Discuss how the farmers identify potential buyers and how they maintain contacts with them. Put this in the Customer relationships areas (4).
6. **Income:** Ask the farmers about the revenue they earn from the sale. Get specific figures if possible on prices and volumes. Put this information in the Income area (5).
7. **Key Resources:** Moving over to the left side of the canvas, ask the farmers to describe the Key resources (6) they use and the main activities (7). Put these sticky notes in the relevant areas of the canvas.
8. **Key Partners:** On the far left of the canvas, get them to list the main Business services and partners (8).
9. **Costs:** In the Costs area (9), get them to list the various costs they incur in producing and marketing their product.
10. By the end of this process, you should have a canvas with many sticky notes.
11. Sort the information the farmers have gathered into the nine categories represented in the canvas. There are different ways to do this:
12. Check what additional information you need, and ask the farmers to generate it.
13. Write the body of the business plan based on the information you have ordered.


Key activities
Value proposition (Product)
Customer relationships
Key partners
Customers
Key resources
Channels
Costs
Income
$120
$25
$145

Empty business model canvas



Example of completed business model canvas for current situation



LESSON 15. FILLING IN THE BUSINESS PLAN

IN THIS LESSON

After this lesson you will be able to:

- List the elements in a business plan, and describe what goes in each one
- Guide the farmers' group to write the narrative section of their business plan
- Guide the group to write the profitability section of the plan
- Guide the group to review the loan section of the plan.

WRITING A BUSINESS PLAN

Once you have gathered the information you need, writing a business plan should be fairly easy. All you have to do is to put the right pieces of information in the right place. This lesson shows you how to do this. Of course, the process of writing a business plan may bring up questions that the group has not yet thought through. You may have to stop the writing in order to discuss these issues and make the necessary decisions.

Table 50 provides the basic sections of a business plan with the basic information and explanatory questions that are associated with each section. If you have used the business canvas to organize the information, you can now write down the information into the standard format as outlined below.

FARMBOOK SOFTWARE

CRS has developed software called Farmbook to help you create a business plan. You can use this software by visiting $$$ and logging in with your username and password. If you do not have a username or password, or if you have forgotten yours, please contact Helpdesk@crs.org.

MSHIKA FARMERS' GROUP

We will use the example of the Mshika Farmers' Group, to develop a business plan. This is a group of farmers in Tanzania who plan to grow hybrid maize and sell to a large trader in a nearby town. Table 51 gives you some basic information on the farmers, their farm size and the area they have planted to maize, and whether they plan to use hybrid seed and fertilizer to increase their productivity.

You can see the full details of this group in Annex 1.

TABLE 50. BUSINESS PLAN

	SUBSECTIONS	WIZARD QUESTIONS
Introduction	**Project name**	Name of the agro-enterprise team and goal of the business
	Address	What is your contact address
	Phone number	What is your phone number
2. Business organization	**Vision and sales goal**	What is the Vision of the enterprise? Goal = SALES TARGETS
	Describe business	How long has this group been in existence? Is the group registered?
	Name key positions in business	Chair, treasurer, secretary, lead farmer, market agent, other
	Number of members by gender	Number of men and number of women
	Current savings/ bank statement	Latest financial statement, savings levels
3. Value proposition (Product)	**Product / service name**	What product / service will you sell?
	Existing / new	Is this an existing product/ service or new product / service being offered by your group?
	Benefits to buyer	Why is the buyer(s) interested in product / service? What is unique? Is it cheaper, better quality, local, other benefit, or advantage?
4. Marketing strategy Introduction	**Define target market**	Define target market (local, district, national, supermarket)
	Location	How far is this market from the production site (km)
	Market type	Is this an existing market or a new market for your group?
	Describe customers	Type of trader, or processor, who is your buyer?
• Product	Describe key product attributes	Explain attributes of the product (variety, quality, packaging, etc.)?
• Price	Describe price setting	How will the price be established? Offer price, contract price
• Place	How will you get product to market	Sales team, street vending, carry, pick up, cycle, lorry, donkey
• Promotion	How will you promote your product	Voice, phone, through trader, person to person contacts, other
5. Market risks	**Identify key risks to plan**	Indicate key risks to the action plan? And how can they be overcome?
	What risk mitigation plans	Are there ways of minimizing the risks?
6. Business operation plan	**Describe your business flow**	Describe the stepwise activities from production to sale
	Pre-production activities	Pre-production: input procurement, nursery
	Production activities	Production activities: plowing, sowing, weeding
	Postharvest activities	Postharvest activities: drying, sorting storage etc.
	Marketing activities	Marketing activities: buyer linkage, negotiation, transport
	Key partners	Partners may include extension, input supplier, transporter
	Key resources	Key assets include land, labor, staff, crops, processing methods
9. Production costs	**Total material costs**	Calculate costs / season / year
	Total labor costs	Calculate costs / season / year
10. Income streams	**Project sales volumes**	Planned Sales volumes / Give clear units of sale bag – 100kg
	Project sales price	Selling price of product Give dollar conversion, 250 shillings / bag $1 =
	Estimate season income	Estimate seasonal sales
11. Profitability	**Gross margin**	Calculate Gross Margin and Net Income
Fine tuning	**Strategies to increase profit**	What changes can be made to increase Gross Margin?
12. Financial requirements	**Startup capital requirements**	How much capital do you need to start the business?
	Capital funds available	How much capital do you and your members/partners have?
	Capital funds required	How much capital are you lacking?
	Method to raise funds	How can raise the funds that you are lacking?

TABLE 51. LIST OF FARMERS GROWING MAIZE IN THE MSHIKA FARMERS' GROUP

#	FARMER NAME	GENDER	FARM SIZE ACRES	POSITION	TELEPHONE NUMBERS	MAIZE PRODUCTION AREA (ACRES)	USES FERTILIZER	SEED TYPES USED	SAVINGS
1	Reginald Mengi	Male	3		27 394 9656	2	1 bag/ acre	Hybrid	30
2	Jim Tembo	Male	4	Chairman	27 853 6923	3	1 bag/ acre	Hybrid	30
3	Julius Kassanga	Male	5		27 287 8927	3	1 bag/ acre	Hybrid	50
4	Euphrase Kezilahabi	Male	3		27 889 3323	2	1 bag/ acre	Hybrid	10
5	Salma Kikwete	Female	7	Secretary	27 853 7832	4	1 bag/ acre	Hybrid	50
6	Leonard Shayo	Male	4		27 888 2352	2	1 bag/ acre	Hybrid	30
7	Flaviana Matata	Female	16	Treasurer	27 999 2783	4	1 bag/ acre	Hybrid	200
8	Marcus Chengula	Male	4	Market agent	27 079 2132	3	1 bag/ acre	Hybrid	30
9	Livelong Nyerere	Female	1	Lead Farmer	27 866 5000	1	1 bag/ acre	Hybrid	50
	Totals		47			24			

PART 1: OUTLINE OF THE BUSINESS PLAN

This part consists largely of text (it is sometimes called the "narrative" part of the plan). It consists of five sections:

1. Introduction
2. Business organization
3. Product
4. Marketing strategy
5. Risks
6. Business operation plan

It gives details about the goal and structure of the organization, the product the farmers have chosen, and details of the market strategy.

The text should be short, simple, and to the point. You can use subheadings headings and bullet points rather than trying to make complete sentences.

1 INTRODUCTION

This section gives basic data and contact details for the group (Table 52).

TABLE 52. BUSINESS PLAN 1: INTRODUCTION

ITEM	EXPLANATION	EXAMPLE
Organization	Name of the farmers' group	Mshika Farmers' Group
Type of enterprise	Product and market of the agroenterprise	Production of maize to sell to Mrs Kasese a large trader in Himo town
Production cycle	Dates of start and end of the production cycle	March–Sept (year)
Address	What is your contact address	Sanya Juu village, Hai District, Kilimanjaro Region, Tanzania
Phone number	What is your phone number	+255 123 456 789

2 BUSINESS ORGANIZATION

This section describes the farmers' group and how it is organized (Table 53).

3 PRODUCT

This section focuses on the product that the farmers plan to grow and sell (Table 54).

TABLE 53. BUSINESS PLAN 2: BUSINESS ORGANIZATION

ITEM	EXPLANATION	EXAMPLE
Vision and sales goal	What is the vision and sales goal or target for the enterprise?	To raise incomes of members by producing and jointly marketing our maize crop. Sell 25 metric tons of maize to known buyer
Organization description	How long has this group been in existence?	The group was founded in 2008. It has 9 members, who farm at total of 47 acres of land.
	Why has this group been constituted?	The group was formed to learn about and manage pests and diseases of maize. The members have come to recognize that by marketing as a group, they can better supply the market for their products, and earn more than by selling individually.
	What are the basic values of the group?	The group has a strong belief that by working together, they can solve their problems. In existence for over 10 years, the group has a smoothly functioning management based on mutual trust and consensus.
	How many men, how many women members?	The group has 9 members: 6 men and 3 women.
Legal status of organization	What is the legal format of the organization?	Farmers' group registered with the authorities in Hai District. It is a member of the Muvimaha Society (a second-level farmers' association).
Key positions in the organization	Give the positions and the names of the people in them	Chairman: Jim Tembo Secretary: Salma Kikwete Treasurer: Flaviana Matata Lead farmer: Livelong Nyerere Market agent: Marcus Chengula
Current savings	Latest financial statement, savings levels	The group has total savings of $440, deposited in an account with the Postal Bank, Hai.

TABLE 54. BUSINESS PLAN 3: PRODUCT

ITEM	EXPLANATION	EXAMPLE
Product type	What product will you sell?	TAN 250 hybrid maize
Existing or new	Is this an existing product or new product for your group?	The farmers already grow this type of maize.
Benefits to buyer	Why is the buyer interested in your product?	Maize is in good demand in the market and commands a high price.
Trends in demand	Are there trends or changes in buyer preferences that favor the sale of the product?	In Kenya, the maize is sold by the millers.

4 MARKETING STRATEGY

Introduction
This subsection introduces the market for the farmers' product (Table 55).

Customer relations
This subsection shows how the farmers' group will maintain relations with the customers (Table 56).

Product
This subsection provides details about the product (Table 57).

Price
This subsection provides information on the product's price (Table 58).

Place
This subsection describes where the group will sell the product and how it will deliver it (Table 59).

Promotion
This subsection describes any promotional or advertising activities the group plans, and how it communicates with the customers (Table 60).

TABLE 55. BUSINESS PLAN 4.1: MARKETING STRATEGY: INTRODUCTION

ITEM	EXPLANATION	EXAMPLE
Target market	What is the target market (local, district town, major national market, international market, supermarket)	A large trading organization, Kasese Traders of Himo, is interested in purchasing maize on contract at a fixed price in the last year they paid ($30 per 100 kg bag) for supply to millers.
Location	How far is this market from the production site?	The maize will be delivered to Himo, 100 km from Sanya Juu.
Market type	Is this an existing market or a new market for your group?	This is a new market for the group.
Alternative markets	Do you have alternative markets for surplus product, or if the target market fails?	Alternative markets based on last year's prices, including delivery costs were:- Traveling traders ($24 per bag) Local traders ($28 per bag). Kasese Traders in Hai ($30 per bag), Maize that was stored for 9 months after harvest sold for $35 per 100 kg bag. All farmers used part of their production for home consumption, most retained 10 bags for the family.
Customer type	What type of customers are you aiming to supply?	Large traders such as Mrs Kasese, who supplies flour millers in Dar es Salaam and Kenya.
Main competitors	Who are the main competitors in this market?	Other smallholder farmers, large farmers, importers, traders
Market objective	Which is your general marketing objective?	To maximize income while keeping risks to a minimum.

TABLE 56. BUSINESS PLAN 4.2: MARKETING STRATEGY: CUSTOMER RELATIONS

ITEM	EXPLANATION	EXAMPLE
Customer relations	Describe the types of relationships you have with your buyers or customers	Handshake with Kasese Trade rs in coordination with the Muvimaha Farmers' Association.
Sales method	Direct sales, contracts, sold as seen	Payment on delivery and after quality tests by Kasese Traders. Payment may be in cash or by check into group account at Postal Bank. 1% premium for payment by check.

TABLE 57. BUSINESS PLAN 4.3: MARKETING STRATEGY: PRODUCT

ITEM	EXPLANATION	EXAMPLE
Key product attributes	What are the attributes of the product (variety, quality, presentation, packaging, etc.)?	TAN 250, large seeded, uniform seed size with no mixture of varieties, clean, less than 5% impurities, 12% moisture.
Product differentiator	How will the product be different from competitors' products?	The Mshika Farmers' Group will weigh and check the quality of all bags before delivery. The maize will be delivered in new 100 kg bags, labeled with the group name.

TABLE 58. BUSINESS PLAN 4.4: MARKETING STRATEGY: PRICE

ITEM	EXPLANATION	EXAMPLE
Describe price setting	How will the price be established?	Due to the changing price of maize, both parties agreed to comes to terms of sales price within one week of the time of sale, based on market conditions.
Describe price strategy	What strategy or action plan will you use to achieve your price objective?	The group has various alternatives if the buyer fails to purchase the maize at the agreed price, including sale in Himo or Hai markets, or storage in the group's warehouse until local traders offer a higher price.

TABLE 59. BUSINESS PLAN 4.5: MARKETING STRATEGY: PLACE

ITEM	EXPLANATION	EXAMPLE
Market transport	Describe flow to product to customer? Sales team, street vending, mail, wet markets, internet	The group will transport the bags of maize to Kasese Traders in Himo by hiring a pickup belonging to the Muvimaha Society.

TABLE 60. BUSINESS PLAN 4.6: MARKETING STRATEGY: PROMOTION

ITEM	EXPLANATION	EXAMPLE
Customer awareness	How are you going to communicate the merits of your product to potential buyers?	The group established contact with Kasese Traders via the Hai District Agricultural and Livestock Development Office. Further support will be provided by Faida Market Linkages, a company that promotes marketing by farmers' groups.
Describe promotional strategy	What strategy or action plan will you use to achieve your 'promotion' objective?	The farmers agreed to make regular visits to the markets and remain in telephone contact with their preferred buyers.

5 *RISKS*

This section covers the major risks lively to be encountered in production and marketing, and how the group plans to deal with them (Table 61).

TABLE 61. BUSINESS PLAN 5: RISKS

ITEM	EXPLANATION	EXAMPLE
Identify key risks to marketing plan	What are the problems or constraints to undertaking the action plan? And how can they be overcome?	Pests: There are a number of foliar diseases and pests that attack maize. Drought: The region is prone to regular drought cycles. Prices: Market prices fluctuate widely according to demand and supply. Side-selling: Farmers often agree to sell with the group, but when it comes to harvest, some sell outside of the group.
Mitigation plan	Are there ways of minimizing the risks?	Pests: The group uses a combination of integrated pest management approaches to manage the large grain borer. Drought: The farmers are growing TAN 250, which is a drought-resistant variety. They are also testing other varieties with the maize research team at Selian Agricultural Research Institute. Prices: Market prices fluctuate widely, but Kasese Traders have said they will pay a $4–5 premium on local traders' prices. Side-selling: Each farmer will undertake to deliver an agreed quota of maize to the group. The group has been in existence for over 4 years, and is strong and cohesive. Problems with side-selling are not anticipated.

6 *BUSINESS OPERATIONS OUTLINE*

This section gives details on how the enterprise will operate, from pre-production, production, processing, and marketing activities. It also describes the partners or business services the group will use, and the resources (such as land and capital) that it will draw on (Table 62).

TABLE 62. BUSINESS OPERATIONS OUTLINE

ITEM	EXPLANATION	EXAMPLE
Describe your business flow from production to sale	Describe the activities that make your plan operational	
Describe pre-production activities	Pre-production: input procurement, nursery	The group will coordinate maize production among its members, allocating a production quota to each farmer based on his/her acreage available and willingness to produce maize. The farmers will use hybrid seed bought from the local input suppliers at the market in Sanya Juu. If they do not own enough land, they will rent it from neighbors.
Describe production activities	Production activities: plowing, sowing, weeding	Production activities include plowing (twice), sowing, fertilization and weeding (twice). Farmers are skilled in all of these operations. The main way to increase yields is by using hybrid seed and applying compound fertilizer (NPK 10:10:10). About half the labor required comes from the farmers' own family members; the rest is from hired workers.
Describe postharvest activities	Postharvest activities: drying, sorting storage etc.	After the maize is harvested, it will be dried, threshed and winnowed and put into new nylon sacks. Each sack holds 100 kg.
Describe agro-processing activities	Processing methods and services required for transformation	None
Describe marketing activities	Marketing activities: buyer linkage, negotiation, transport	Each farmer will deliver the agreed amount of maize to the group's collection point in Sanya Juu. There the sacks will be weighed and loaded onto a pickup hired from Muvimaha. The Muvimaha driver and a delegation from the group will deliver the sacks to Kasese Traders in Himo.
Describe key partners	Partners may include extension, input supplier, transporter	Market in Sanya Juu (seed) Selian Agricultural Research Institute (production and pest-control advice) Muvimaha Society (marketing, fertilizer, transport) Faida Market Linkage (marketing advice) District Agriculture and Livestock Development Office (extension advice) Kasese Traders (buyers)
Describe key resources	Key resources include land, labor, staff, crops, processing methods	Land: owned or rented Labor: family or hired Seed: bought Fertilizer: Bought using loan

PART 2: PROFITABILITY ANALYSIS

This part consists largely of tables showing how to calculate costs, income, and profit. You can calculate this information using pencil and paper or a spreadsheet. Or you can use the profitability calculator, part of CRS's Farmbook software.

It consists of three sections:

7. Costs
8. Income
9. Profit and loss analysis.

Many of the costs and incomes depend on the area of crops planted. So it is easiest to calculate the costs, income and profit per acre or hectare, then to multiply the amounts by the number of acres or hectares cropped. That makes it easy to work out the costs, income and profit for farmers with different amounts of land.

For livestock, you can calculate the amounts per animal, and then multiply by the number of animals kept.

You can do the financial calculations for the farmers' group as a whole. Or you can do the calculations for each individual farmer, and then add them together to get the total for the group. This takes more time and requires information on each farmer, but produces more useful calculations.

7 COSTS (WITH AND WITHOUT INCLUDING FAMILY LABOR)

This section provides details of the costs of production and marketing. These are divided into the costs of labor and services, and of materials and other costs (Table 63). This example is for a 1-acre plot with only hired labor costs being considered.

8 INCOME

This section shows how much money the group expects to earn by selling the product (Table 64).

9 PROFIT AND LOSS ANALYSIS

This section calculates the profit (or loss) by comparing the costs and the income. The profit is called the "gross margin" (Table 65). The data in the unshaded column indicates the gross margin when only hired labor is considered. The data in the shaded column indicates the lower gross margin when all labor, hired and family labor is included.

FOOD SECURITY AND PROFITABILITY

In the case of the maize farmers, they must both grow maize for food and sell surplus to the market. As discussed in Chapter 10, the farmers need to produce at least 10 bags of maize for their annual family needs. This means that we must remove the first 10 bags of production from the income level. As shown in Table 64. The analysis shows that maize is only profitable when farmers grow more than two acres of maize.

TABLE 63. BUSINESS PLAN 7: COSTS

EXPLANATION	EXAMPLE DATA MAIZE PLOT 1 ACRE COSTS		
Materials and other costs			
Calculate materials costs of production and marketing per unit of production (e.g., per acre) for one season or year. For durable items, remember to divide the cost by the number of years the item is expected to last. Example: a plow costs $100 but will last 10 years, so the cost per year = $10	**Consumable materials**	**$/acre**	**$/acre**
	Seed	20	20
	Fertilizer	40	40
	Sacks x 15	15	15
	Transport 15 bags to market	7.5	7.5
	Market fees 15 bags	7.5	7.5
	Total	**90**	**90**
	Durable items		
	Plow	100	10
	Hoes	3	3
	Machete	6	6
	Baskets	1	1
	Store	15	15
	Phone	5	5
	Total	**40**	**40**
Labor costs		**Hired labor**	**Hired and family labor**
		$/acre	**$/acre**
Calculate labor costs of production and marketing per unit of production for one season or year	Plowing	4	8
	Second plowing	4	8
	Planting	0	6
	Weeding	2	10
	Second weeding	2	10
	Harvesting etc.	4	8
	Drying, sorting etc.	0	12
	Marketing	0	8
	Total	**16**	**70**
Total costs			
Calculate the total of labor and services + materials and other costs		**$/acre**	**$/acre**
	Consumable materials	90	90
	Durable materials	40	40
	Labor	16	70
	Total	**146**	**200**

TABLE 64. BUSINESS PLAN 8: INCOME

ITEM	EXPLANATION	EXAMPLE	
Project sales volumes	Planned sales volumes Give clear units of sale (e.g., 100-kg bags)	Yield per acre, 100-kg bags	15 bags
		Weight of 1 bag	100 kg
		Total weight per acre for sale	1,200 kg
Estimate season income	Estimate seasonal sales	Price per bag (estimate)	$28
		Production/acre	15 bags
		Total income per acre	$420

* For a 1-acre plot.

TABLE 65. BUSINESS PLAN 9: PROFIT AND LOSS ANALYSIS

ITEM	EXPLANATION	EXAMPLE		
Gross margin	Calculate gross margin These calculations show the effect on gross margin when only hired labor is considered, and the reduction in gross margin when family labor is included		Hired labor	All labor
			$	$
		Total income per acre	420	420
		Total costs per acre	146	200
		Gross margin per acre	274	220

TABLE 66. BUSINESS PLAN 9: PROFIT AND LOSS ANALYSIS INCLUDING FOOD SECURITY

ITEM	EXPLANATION	EXAMPLE			
Project sales volumes	Planned sales volumes Give clear units of sale (e.g., 100-kg bags)	Plot size	1 acre	2 acres	3 acres
		Yield per acre, 100 kg bags	15	30	45
		Bags retained on farm for food security	10	10	10
		Number of 100 kg bags for sale = yield – food security	5	20	35
Estimate season income	Estimate seasonal sales (not including family food)	Estimated price per bag, $	28	28	28
		Total income per plot size	140	560	980
Gross margin	Calculate gross margin	Total costs per plot size, $	146*	312*	478*
		Gross margins by plot size, $	-6	248	502
Strategies to raise profit	What changes can be made to increase gross margin?	Increase planted area Plant a second crop during the short rains			

* Includes hired labor costs only.

TABLE 67. EXPECTED REVENUES PER FARMER BASED ON LAND AREA AND ESTIMATED COSTS AND SALES PRICE*

FARMERS	MAIZE PRODUCTION AREA	BAGS PRODUCED	BAGS FOR HOUSEHOLD	BAGS FOR SALE	EXPECTED REVENUE	MATERIAL COSTS	HIRED LABOR	TOTAL COSTS	ESTIMATED PROFIT
					$	$	$	$	$
Reginald Mengi	2	30	10	20	560	260	32	292	268
Jim Tembo	3	45	10	35	980	390	48	438	542
Julius Kassanga	3	45	10	35	980	390	48	438	542
E. Kezilahabi	2	30	10	20	560	260	32	292	268
Salma Kikwete	4	60	10	50	1400	520	64	584	816
Leonard Shayo	2	30	10	20	560	260	32	292	268
Flaviana Matata	4	60	10	50	1400	520	64	584	816
Marcus Chengula	3	45	10	35	980	390	48	438	542
Livelong Nyerere	1	15	10	5	140	130	16	146	-6
Totals	24				7560	3360	384	3744	3816

* Assumptions:
Each family has retained ten bags of maize for food
Labor costs include hired labor only

PART 3: LOAN ANALYSIS

The final section of the business plan gives details of any loans or credit that the enterprise wishes to apply for. You should complete this part of the analysis even if a group does not apply for a loan from a bank, a microfinance institution or another lender (such as a money lender or development project). Virtually all enterprises borrow some money to pay for the business costs Moreover, calculating credit needs will help farmers to understand that borrowing money has a cost which will cut into their profit.

10 FINANCIAL REQUIREMENTS

As with the financial data part, you can do the loan calculations for the whole group or for each farmer individually. A bank or microfinance institution may help the group do the loan calculations.

This section shows how much money the group members need to borrow, and calculates the costs of their loans (Table 68).

An important aspect of the loan information, as shown in Table 68, is that by taking a loan, the farmer will need to pay a loan fee (see cost of the loan in column E). This cost of borrowing money reduces the profitability of the enterprise. Compare the values in column C and column H to observe the reduction in profit caused by the borrowing fee. Any savings that a farmer can contribute to the enterprise costs, will reduce their need for borrowing and this will mean that they will retain a higher proportion of their income as profit. Savings are shown in column D. Using savings is therefore a more effective means of increasing profit than relying solely on loans.

TABLE 68. BUSINESS PLAN: FINANCIAL REQUIREMENTS

FARMERS	MAIZE PRODUCTION AREA	FULL PROJECTED COSTS	PROJECTED PROFIT	SAVINGS	LOAN AMOUNT IF BORROWER NEEDS FULL FUNDS*	INTEREST @ 10% X 4 MONTHS	TOTAL TO REPAY	PROFIT AFTER LOANS REPAID
		$	$	$	$	$	$	$
	A	B	C	D	E	F	G	H
Reginald and Bibi Mengi	2	292	268	30	262	104.8	366.8	163.2
Jim Tembo	3	438	542	30	408	163.2	571.2	378.8
Julius Kassanga	3	438	542	50	388	155.2	543.2	386.8
E. Kezilahabi	2	292	268	20	272	108.8	380.8	159.2
Salma Kikwete	4	584	816	50	534	213.6	747.6	602.4
Leonard Shayo	2	292	268	30	262	104.8	366.8	163.2
Flaviana Matata	4	584	816	150	434	173.6	607.6	642.4
Marcus Chengula	3	438	542	30	408	163.2	571.2	378.8
Livelong Nyerere	1	146	-6	50	96	38.4	134.4	-44.4
Totals	24	3504	4056	440	3064	1225.6	4289.6	2830.4

* In most cases a farmer will not need to borrow the full costs of the enterprise.

QUIZ 15

Answers at the end of the guide.

1. Put these sections of the business plan in the correct part of the plan and the correct order

SECTION	PART
1. Income streams	A: Part 1: Outline of the business
2. Business organization	B: Part 2: Financial data and analysis
3. Financial requirements	C: Part 3: Loan analysis
4. Risks	
5. Business operation plan	
6. Profit and loss analysis	
7. Marketing costs	
8. Introduction	
9. Product	
10. Marketing strategy	

2. Match the information with the correct section of the business plan

INFORMATION	SECTION
A. Name of the organization: Mshika and Mwamuko Farmers' Group	1. Marketing strategy
B. The group was founded in 1999. It has 15 members, who farm at total of 69 acres of land	2. Introduction
C. Maize is in good demand in the market and commands a high price	3. Product
D. The group will transport the maize to Burubuli Traders in Himo by hiring a pickup belonging to the Muvimaha Society	4. Business organization

3. Put the following calculations in the order in which you should do them

A. Calculate the gross margin

B. Calculate the loan amount required

C. Calculate the cost of the loan

D. Calculate the costs of production and marketing

E. Calculate the income from selling the product

4. Where do the names of the chairperson and other group leaders go in the business plan?

A. In the Introduction

B. In the "Business organization" section

C. In the "Marketing strategy" section

D. It is not necessary to include this information in the business plan

5. "Payment on delivery and after quality tests by Kasese Traders." Where does this statement go in the business plan?

A. In the Introduction

B. In the "Business organization" section

C. In the "Marketing strategy" section

D. It is not necessary to include this information in the business plan

6. "The group will transport the bags of maize to Kasese Traders in Himo by hiring a pick-up belonging to the Muvimaha Society." Where does this statement go in the business plan?

A. In the Introduction

B. In the "Business organization" section

C. In the "Marketing strategy" section

D. It is not necessary to include this information in the business plan

EXERCISE 15. FILLING IN THE BUSINESS PLAN

This exercise leads farmers through the various steps in completing a business plan.

Make sure that the farmers do as much of the work as possible. That way they will learn how to put together a business plan by themselves.

OBJECTIVE

After this exercise the participants will be able to:

- Write a business plan for the group's enterprise.

EQUIPMENT NEEDED

- Large pieces of paper, marker pens, large calculator
- Optional: Computer with word-processing and spreadsheet software or the Farmbook software
- Printer, paper

EXPECTED OUTPUTS

- A completed business plan for the group

TIME REQUIRED

- The time to write a business plan depends upon the level of detail and complexity of the plan and the amount of information that is available. If the information has been gathered, the field agent should plan for 1 to 2 days to complete this task.

PREPARATION

- Bring the results of previous exercises in Step 4.

SUGGESTED PROCEDURE

1. Bring together a small group of farmers who have been selected to draw up the business plan. This will probably include the group chairperson, secretary, treasurer, production coordinator, and marketing coordinator.
2. Using large sheets of paper, go through the outline of a business plan and explain briefly what goes in each of the 10 sections.
3. Ask the group to state the information that should go into each section of the business plan. Summarize this on the large sheets of paper, and type it into the computer using a word-processor and spreadsheet or the Farmbook software.
4. If there is uncertainty or discussion about certain items, mark them and make sure they are discussed and decided on by the larger group.
5. When the plan is finished, call a meeting of the larger group to discuss and refine it.
6. Discuss how the plan will be used – to guide the group's activities, to obtain support from business services, and to obtain a loan from a financial institution.
7. If you are using the Farmbook application to develop the business plan, make sure that a hard copy of the profit analysis and business plan narrative is given to the farmer group for their records and actions.

LESSON 16. PUTTING THE BUSINESS PLAN INTO EFFECT

IN THIS LESSON

After this lesson you will be able to:

- Describe what to do with a business plan after it has been prepared
- Develop an implementation plan
- Show farmers how to keep a record of their costs
- Show farmers how to assess their performance against targets.

Once the farmers have finished the business plan, it is time to put it into practice. This Lesson discusses three ways to do this:

- Using the business plan as a management tool
- Developing an implementation plan
- Maintaining records of costs.

USING THE BUSINESS PLAN AS A MANAGEMENT TOOL

The business plan provides a guide for the direction of the enterprise. It reminds the farmers and others of the enterprise's goals and directions. It is one of group's key tools in managing its activities.

Get the plan approved. As a field agent, you may need to submit the plan to your supervisor and get approval for it – for example, as part of the reporting process in your organization or in order to obtain further support for the farmers' group.

If your supervisor has comments on the plan, discuss these with the farmers and consider revising the plan if necessary. Outsiders can often give valuable comments about business plans because they have a different perspective or have experience with similar situations elsewhere.

Develop an implementation plan. An implementation plan is a list of activities that have to be done to put the business plan into effect. It shows who is responsible for each activity and when it will be done. We discuss the implementation plan in more detail below.

Decide on production and marketing targets. If you have not already done so, you should help the group plan how much each individual farmer will produce and when he or she should deliver it. See Exercise 13d for how to do this.

Use as a guide for the enterprise. The business plan is one of the most important documents that the group has. (Other important documents include the group's constitution and the accounts.) Like the constitution and the accounts, the business plan guides the group in what it does. Each member should be familiar with the outlines of

the plan, so he or she knows what the group aims to do and what his or her role is. That is why it is important for every member to understand and agree to the plan.

The business plan will be the basis for many other decisions: how much of which crop or animal each farmer grows, who the customers are, and what the production and marketing arrangements will be. It may even form part of legal agreements, such as a contract to sell to a particular buyer, or a loan agreement with a bank.

Use the business plan to borrow money. Most banks and microfinance institutions want to see a business plan before they will lend money. Submitting a well-prepared business plan shows these financial institutions that the group is serious and is likely to be creditworthy. The financial institution may require some extra information, but this should be easy to gather if you already have prepared a business plan. You should work with both the farmers and the financial institution to make sure that the loan is suitable for the group's needs and that both the group and the financial institution understand the constraints and risks involved.

Use the business plan to gather support from business services. Other services, such as input suppliers, transporters, major customers, and extension services, may also ask to see a business plan. A credible business plan is a valuable tool to convince such services that the group deserves their support and can make the most of a partnership.

Revise the business plan. Once the business plan is agreed, try not to change it unless it is necessary. Some adjustments may be needed but should be made with discussion and agreement of all concerned. Major changes are best left until the end of the production and marketing cycle. Many business plans stay largely the same for each business cycle or season. Some business plans can remain as they are for several years, with some sections updated to reflect production, cost, and price changes.

DEVELOPING AN IMPLEMENTATION PLAN

The business plan describes what the farmers' enterprise plans to do in general terms. But it does not go into details about how to get it done. It does not say who will plant what area of crops and at what time. It does not say who will open a bank account for the group, or who will buy the inputs. The implementation plan covers such details.

The implementation plan is a list of the activities that need to be done, based on the business plan. For each activity, it says who is responsible for doing it and when it has to be done. Table 69 shows a plan used by a farmers' group in Uganda to supply a fast-food restaurant with year-round potatoes.

The group can use the final column ("Completed") in the table to keep track of when a particular task was done and to note any problems that arose.

A normal implementation plan is divided into sections for pre-production, production, postharvest, and marketing. But you can add more sections if necessary. The example in Table 69 has additional sections for "Initial market studies" and "Business organization."

See Exercise 16 for how to prepare an implementation plan.

The group may find it useful to develop implementation plans for each stage in the production and marketing cycle. Table 70 gives an example of a plan for marketing maize.

TABLE 69. EXAMPLE OF AN IMPLEMENTATION PLAN

Implementation plan for the production of potatoes by Nyabyumba Farmers Group (NFG) for sale to Nando's fast food restaurant, Uganda

WHAT	WHO	WHEN	COMPLETED
Initial market studies			
Agree on buying conditions, and organize transport	NFG (John)	2 May and ongoing	
Develop and maintain contact	John, NGO (Paul)	Weekly from 5 May	
Identify market outlets for off-size products and for rejects	John and Sydney	May–Jun	
Business organization			
Negotiation with buyer and to finalize contract	Sydney and Joan	10 May	
Register with local authorities	Mary	2 Jun	
Open a bank account	Mary	10–12 Jun	
Establish a group savings fund	Mary, Jane	15 Jun	
Train leaders and group members on enterprise management	John, Sydney, Mary, NGO, Research	Jun–Oct	
Pre-production			
Ensure inputs are available	NFG management	Jan	
Assign record keepers for costs	NFG management	Jan	
Ensure seed supplies are ready	NFG management Research	2 May	
Prepare fields for planting	NFG management, NGO	5 May and ongoing	
Production			
Stagger planting schedule	NFG members, NGO	10 Jul	
Adjust planting spacing practices to produce larger potatoes	NFG members, Africare, Research	10 Jul	
Train group members on ware potato management techniques	NFG members, Africare, Research	15 Sep–Nov	
Arrange with research on seed of identified varieties for Nando's	NFG management, Research	12 Sep and ongoing	
Multiply desired varieties	NFG members	10 Oct	
Identify and implement micro-irrigation on uplands	NFG management, Africare	2 Dec and ongoing	
Postharvest			
Purchase weighing scale	NFG management	3 Jul	
Rent warehouse for storage	NFG management	25 Jul	
Train group members on sorting, grading, and packing procedures	NFG members, Africare	20 Jul and ongoing	
Marketing			
Arrange transport and delivery first consignment to buyer	John		
Review quality feedback from buyers	NFG John, NGO (Paul)		
Supply off-size products and rejects to secondary markets	John and Sydney		

TABLE 70. EXAMPLE OF TARGET SETTING FOR MARKETING

	TARGETS	ACTIVITIES
Volume	200 50-kg bags, individually weighed	Each of 10 farmers to deliver 20 bags Weighing at collection center
Date	30 April, 09:00	Harvesting, dehusking and hulling by 15 March Drying at own farm Deliver to center by 28 April Pick up by trader with own truck All members to be present for loading and to witness delivery
Quality, grade	14% moisture, clean grain, no stones	Dry for 3 days in own farm Random testing for moisture and cleanliness at collection center Reject any sacks with high moisture
Place	Village collection center	Farmers deliver to center Stack bags after inspection in storeroom
Packaging	Clean gunny sacks, labeled with grade, group name and village	1 April: Group warehouse coordinator buys sacks 2–15 April: Farmers pick up empty sacks from collection center 15–28 April: Farmers fill sacks with grain and transport to collection center. Warehouse coordinator weighs sacks, checks for moisture and cleanliness, and gives farmers receipt.
Payment	Payment to group bank account	30 April: Trader signs receipt of bags at handover 30 April: Group treasurer calculates amount due to each member and deducts loan repayments 5 May: Trader transfers funds to group account 7 May: Treasurer and secretary withdraw cash from bank and pay individual members

MAINTAINING RECORDS OF COSTS

Keeping a record of the farmers' actual costs is important to check the estimates made earlier, and to enable the farmers to manage their enterprise effectively. The farmers should keep records of materials and labor costs.

Ideally, all the farmers should keep their own records. But that may be impractical, at least at first. Instead, identify two to three farmers to keep records. These may be the same farmers who provided the financial information in Lesson 10: a farmer with a small amount of land, one with an average amount, and one with a larger farm. It is a good idea to have records from several farmers in case one or two make mistakes or forget to write an expense down.

Give these farmers a notebook with tables to record the costs of consumable materials (Table 71), durable items (Table 72) and labor (Table 73). Ask them to make a note of their payments and labor use throughout the season. Ask them to include any costs that may have been forgotten in the previous estimates.

Review the figures once a month to make sure the farmers are recording them accurately.

The next step uses the information gathered to analyze the profitability of the enterprise.

CONCLUSION

The process of preparing a business plan and implementation plan helps to build a sense of common purpose within the farming group. This process also starts to build relationships between the farmers and their service providers. Making these plans helps the field agent and project team to have a clearer understand of the groups' capacity, technology use, and planned production levels. Through this process the field agent will also have gained a lot of useful marketing experience, learning how to gather market information, learning about market demand, production activities, costs of the production and marketing, and information about loans and how they will be repaid. The field agent will also be able to use this information when working with their supervisors in making decisions on what support is required from the NGO and what the community is able to contribute.

The issue of access to business services will also be part of these discussions and the field agent and project managers should assess what needs to done in terms of supporting the farmer agro-enterprises and how much support is required to support linkage to the local business services. The field agents and project managers should also discuss the prospects of sustaining the proposed business plan. The key questions being, **Is the agroenterprise a good investment for the community?** Can they afford to do this when the field agent leaves? Is this a good investment for the donor?

Once, the implementation plan has been completed, discussions are over, and the farmers need to put their agroenterprise plans into action.

The field agent now needs to shift from planning mode to monitoring. The field agent should check production performance and follow up with the farmer group leadership to find out if the group members are following the plan. Are there any problems in implementation, have farmers planted the areas they agreed to? Are the fields crop stands good? Are fields being maintained? Is there enough water to get the crop from sowing to harvest?

TABLE 71. FORM FOR RECORDING CONSUMABLE MATERIALS COSTS

Product type		**Currency**			
Land area		**Currency per $**			
DATE	**MATERIALS**	**UNITS**	**QUANTITY**	**PRICE PER UNIT**	**COST**
		Eg, kg, bags	A	B	A × B
Pre-production					
	Tools				
	Land rental				
Total pre-production costs					
Production					
	Seed				
	Fertilizer				
	Agrochemicals				
Total production costs					
Postharvest					
	Bags				
Total postharvest costs					
Marketing					
	Transport to market				
	Market fees				
	Communications				
	Other				
Total marketing costs					
Total consumable materials costs					
Total consumable materials costs ($)					

TABLE 72. FORM FOR RECORDING THE COST OF DURABLE ITEMS

Product type		**Currency**			
Land area		**Currency per $**			
ITEM	**UNITS**	**QUANTITY**	**PRICE PER UNIT**	**YEARS USED**	**COST PER YEAR**
	Eg hoes, buildings	A	B	C	A × B / C
Total cost of durable items per year					
Total cost of durable items per year ($)					

At the end of this step you will have

- Organized the narrative section of the business plan
- Set production targets for the group and for the individual farmers
- Organized the financial information of the product from at least one member of the target farmer group
- Run the profitability of the business plan with details of:
    - Material costs
    - Labor costs
    - Service costs
    - Loan requirements and costs
- Negotiated targets with farmer groups
- Investigated ways of reducing any costs and increasing profits
- Developed an implementation plan
- Printed out the business plan
- Submitted the business plan to the database
- Given the farmers involved in the estimated profit calculations a sheet or book in which they will collect the actual costs during the production and marketing seasons.

TABLE 73. FORM FOR RECORDING LABOR COSTS

Product type				**Currency**				
Land area				**Currency per $**				
DATE	**ACTIVITY**	**PERSON-DAYS**		**COST/DAY**		**COSTS**		
		Hired	**Family**	**Hired**	**Family**	**Hired**	**Family**	**Total**
		A	B	C	D	E = A × C	F = B × D	E + F
Pre-production								
	Land clearing							
	...							
Total pre-production costs								
Production								
	Cultivation							
	Fertilizer application							
	Weeding							
	...							
Total production costs								
Postharvest								
	Harvesting							
	Drying							
	Threshing							
	Storage							
	...							
Total postharvest costs								
Marketing								
	Packaging							
	Cleaning							
	Sorting / grading							
	...							
Total marketing costs								
Total labor costs								
Total labor costs ($)								

QUIZ 16

Answers at the end of the guide.

1. What three elements are essential in an implementation plan?

   A. Person(s) responsible (who)

   B. Activity (what)

   C. Timing (when)

   D. Location (where)

   E. Reason (why)

   F. Method (how)

   G. Cost (how much)

2. It is vital that all farmers keep accurate records of their costs

   A. True. This information is vital

   B. False. It is desirable but not necessary

   C. False. Farmers do not need to keep track of their costs

3. The Nyabyumba farmers group wants to grow potatoes and has decided on some activities to implement. Help them put them in the right order

   A. Prepare the fields for planting

   B. Agree on buying conditions

   C. Transport the potatoes to the customer

   D. Plan the planting schedule

   E. Harvest the potatoes

4. The process of preparing a business plan and implementation plan helps to build a sense of common purpose within the farming group, and between farmers and their service providers.

   A. True

   B. False

5. A business plan gives the field agent a clearer understanding of the groups' _____.

   Select all that apply to fill in the bank.

   A. Computer skills

   B. Planned production levels

   C. Intelligence

   D. Capacity

   E. Technology use

6. What is an implementation plan?

   A. A list of activities that have to be done to put the business plan into effect

   B. Another name for a business plan

   C. A list of activities that have to be done to prepare a business plan

   D. A list of activities that have to be done to get a loan from a bank

EXERCISE 16. PREPARING AN IMPLEMENTATION PLAN

This exercise enables farmers to develop an implementation plan based on their business plan.

As with the business plan, make sure that the farmers do as much of the work as possible so they learn how to put together an implementation plan.

OBJECTIVE

After this exercise the participants will be able to:

- Write an implementation plan based on the group's business plan.

EQUIPMENT NEEDED

- Large pieces of paper, marker pens

EXPECTED OUTPUTS

- A completed implementation plan for the group

TIME REQUIRED

- 1–2 days (the first time the group develops an implementation plan. Less time is needed next time around)

PREPARATION

- Bring the business plan.

SUGGESTED PROCEDURE

1. Explain to the group that they are going to plan the detailed activities for their enterprise. Remind them if necessary of the general business plan and the targets it sets (amount of produce, timing of delivery, quality standards, etc.). Write these targets on a large piece of paper for all to see.

2. It is probably easiest for the group to think first about the production stage, since that is what they are most familiar with. So ask them to list the activities they will need to do during this stage: land preparation, sowing, fertilization, weeding, etc. On another large sheet of paper, draw a table like Table 74 and write their responses in the left-hand column.

3. For each activity, ask who will be responsible for doing the task.

- Some activities will be done by particular individuals, such as the marketing coordinator or the group secretary. Write their names in the "Who" column.

- Other activities (such as working on their own land) will be done separately by individual members. Write "individual members" in the "Who" column.

- A third type of activities will be done by some or all of the members working together. Write "group" or the name of the sub-group (e.g., "production committee") in the "Who" column.

Make sure that everyone agrees to be responsible for the tasks they have been assigned.

4. For each activity, ask when it should begin and be finished. Put this information in the "When" column.

5. Assign a person in the farmer group to check on each of these activities, at group meetings, but also in the field, so that there are no surprises.

6. Ask if any tasks have been finished already. Put a tick or write the date in the "Completed" column.

7. Repeat Steps 2–5 for the pre-production, post-harvest and marketing stages. Use more sheets of paper if necessary.

8. Encourage discussion of the various tasks and responsibilities so you are sure that everyone understands what they have to do and when to do it.

9. Transfer the finished plan onto a smaller sheet of paper (a computer is useful for this), and put the large sheets of paper on the wall to remind people of their commitments.

10. Encourage the group to use the plan at each of their regular meetings to remind members of upcoming tasks and to check what has been done. They can use the "Completed" column to keep track of progress.

TABLE 74. FORM FOR IMPLEMENTATION PLAN

WHAT	WHO	WHEN	COMPLETED
Pre-production			
Production			
Postharvest			
Marketing			

The seven steps of marketing

A SMART SKILLS MANUAL

BOOKLET 2: BUSINESS PLANNING

This is the second of four booklets in the guide *Seven steps of marketing: A SMART Skills manual.*

Marketing is one of the biggest challenges for small-scale farmers in developing countries. Many farmers would like to improve their output or the quality of their products, but they need a way to sell their produce and increase profits.

This manual outlines seven steps that field agents, extension workers and program managers can follow to help farmers improve their marketing:

1. Getting organized
2. Identifying products and organizing groups
3. Collecting information for the business plan
4. Building a business plan
5. Marketing as a group
6. Reviewing agro-enterprise performance
7. Scaling up.

The manual consists of 21 lessons, each with guidelines, exercises to do with a group of farmers or with development agents, and quizzes to test your understanding.

This is one manual in a series on SMART Skills – the skills that field agents need to help farmers in developing countries improve their livelihoods. A companion manual on marketing basics describes the ideas that underlie the seven steps in this manual.

http://www.crsprogramquality.org/smart-skills-for-farmers/

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