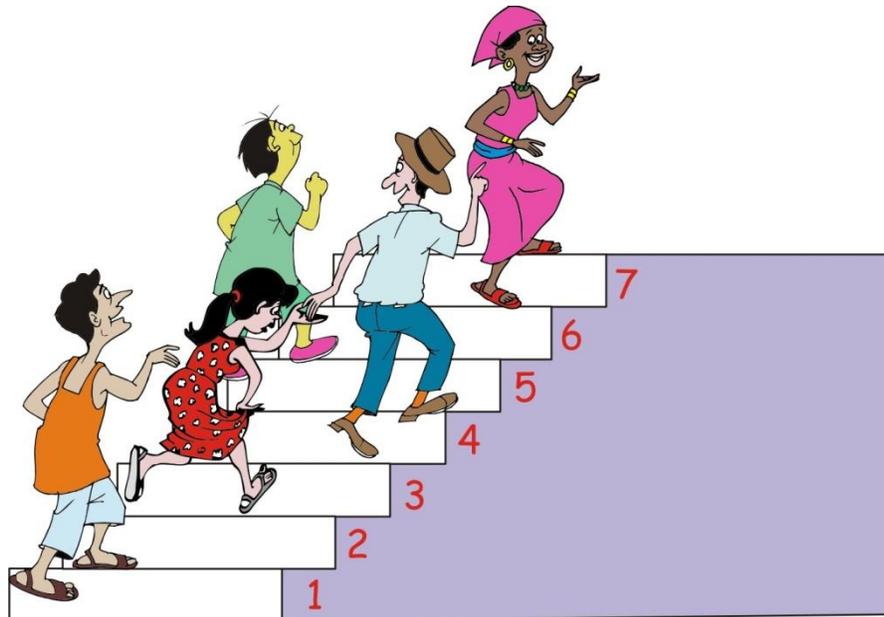


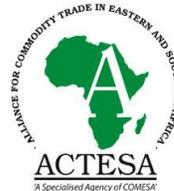
Seven steps of marketing

Course on agroenterprise and market development for field agents



Written by Shaun Ferris, Rupert Best and Paul Mundy

Co-created through the support of 132 practitioners from 19 organizations and 12 countries



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Contents

Tables	8
Figures	12
Acknowledgements	14
Foreword	15
Introduction	17
Step 1. Getting organized	20
Lesson 1. Organizing the project team.....	21
Quiz for Lesson 1. Organizing the project team.....	33
Staff exercise 1a. Assessing the marketing skills of project staff.....	34
Field exercise 1a. Explaining the agroenterprise process.....	38
Lesson 2. Working with the community.....	40
Quiz for Lesson 2. Working with the community.....	45
Field exercise 2a. Visioning “basic sessions”.....	46
Lesson 3. Asset transfers and being sustainable.....	48
Quiz for Lesson 3. Asset transfers and being sustainable.....	52
Lesson 4. Deciding where to start the project.....	53
Quiz for Lesson 4. Deciding where to start the project.....	58
Staff exercise 2. Choosing an entry point.....	59
Step 2. Identifying products and organizing groups	63
Lesson 5. Choosing products and markets.....	64
Quiz for Lesson 5. Choosing products and markets.....	73
Field exercise 5a. Choosing Food products and Market products.....	74
Field exercise 5b. Let’s think about new products.....	77
Field exercise 5c. Assessing risks of product and marketing options.....	79
Lesson 6. Working with farmers’ groups.....	81
Quiz for Lesson 6. Working with farmers’ groups.....	90
Step 3. Collecting information for the business plan	91
Lesson 7. Market analysis.....	92
Quiz for Lesson 7. Market analysis.....	98
Field exercise 7a. Market mapping.....	100
Field exercise 7b. Market survey.....	102
Field exercise 7c. Analyzing market information.....	105
Lesson 8. Analyzing production.....	109
Quiz for Lesson 8. Analyzing production.....	111
Field exercise 8a. Choosing a production technology package.....	112
Lesson 9. Surveying and fostering business services.....	114
Quiz for Lesson 9. Surveying and fostering business services.....	121

Field exercise 9a. Identifying and prioritizing service needs.....	123
Lesson 10. Tools for financial analysis.....	126
Options to balance food and financial security.....	138
Quiz for Lesson 10. Tools for financial analysis.....	141
Field exercise 10a. Calculating costs of production and marketing.....	142
Field exercise 10b. Calculating income and profit	146
Lesson 11. Deciding on credit.....	147
Quiz for Lesson 11. Deciding on	158
Field exercise 11a. Calculating the cost of a loan.....	159
Lesson 12. Choosing an agroenterprise	164
Quiz for Lesson 12. Choosing an agroenterprise.....	167
Field exercise 12a. Choosing a product and market	168
Step 4. Building a business plan	170
Lesson 13. Tools for business planning	171
Quiz for Lesson 13. Tools for business planning	178
Field exercise 13a. Visioning	179
Field exercise 13b. Market mapping	182
Field exercise 13c. Problem analysis	187
Field exercise 13d. Preparing production targets	189
Field exercise 13e. Pathway analysis.....	191
Lesson 14. The business model canvas	193
Quiz for Lesson 14. The business model canvas	201
Field exercise 14a. Using the canvas to build a business plan	203
Lesson 15. Filling in the business plan.....	205
Quiz for Lesson 15. Filling in the business plan.....	218
Field exercise 15a. Filling in the business plan.....	219
Lesson 16. Putting the business plan into effect.....	220
Quiz for Lesson 16. Putting the business plan into effect.....	228
Field exercise 16a. Preparing an implementation plan.....	229
Step 5. Marketing as a group	231
Lesson 17. Why market as a group?.....	232
Quiz for Lesson 17. Why market as a group?.....	253
Field exercise 17a. Working out transportation costs	254
Field exercise 17b. A trader's time is the farmers' money.....	256
Field exercise 17c. Let's talk about side-selling.....	259
Lesson 18. How do traders decide on prices?.....	261
Quiz for Lesson 18. How do traders decide on prices?	267

Field exercise 18a. Farmer and trader pricing.....	268
Step 6. Reviewing agroenterprise performance	270
Lesson 19. Calculating costs, income and profits.....	271
Quiz for Lesson 19. Calculating costs, income and profits.....	282
Field exercise 19a. Calculating costs, income and profits.....	283
Lesson 20. Review, documentation and planning the next season	290
Quiz for Lesson 20. Review, documentation and planning the next season	294
Step 7. Scaling up	295
Lesson 21. Scaling up.....	296
Quiz for Lesson 21. Scaling up.....	303
Field exercise 21a. Your scaling up plan.....	304
Annex 1. Mshika Farmers' Group	307
Annex 2. Implementation plan for an agroenterprise plan	319
Annex 3. Conversion tables	320
Annex 4. Input costing sheet (one per crop)	321
Annex 5. Resources	323

Tables

Table 1. Activities in the seven steps of agroenterprise development.....	23
Table 2. Differences between production- and market-based strategies	27
Table 3. Possible start-up meetings and field work with communities	29
Table 4. Agroenterprise skills assessment form.....	35
Table 5. Example of agroenterprise skills assessments for two team members	35
Table 6. Agroenterprise team capacity form	37
Table 7. Participatory tools for introducing marketing.....	43
Table 8. Agroenterprise development entry point form.....	62
Table 9. Participatory tools to evaluate farmer types and product options.....	64
Table 10. Marketing strategies: The product/market matrix	70
Table 11. Form to list farmers' top five FOOD products	75
Table 12. Form to list farmers' top five MARKETED products (cash crops)	75
Table 13. Comparing men's and women's marketed (cash crop) priorities	76
Table 14. Form for minor and new crop and livestock products	78
Table 15. Checklist of requirements for marketing group	86
Table 16. Farmers' group sign-up sheet.....	87
Table 17. Key issues to address at meetings with farmers' groups	88
Table 18. Results of a survey conducted by farmers in Soroti market, Uganda	97
Table 19. Example of a questionnaire for a market survey.....	104
Table 20. Form for summarizing findings of market survey.....	107
Table 21. Possible ways to increase productivity and sales prices of crops and livestock	110
Table 22. Form for recording the requirements of a crop product.....	113
Table 23. Business services needed for production and marketing.....	124
Table 24. Example of estimating material costs.....	131
Table 25. Example of estimating costs of durable items.....	132
Table 26. Total material costs	133
Table 27. Example of estimating costs of labor.....	134
Table 28. Total costs.....	134
Table 29. Estimating income (one-time sale).....	135
Table 30. Estimating income (multiple sales).....	136
Table 31. Estimating profit	136
Table 32. Estimating profit excluding family labor.....	137

Table 33. Estimating profit with household consumption	138
Table 34. Form for estimating and recording costs of consumable materials.....	144
Table 35. Form for estimating and recording costs of durable items	144
Table 36. Form for estimating and recording labor costs	145
Table 37. Calculating expected income and profit from various products	146
Table 38. Example of a credit arrangement	149
Table 39. Estimating the amount of money a farmer needs.....	151
Table 40. Calculating the cost of a loan.....	151
Table 41. Calculating gross margin of 1 acre of maize	152
Table 42. Calculating the profitability of a loan	153
Table 43. Calculating the profitability of a smaller loan.....	154
Table 44. Examples of loan conditions from different lenders	162
Table 45. Comparison of loans from different lenders	163
Table 46. Example of planned production targets and output monitoring	176
Table 47. Form for converting a long-term vision into short-term action	181
Table 48. Example of a problem analysis	188
Table 49. Form for planning production for a crop.....	190
Table 50. Business plan	206
Table 51. List of farmers growing Maize in the Mshika Farmers' Group	207
Table 52. Business plan: 1 Introduction	208
Table 53. Business plan: 2 Business organization	208
Table 54. Business plan: 3 Product.....	209
Table 55. Business plan: 4.1 Marketing strategy: introduction.....	209
Table 56. Business plan: 4.2 Marketing strategy: customer relations	210
Table 57. Business plan: 4.3 Marketing strategy: product.....	210
Table 58. Business plan: 4.4 Marketing strategy: price.....	210
Table 59. Business plan: 4.5 Marketing strategy: place	210
Table 60. Business plan: 4.6 Marketing strategy: promotion	211
Table 61. Business plan: 5 Risks	211
Table 62. Business Operations Outline	212
Table 63. Business plan: 7 Costs.....	214
Table 64. Business plan: 8 Income	215
Table 65. Business plan: 9 Profit and loss analysis.....	215

Table 66. Business plan: 9 Profit and loss analysis including food security	216
Table 67. Expected revenues per farmer based on land area and estimated costs and sales price	216
Table 68. Business plan: Financial requirements	217
Table 69. Example of an implementation plan	222
Table 70. Example of target setting for marketing	224
Table 71. Form for recording consumable materials costs	225
Table 72. Form for recording the cost of durable items	225
Table 73. Form for recording labor costs	226
Table 74. Form for implementation plan	230
Table 75. Example of role-play of transport costs.....	255
Table 76. How a trader calculates the purchase price	265
Table 77. Why Mr Khan wants to buy more chickens.....	269
Table 78. Actual consumable materials costs for Reginald and Bibi's maize crop.....	272
Table 79. Cost of durable items for Reginald and Bibi's maize crop	273
Table 80. Total materials costs for Reginald and Bibi's maize crop	273
Table 81. Actual labor costs in Reginald and Bibi's maize crop.....	274
Table 82. Calculating the cost of a loan.....	275
Table 83. Total costs of Reginald and Bibi's maize crop.....	275
Table 84. Reginald and Bibi's income from maize.....	276
Table 85. Reginald and Bibi's profit from maize	276
Table 86. Reginald and Bibi's profit from maize	277
Table 87. Actual costs, income and gross margin per farmer in a group.....	278
Table 88. Estimated costs, income and gross margin per farmer in a group.....	279
Table 89. Difference in estimated and actual costs, income and gross margin.....	279
Table 90. Consumable materials costs for target crop	284
Table 91. Cost of durable items.....	285
Table 92. Labor costs.....	286
Table 93. Calculating the cost of a loan.....	287
Table 94. Total costs of product	287
Table 95. Income from target product.....	287
Table 96. Profit (gross margin) from target product.....	288
Table 97. Average costs per unit area	288
Table 98. Actual costs, income and gross margin per farmer in a group.....	289

Table 99. End-of-season review form 291
Table 100. Cost comparison form 302

Figures

Figure 1. Working with farmers to build their marketing and business skills.....	17
Figure 2. Preparing the ground work for the project with partners	20
Figure 3. Organizing a team in a large agroenterprise project.....	21
Figure 4. Evaluating skills of field agents to assess capacity and training needs	24
Figure 5. Marketing requires many skills, supervisors and field agents need to learn first then apply	25
Figure 6. Make sure the field agents understand the marketing and business approach.....	25
Figure 7. Getting the project team working in the same direction.....	26
Figure 8. Field agents meeting the community members and farmers.....	29
Figure 9. Seven steps in developing agroenterprises.....	39
Figure 10. Working with the community.....	40
Figure 11. Try to make training fun!.....	41
Figure 12. Visioning	47
Figure 13. Giving things for free can make it more difficult for farmers in the long term.....	48
Figure 14. Identifying the best starting point for your project	53
Figure 15. Working out the right product and market.....	80
Figure 16. Organization of individual farmers to farmer produce marketing groups.....	82
Figure 17. Gathering data for the business plan	91
Figure 18. Standard weights and measures allows us to compare products and sales.....	92
Figure 19. As supply goes up, prices tend to fall	98
Figure 20. Market map drawn by farmers for groundnut in Embu district	101
Figure 21. Working out costs of materials	131
Figure 22. Market agent explaining pros and cons of the different product options.....	168
Figure 23. Using visioning for the agroenterprise	179
Figure 24. Preparing a marketing map for new agroenterprise.....	182
Figure 25. Market map drawn by farmers for groundnut in Embu district, Kenya.....	185
Figure 26. Market map for desired marketing of groundnut in Embu district, Kenya.....	186
Figure 27. Pathway analysis for production and marketing.....	192
Figure 28. How the parts of a business plan fit together	193
Figure 29. The business model canvas	194
Figure 30. Interpreting the business model canvas	195
Figure 31. Example of the business model canvas showing production and marketing system	197
Figure 31. Example of the business model canvas showing production and marketing system	197

Figure 32. Business plan outline.....	198
Figure 33. How the canvas relates to a standard business plan: Value Proposition.....	198
Figure 34. How the canvas relates to a standard business plan: Marketing.....	199
Figure 35. How the canvas relates to a standard business plan: Production	199
Figure 36. How the canvas relates to a standard business plan: Costs and income.....	200
Figure 37. Empty business model canvas.....	203
Figure 38. Canvas with sticky notes showing current situation	204
Figure 39. Marketing together has many advantages: higher volumes, better quality,higher prices.....	231
Figure 40. Trader trying to find a full load.....	233
Figure 41. Selling collectively makes it possible to sell to bigger traders	235
Figure 42. Selling to different market segments	245
Figure 43. The power of mobile phones in trading	246
Figure 44. Second-order marketing association.....	247
Figure 45. Side selling is a real problem, farmers should discuss plans to avoid this	250
Figure 46. Farmers who cheat the group will cause frustration	251
Figure 47. Line up farmers and traders	257
Figure 48. Traders to bring all the bags behind the starting line	257
Figure 49. Traders race with group and individuals	258
Figure 50. Setting prices based on location and volume	261
Figure 51. How a trader calculates prices	262
Figure 52. How a trader calculates prices: longer distance	263
Figure 53. How a trader calculates prices: smaller volume	263
Figure 54. How a trader calculates prices: seller's market.....	264
Figure 55. Changes in maize prices over five years	266
Figure 56. Working with different groups and field agents to scale up	295
Figure 57. Outline for rolling training plan for one field agent for a 5-year project	297
Figure 58. From first-order marketing groups to a second-order association.....	299
Figure 59. Scaling plans	306

Acknowledgements

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- Jorge Enrique Gutiérrez, who produced the graphics.
- The writing team of Shaun Ferris, Rupert Best and Paul Mundy.

Foreword

Cool and wet, the highlands of Kabale District, in southwestern Uganda, are a good place to grow potatoes. But diseases are a problem, so it is important to have disease-free seed.

The Nyabyumba Farmer Group was formed in 1998 to boost the production of clean seed, as well as to produce potatoes for the retail market (called “ware” potatoes). Members learned in a farmer field school how to produce disease-free seed potatoes. They were supported by Africare (an international NGO), PRAPACE (a potato research network) and the government’s National Agricultural Research Organisation (NARO).

The Nyabyumba group gave birth to a national association of seed-potato producers, which for several years produced seed potato. It sold most of its output through NGOs, which supplied seed to other farmers. The association grew to 120 members and had an annual turnover of \$50,000. But in 2004, the market for seed potatoes faltered when NGOs and farmers stopped buying seed, and the market was oversupplied.

The Nyabyumba farmers needed a new marketing strategy for their seed and ware potatoes. Together with Africare, the International Centre for Tropical Agriculture (CIAT) and NARO, they chose Nando’s, a fast-food chain, as a target market. The group developed a sophisticated production system to supply potatoes all year round. It overcame many technical, marketing and financial challenges, and eventually signed a contract to supply Nando’s.

The group’s membership has since grown to 300 farmers. To generate money to invest, it has established a savings-and-credit cooperative, which by the end of 2006 had saved nearly \$2,000. In 2012, the group still supplies Nando’s, but with increasing competition it wants to supply other fast-food chains too. The members know that they have to innovate continually to maintain their competitiveness in the marketplace.

The Nyabyumba group is an example of a new way of doing development with vulnerable rural communities. Five critical skills that smallholder farmers need to engage successfully with markets are integrated into a novel capacity-building approach.

- Self-selecting groups, like Nyabyumba, started by building their **organizational management** and **production skills** with support from NGOs, research organizations and government extension services.
- As the group grew, they improved their skills to produce sustainably and **manage their natural resources**.
- When their marketing environment changed dramatically, they learned new skills in **market and enterprise skills** to identify alternative markets and develop new marketing strategies to rebuild their business options.
- The new market opportunities required them to upgrade their financial management and invest more into their enterprise, this led to group setting up **savings and loan** cooperative, which helped them to manage their internal savings and lending and also how to deal with other money lenders.
- And finally, to become and maintain their competitiveness in this new market area. They acquired new knowledge, tested new technologies (e.g. potato varieties appropriate for Nando’s

needs) and adapted management practices to suit its circumstances (e.g. small-scale irrigation to be able to supply all year-round).

Over the years CRS has made a dedicated effort to review and realign its agricultural development strategy according to the needs and demands of our partners and those we serve in developing countries. Ten years ago we saw the need to shift from a production-oriented response to recovery from disaster, to one that incorporates market- and business-oriented approaches. We observed that increased household food production alone is no vehicle for moving poor rural people permanently out of poverty. Understanding markets and building the capacity of smallholder farmers to engage in profitable enterprises that earn them cash income have therefore become integral parts of our agricultural development strategy.

This shift has required a new mindset among managers and technical staff alike. Opportunities for market-led responses to crisis situations and the building of business capacity in partners and other local development agents are replacing indiscriminate transfer of assets and provision of services with little thought about the sustainability of these interventions.

This approach requires new skills. Managers have to engage new staff with appropriate education and experience. And existing staff are retrained to acquire new skills. Farmers' demands go beyond production practices and new technologies. They now want to master a wider set of skills that include how to look for new markets and negotiate sales, how to manage savings and loans, how to calculate costs profits, how to do bookkeeping, and even how to develop environmentally sound products or technologies.

The modules in this series on "Five skill sets for preparing smallholder farmers to successfully engage with markets" are part of CRS's response to these new needs. Their audience is the vast cadre of field agents, within CRS, our partners and other public and private extension and development agencies dedicated to supporting smallholder farmers finding a pathway out of poverty.

None of these skills by themselves are new or unique – farmers have always needed them to successfully engage with markets. But development agencies have seldom if ever provided integrated facilitation of these skills; they have been content to support farmers only in those areas of their particular expertise. Through strong and integrated capacity-building processes based on skills, we are reshaping the way we support vulnerable communities. As in the case of Nyabyumba, communities progressively become agents of their own change. They identify and grasp opportunities that turn previous desperation into a brighter hope for the future.

Carolyn Woo
President and CEO, CRS

Introduction

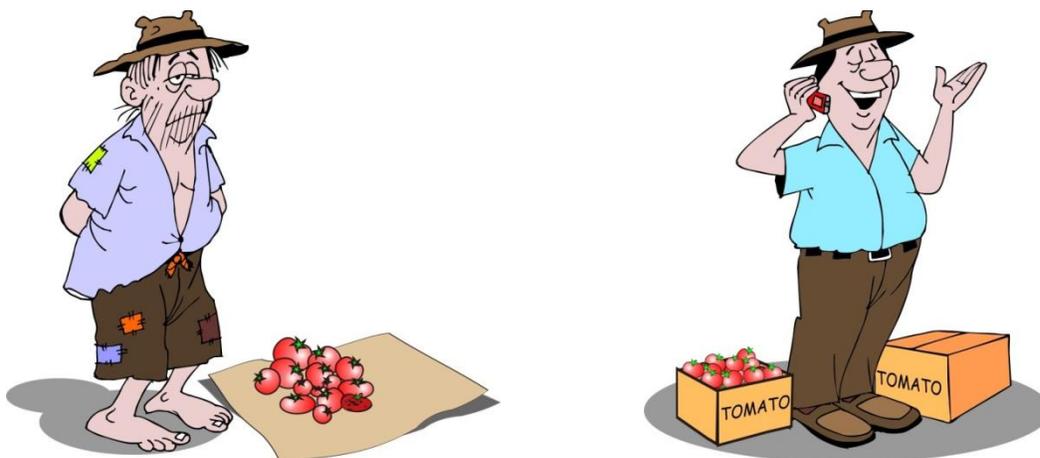


Figure 1. Working with farmers to build their marketing and business skills

This guide focuses on the practical aspects of linking vulnerable farmers with markets. The marketing skill set is divided into two sections:

- Marketing basics (theory and concepts)
- Basic steps in linking farmers to markets (practical market linkage work)

This participatory marketing approach focuses on the needs of poor farmers. The aim is to ensure that farmers produce sufficient food crops for their household needs and improve income through sales of surplus produce into local and national markets. The principles can also be used for helping to link farmers to higher value markets including internal formal markets and export markets.

The types of farmers targeted in this guide typically produce on farms of two to five acres of land. At the start of an upgrading process they will not own mechanized tools, use limited inputs, are not well organized, have no savings schemes or links to formal financial lenders and for the most part have opportunistic trading relationships with buyers. The methods described in this guide will help a field agent to:

- Provide farmers with a clear understanding of markets and marketing,
- Build a marketing curriculum with farmers
- Identify products with market opportunities,
- Conduct a basic market survey to determine demand for specific products
- Upgrade a production system to meet market needs
- Write a business plan and an implementation plan
- Collectively sell produce to an identified buyer
- Assess profitability of their marketing strategies
- Use results from one season to improve marketing activities in subsequent seasons

The goal is to use the process outlined in this guide to transfer skills to farming communities and enable them to upgrade their farming systems based on new knowledge.

This module is concerned with methods and tools to assist a field agent who is starting to work with a community on agroenterprise development. The approach can also be used to assist farmers in shifting from production to a market led approach to agricultural investment.

Seven steps in linking farmers to markets

Here are seven steps you can follow to help farmers develop their agroenterprises:

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

We will guide you through each of the steps in turn.



How to use this course

Before using the contents of this course, we suggest that field agents who plan to work on marketing first read and complete the exercises and field lesson plans outlined in the first part of this marketing course. This information can be found in the first book in the marketing series, which is entitled “Marketing Basics”. This first book focuses on the theory of marketing.

Having completed Marketing basics, the field agent can work with the project managers and community partners to carry out the practical side of marketing outlined in the 7 steps guide.

As with the first guide, the chapters are divided into lessons, exercises and field lesson plans. The field agent should first read the lessons provided in each of the steps. The field agent should work through any exercises that are provided. These exercises are designed to help field agents practice ideas and calculations, so that you fully understand the concepts and can apply the ideas with farmers.

The field lesson plans are outlines for sessions when field agents work with farmers in the field. There are 29 field lesson plans in the 7 Steps. Each of the 7 steps contains a series of sub-steps that helps the

field agents and farmers to identify, build and record information incrementally. This information is used to arrive at a decision point, then proceed to the next step.

You do not have to use every field lesson plan with every farmer group. However, we would advise that the field agents follow each of the field lesson plans in order for at least the first season, so that when you apply the 7 steps process, you fully appreciate the tasks within each of the field lesson plans.

The field lesson plans are designed to take a farmer group through all the sub-steps in a logical process so that they learn more about markets, products with market opportunities, the information required to formulate a business plan and the organization required to sell bulked goods to a buyer. The final steps help farmers to understand more about negotiating with buyers, selling collectively and then reviewing their actual sales against their plans. The final step helps field agents to scale up the marketing process with other farmers, and how farmers can grow their businesses.

Each of the field lesson plans provides the farmers with new information that builds up to specific decision points. Farmers who work through this process will be able to apply this approach to other products after learning in the first one to two seasons.

Step 1. Getting organized



Figure 2. Preparing the ground work for the project with partners

This Step helps the project team to get organized for an agroenterprise development project. It covers:

- Lesson 1: Organizing the project team, evaluating their agroenterprise skills and identifying ways to improve these skills.
- Lesson 2: Introducing the idea of agroenterprise development to the community and exploring their interest in it.
- Lesson 3: Asset transfers within agro-enterprise.
- Lesson 4: Deciding on the entry point for the agroenterprise project.

At the end of this Step you will have:

- Held a series of meetings with project staff to outline the agroenterprise process and be able to explain this to the target community
- Met with the community and outlined what the agroenterprise project **will** do and what it **will not** do.
- Held discussions with community about the need for self-reliance in agroenterprise methods and clearly explained how asset transfers will be limited, in order to improve overall sustainability
- Made a decision within the project team and with the community on a suitable starting point for the project.

Target audience

This first step is relevant to all the members of the project team, but specifically to the project marketing theme leader, supervisors, partners and field agents.

Lesson 1. Organizing the project team

In this lesson

After this lesson you will be able to:

- List the seven steps in agroenterprise development, and describe each of the steps.
- Evaluate the agroenterprise skills of potential team members.
- Describe the differences between the production and marketing approaches to rural development.
- List the types of information you will need about the target area.
- Describe some considerations for working with partners on agroenterprise development.

The project team

Many agroenterprise projects are managed by a small team of people from a lead organization and perhaps one or more partners. This project management team works with many other people: district supervisors and field agents; traders, processors and retailers; business and financial services; and of course farmers and community leaders.

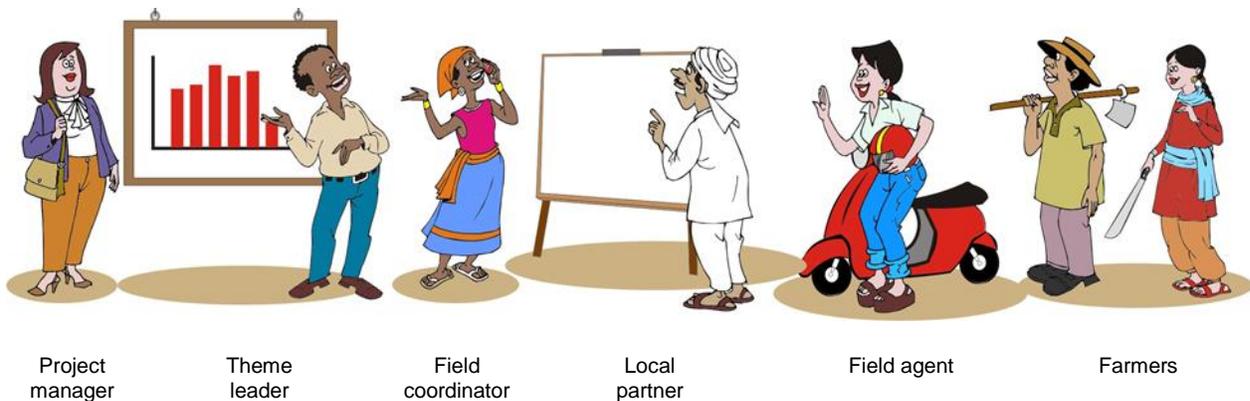


Figure 3. Organizing a team in a large agroenterprise project

- The project team includes **theme or task leaders** who coordinate activities and provide training in different subjects: training includes working with groups, inputs and business services, production, finance and marketing.
- The theme leaders train and coordinate **field staff** from the lead agency, who in turn coordinate **staff of local partner organizations**.
- **Field agents** from these local organizations work directly with **groups of farmers**.

This guide is aimed to support the field agents who work directly with farmers.

The seven steps in agroenterprise development



The agroenterprise development process has seven steps (Table 1). Each step consists of several sub-steps and activities. At each step, certain key decisions are made about the direction of the activities.

The project team members must have a good idea of these steps. See Staff exercise 1 for a way to introduce the steps to them.

Table 1. Activities in the seven steps of agroenterprise development

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Steps	Organize staff and meet community	Identify products and select groups	Collect information for a business plan	Build business plans and implementation plans	Marketing as a group	Reviewing agroenterprise performance	Scaling up
Sub-steps	Hire staff Train staff Identify partners Do participatory appraisal Plan with community	Identify target farmers Select products Register groups Develop work plans Plan training	Survey market Select production options Review finance Review business services	Write business plan Work with groups on implementation plans to produce crops or livestock	Store product Grade product Negotiate with buyers Bulk product Sell collectively	Analyze profit Check volume and sales Check group work	Re-invest Choose products for next cycle Draw up new business plan Form new groups Recruit new field agents
Field Work	Rapid participatory appraisals to learn about location, businesses and community	Wealth ranking Product selection Registration	Production data Market surveys Financial analysis Service analysis	Production of crop or livestock product NRM activities	Planning sales Identifying buyer	Review sales by group and farmer	Plan for next season or next year
Key Decisions	Process and entry point agreed	Products selected Groups organized	Collect data analyze and compile data	Business plans made Implementation plans lead into production cycle	Agree on sales Agree on where to sell Agree on who to sell to Agree on price Sell goods	Evaluate agroenterprise performance	Select new market option Scale activities
Timeframe	From 2-3 weeks up to 2-3 months	2-3 weeks	Depending on # of products 3-4 weeks	1-2 weeks	1-2 weeks Or more if stored	1-2 days	1-2 weeks

Evaluating the project team's agroenterprise skills



Figure 4. Evaluating skills of field agents to assess capacity and training needs

Promoting agroenterprise requires a range of skills. It is important that the project team and especially the field agents fully understand the marketing approach. Several people within the project team may need to acquire new skills and adopt a new mindset to be successful in marketing.

For the project managers: Before starting to work on agroenterprise, the project manager needs to evaluate the “in-house” agroenterprise capacity. This assessment will help managers to decide on the type of marketing the team should engage in. It will also indicate any training needs. If the team has a lot of experience in marketing, you are more likely to achieve rapid results than if the team’s experience is limited or if this is a first time you are working on linking farmers to markets.

Questions to ask yourself and your team

- What experience do you have in marketing?
- Is working with markets a new area for you and your team?
- Are your partners experienced in marketing and agroenterprise?
- Does your capacity affect what you want to do with farmers?
- What additional skills and experience does your team need? How can you get this?

The answers are important because agroenterprise work increases the amount of time and money farmers will invest in their farming activities. The farmers can earn more, but there are also risks. Sophisticated marketing efforts require more skills and experience than simpler efforts.

See Staff exercise 1 for a way to assess the team members’ agroenterprise skills and experience.

Training project staff



Figure 5. Marketing requires many skills, supervisors and field agents need to learn first then apply

Once you have determined the level of marketing skills of the team, you can design training to give them the skills they need. You can help your team improve their skills in various ways:

- Get them to read through the “**Marketing basics**” course and **this course**.
- Arrange a face-to-face or online **training course**.
- Enable staff to **learn on the job**, perhaps by being coached by a more experienced staff member.
- Hire **new staff** with the missing skills.
- **Work with partners** who have marketing skills and include **private sector partners**.
- Ask **local business people** for help. Many business people are more than pleased to support projects that aim to help local business efforts. Working with traders, business managers and economists is a quick way to learn how to support farmers in the business world.

Developing a new mindset



Figure 6. Make sure the field agents understand the marketing and business approach

Many development projects focus on increasing agricultural production. They promote new farming technology and methods that help farmers grow more produce.

But marketing projects need an additional set of skills. They aim to help farmers increase their income and profit, in ways that are sustainable in business, social and environmental terms.

That means marketing projects require a different mindset. You need to think not only about yields, but also about costs, income and profit. You need to understand the agroenterprise process and how it helps farmers improve their market performance. You need to see farming as a business, not a hobby or a way of life for poor people.

Everyone in the marketing project – managers, field agents, partners and farmers – must understand this and learn to think in this way.



Figure 7. Getting the project team working in the same direction

Successful marketing requires project managers, field agents and farmers to have a new mindset: A marketing approach sees farming as a business

Table 2 shows some of the differences in organizing a production approach and a marketing approach. To be successful in business project staff will need both sets of skills.

The production approach is useful to help farmers grow more food and produce a surplus for sale. But a “production only” approach is not likely to help smallholder farmers find their way out of poverty. For that, improved marketing and business decision making is needed.

A marketing approach must be based on sustainable production. It builds on effective production systems by helping farmers plan and run their businesses in a better way.

Being effective in agroenterprise does not need brilliance, but it does require discipline in making and then implementing a business plan

A fundamental difference in a market-led approach is the emphasis on business planning. The project team, and the farmers, must be able to gather, organize and analyze information, and then act on that information. They have to plan for specific products and sales targets, and then follow the plan. They must invest the time, energy and money necessary to achieve their targets.

Table 2. Differences between production- and market-based strategies

	Production strategy	Market-based strategy
Primary focus	Increase production to meet household food needs	Grow and sell products with an identified market demand
Business outlook	Sell surplus production to opportunistic buyers	Aim to make a profit. Farmers produce to supply identified buyers at a profit
Farmers' group formation	Farmers form group to learn new technologies (e.g., as part of a farmer field school)	Farmers' group sets targets for production, sales and profit. They work together to increase productivity and incomes through collective marketing
Targets	Production levels based on new technology (such as improved seed)	Farmers set production and sales targets as part of the business plan and do profit analysis
Collective action	Evaluation of new technologies	Focus on collective marketing
Technologies and asset transfers, (seed, fertilizer, agro-chemicals,	Typically provided free to farmers to boost production	All transfers come with a plan. Inputs paid by farmers. If subsidies used, project should move to co-investment and full payment, using lenders
Microfinance	Not usually included	Includes use of savings and of loans from group or financial institutions to pay for input supplies
Monitoring and evaluation	Focus on training and production gains	Focus on impacts, volume of sales, profits, collective marketing, use of business services, ability to re-invest

Gathering initial information about the target area



In order to advise the local community, project managers, supervisors and field agents must understand the situation they face. Here are some things to look for:

- **Social context.** General information on the local area, towns, climate, population, social groups, and business outlook.
- **Natural resources.** Information on soils, water, crops, livestock and natural resources. Challenges faced, such as erosion, droughts, floods, diseases, etc.
- **Local production resources.** Farm sizes, typical farming equipment used, access to irrigation, transport systems, market infrastructure.
- **Business and market organization.** The marketing system, major products and services traded, input supplies, microfinance and banking services, major business challenges and opportunities.

You may already have much of this information from previous work in the area, or from the project design documents and baseline surveys. To support the marketing work, if you need more information

Only collect data that is going to help you to support agro-enterprise work. Be sure you have a clear focus on any information gathering, field agents should not gather general information.

Consider conducting a participatory appraisal or rapid market appraisal to fill in any gaps in the information. You can gather information on markets by interviewing traders, support agencies, NGOs, extension workers and business services. See

Field exercise 7b for ideas on how to do a market survey. You can prepare maps or use GIS tools such as Google Earth to show the locations of important features.

Initial meetings with staff and communities



Figure 8. Field agents meeting the community members and farmers

You will need to hold some initial meetings with other members of the project team, public and private sector partners and the community to introduce and design the elements of the agroenterprise process. These meetings draw on the project design to develop a detailed implementation plan. Table 3 shows how a project team could organize a series of start-up workshops to do this.

Between the workshops, the team members gather information through participatory appraisals and rapid surveys, and discuss issues with partners and communities. At the workshops, the participants analyze the information, make decisions and plan the next field sessions.

These initial meetings give the team a chance to learn about the farmers’ resources, assets, skills and business ambitions. The project team must set clear “rules of engagement”: explain the purpose of the project to the community, what is new about the approach, the roles of the project team and farmers.

Table 3. Possible start-up meetings and field work with communities

Step	Topics	Subject matter	Lead	Audience	Results	Timeframe
Step 1, Lesson 1	Workshop 1	Project orientation workshop	Lead agency	Project team	Establish basic ground rules for the project, staffing plan, capacity analysis, orient project team	3 days
Lesson 2	Field work	Participatory appraisal, rapid market survey, sensitize communities	Field agents	Field staff and community leaders	Gather initial project information from target communities and markets, start forming groups	1–2 weeks time depends on how market markets are assessed
Step 2	Workshop 2	Project planning based on results of participatory appraisal	Lead agency	Project team including private sector	Review participatory appraisal results, plan groups for agroenterprise and savings	3 days

Lesson 4, Lesson 5	Field work	Visioning, registration of groups, data flow mapping	Field agents	Field staff and community	Register farmer groups, select products	1–2 weeks
Lesson 4	Workshop 3	Project implementation plans	Lead agency	Project team including private sector	Agreement on entry points, method for implementing project and reporting responsibilities	3–4 days
	Project work	Start implementing	Field agents	Field staff and community	Training and implementation	Ongoing

Working with partner organizations



Agroenterprise development can be complex, and it is unusual to have all the skills needed within one organization. So your organization may need to find like-minded partners from the public and private sectors to support the process and help with scaling-up activities. These partners may be from local communities, NGOs, church organizations, government agencies, research institutions, private companies and local entrepreneurs.

Here are some points to discuss with potential partner organizations:

- **Skills.** What skills does the partner offer the project group? Does the partner have agroenterprise skills? Does the partner have staff trained in using participatory techniques? If not, will it agree to training?
- **Commitment.** Is the partner's management committed to support for 24–36 months? Is the partner interested in a long-term commitment to agroenterprise?
- **Location.** Does the partner work in the same geographical area?
- **Resources.** Does the partner have the resources to engage in the project, or is funding required?
- **Information.** Does the partner agree to link field data and financial reporting into a single routine reporting process?

In many cases, agroenterprise development will be a new area of activity for at least one of the partners. The lead organization should provide training to partners when the project begins. The lead agency should also audit the quality of the marketing services being delivered.

Conditions of collaboration



The partners should discuss conditions for their collaboration. Once agreement is reached, prepare a formal memorandum of understanding between partners that outlines their roles and responsibilities and any financial arrangements.

Technical reporting is as important as good financial accounts. In any working agreement it should be clear that any financial support requires clear rules of financial accountability. It must also be made clear that technical accountability or reporting is as important as financial records. Both technical and financial reporting are required in order to maintain financial support.

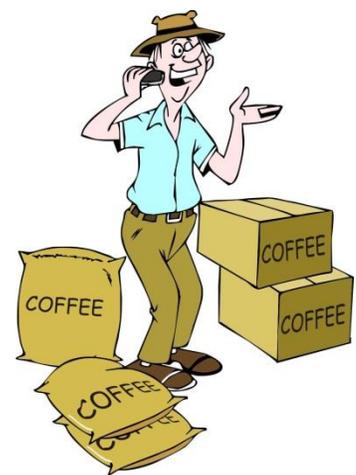
As the agroenterprise approach is focused on market performance, it is particularly important that information on the market performance of farmer groups is recorded and information reported.

No data, no payments!

All financial transactions should be tied to technical reporting, according to agreed formats, specifically around farmer group market performance.

Where possible try to get farmers involved in direct evaluations about the training being provided. Farmer auditing can be done using mobile phones

If the partners are to provide field agents, these should be selected carefully. Field agents should be dynamic and interested in their new role, have strong participatory skills and, if possible, have some background in business. It may be necessary to hire new staff with these attributes. To support women in agro-enterprise work, partners should include women field agents. Provide basic market training to all new staff of partner organizations to ensure they have the necessary skills and a clear market mindset.



Deciding on an approach



To build an effective marketing approach, the team needs to understand the local market conditions. It has to develop an approach that suits its own skills and capacity, and that matches the needs and abilities of the local farming community.

Here are some issues to discuss with the team members and partners:

- The team's own marketing experience
- The project time frame and scope of investments
- Technology packages that the project aims to supply
- The skills of partner organizations
- The farmers' marketing experience and organization
- The maturity of the local private sector.

These issues will determine the best approach to use in your situation. Do not be too ambitious, especially with an inexperienced team and if you are operating in difficult circumstances.

Conclusion

This Lesson has discussed how to organize the team to plan and implement an agroenterprise development project. It enables the project team to get organized, evaluate their skills, and gain a basic knowledge of the agroenterprise approach. They will realize that it is different from a purely production-based approach.

The next Lesson will focus on how to begin work with the community.

Quiz for Lesson 1. Organizing the project team

1. Which of these is a marketing approach?

- A. Grow as much as you can, then try to sell it
- B. Form a group to learn new production techniques
- C. Test a new farming technique by comparing it with the method you already use
- D. Choose what crops to grow based on a market demand

Correct answer: D. The others are typical of a production approach.

2. Two of these statements are from farmers who have been working in a marketing project. Which two?

Select all that apply.

- A. "In our demonstration plot, we tested several ways to improve our yields"
- B. "We agreed to plant vegetables at weekly intervals so we could produce a continuous supply"
- C. "We sold our produce to the first buyer who came along – and we got a good price!"
- D. "We negotiated a contract with a buyer for a fixed price"

Correct answers: B, D.

3. Select the skills that a marketing specialist will need.

Select all that apply.

- A. Helping farmers keep track of market prices
- B. Linking farmer groups to potential buyers
- C. Conducting market surveys
- D. Helping farmers organize a planting and harvesting calendar

Correct answers: A, B, C, D. All of these are skills that a marketing specialist will need.

Staff exercise 1a. Assessing the marketing skills of project staff

This exercise enables you to gather information about the project team members' skills and experience in agroenterprise development. It will help you identify their strengths as well as gaps in their knowledge, and hence their training needs. It can also be a good team-building exercise as it allows members to get to know each other's skills and experience in agroenterprises.

Objective

After this exercise you will be able to:

- Assess the marketing skills of potential members of the agroenterprise team
- Identify team members' training needs in agroenterprise development

Equipment needed

Agroenterprise skills assessment forms (Table 4) (one per person)

Expected outputs

A list of marketing skills of each team member

A list of training needs for the team members

Time required

30 minutes

Preparation

None

Suggested procedure

1. Ask each of the team members to list their skills and experience in agroenterprise development using a skills assessment form (Table 4). They can do this individually or in pairs, with each person asking the other about their skills and experience and filling in the form accordingly.
2. Ask the team members to count the number of items in each row of the table, then multiply these numbers by the weighting factor to give the scores in each row. They should then sum the scores at the bottom of each form. Table 5 gives an example of how to do this

Collate the results of the exercise and the scores using the agroenterprise team capacity form (

3. Table 6).
4. If a team member scores highly (e.g., more than 30), he or she can be considered to have strong agroenterprise skills that are well suited to rural business development. If the score is less than 10, then the person would benefit from additional training and starting the agroenterprise process with some expert assistance. You can identify the specific types of training needed from the responses to each of the questions.

Table 4. Agroenterprise skills assessment form

Name			
Experience and skills	Skills	Multiply number of skills by...	Score
What participatory skills you have?		2	
How many farmers' groups have you established?		3	
How many market visits have you facilitated and evaluated?		4	
How many surveys for marketing have you completed?		5	
How many enterprises have you supported?		6	
What is your level in your organization? (10 for management level; 5 for senior field technician; 3 for assistant)		1	
Overall score			

Table 5. Example of agroenterprise skills assessments for two team members

Experience and skills	John		Mary	
	Skills	Score	Skills	Score
List the number of participatory skills you have (score 2 per skill)	River code Pair wise ranking matrix Venn diagrams Market mapping Visioning	$5 \times 2 = 10$	All four stages of appreciative inquiry dream, develop, design, deliver for gender analysis	$4 \times 2 = 8$
List the number of farmers' groups you have established (score 3 per group)		0	Three farmers' groups for experimentation	$3 \times 3 = 9$
List the number of market visits you have facilitated and evaluated (score 4 per visit)	Took two groups of farmers to local market and linked farmers with traders	$2 \times 4 = 8$		0
List the number of surveys for marketing that you have completed (score 5 per survey)	Cassava market chain in local market Cashew nut market from farmer to port, including all market chain actors	$2 \times 5 = 10$		0
List the number of enterprises that you have supported in the past (score 6 per enterprise)	Cassava chipping to sell to local glue factory Cabbage production for local market Potatoes for local shopping center	$3 \times 6 = 18$		0
Level (add 10 for management level; 5 for senior field technician; 3 for assistant)	Senior technician	$5 \times 1 = 5$	Assistant	$3 \times 1 = 3$

Overall score		51		20
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Table 6. Agroenterprise team capacity form

Position	Name	Gender M/F	Agroenterprise score (from Table 4)	Remarks (training needs, partner, etc.)
Field supervisor 1				
Field supervisor 2				
Field supervisor 3				
...				
Field agent 1				
Field agent 2				
...				

Field exercise 1a. Explaining the agroenterprise process

Teaching tip: This lesson plan explains the various steps in the agroenterprise process.

Audience: You can use it with the project team, partner organizations, community members and farmers.

Objective

After this exercise the participants will be able to:

- List the seven steps in the agroenterprise development process, and describe each step.

Equipment needed

Cards of different sizes, marker pens

Expected outputs

An understanding of the steps in the agroenterprise development process, with ideas on how to adapt the process to suit the local situation.

Time

2–3 hours

Preparation

Write the steps on the big cards, and the sub-steps on the smaller cards (one per card). Feel free to add or delete steps or sub-steps to suit your situation.

Suggested procedure

1. Introduce the seven steps in the agroenterprise development process one by one. As you discuss each one, put the corresponding card on the ground so all can see it.
2. Introduce the sub-steps and briefly describe them. Add the corresponding cards to a diagram you are building on the ground ([\\$\\$\\$crossref](#)). Adjust the plan by adding new cards if necessary. See also Table 1 for points to discuss (time needed for each step, decisions to be made, type of field activities, etc.).
3. Invite questions and comments from the participants as you are presenting. It is important that everyone understands the concept of several steps, and how one step prepares for the next one.
4. Make a note of the final diagram. Copy it onto a large piece of paper and post it on the wall for reference.

Notes

You may also choose to run this exercise with the farmers to help them understand the agroenterprise development process.

The agroenterprise process



Figure 9. Seven steps in developing agroenterprises

Lesson 2. Working with the community

In this lesson

After this lesson you will be able to:

- Explain the marketing approach to local people.
- Describe several tools to use to familiarize local people with marketing ideas.
- Conduct a visioning session with villagers.

Introducing the ideas of marketing, self-reliance and visioning



Figure 10. Working with the community

If you are working in a new location, you will need to introduce yourself, get to know the local community, and gain their trust. Get the support of both formal and traditional local leaders. Such introductions can take time. See introduction to the 5 skills set section “rules of the game” \$\$\$ for how to do this.

When you introduce the idea of marketing to the community members, be prepared. Be clear about what to tell them.

- Describe the **market approach** and how it is different from a production project, see Table 2. Explain why you think a market approach will be of interest to them. Explain that the proposed project is about marketing and farming for business.
- Explain that the project will work **with** local people by facilitating their marketing work. It will not do marketing **for** them. Explain this by using the role play “crossing the river”, and explain that self-reliance is a vital part of marketing.
- Explain that the project will target specific types of farmers. Generally this will focus on farmers with less than 2 acres of land, but that other types of farmers may be included such as the more commercial smallholders with 2-10 acres and even farmers with more than 10 acres. An important point for the community is that even if the project is focused on one level of farmers, everyone can benefit.

- Explain the **types** of target clients to be involved in the project. (Your target farmers will depend on the goals of a particular project: Your project may focus on the needs of poor farmers, progressive farmers, women, young people, landless people, the ultra-poor, a combination of these groups and so on.)
- Selecting target farmers will need support from the community, and this may need help in terms of land area, education levels and wealth ranking. To select poorer farmers in a community, the local community council or leadership should work with the project supervisors and field agent to prepare a list of possible farmers, based on some basic criteria, such as land cultivated, asset levels, female-headed households, etc.
- Use the visioning method as a way of helping farmers to understand how a market based approach will help them to achieve their goals over time.

Farmers can sometimes be reserved when you start talking about markets, supply and demand, business plans and profit. They may not be familiar with the “marketing language” or know how to respond. Keep your language simple. Tell the group that the purpose of the work is to talk about markets, how to get to market, how to increase income and how to grow your money.

Familiarizing people with marketing



Figure 11. Try to make training fun!

You can use participatory techniques to establish the case for a marketing approach, set up introductions, organize local people, help them learn about the market, and build momentum for the project work.

Table 7 lists some tools to choose from.

Table 7. Participatory tools for introducing marketing

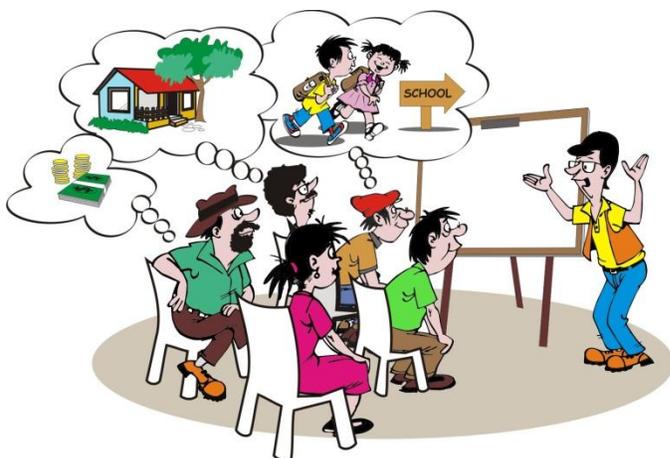
Method	Purpose	When to use	Time	Exercise
Games				
Crossing a river	Demonstrates that the project team are there to facilitate market linkage not do the work	Opening sessions with community focus groups	1 hour	See Introduction to 5 skills set Field exercise 4b
How to find your first 20 shillings	Ice breaker helps to evaluate enterprise spirit and find out who has	Opening sessions with community focus groups and farmer groups	30 minutes	See Marketing Basics Field exercise 10a
What makes a great business person	Evaluate enterprise spirit, how to find your first \$20	Opening sessions with community focus groups and farmer groups	1-2 hours	See Marketing Basics Field exercise 10b
Focus group methods				
How to run a focus group	Gather information on 2–3 major questions	Opening sessions with community focus groups and farmer groups	1–2 hours	Field exercise 2.5
Explaining the agroenterprise process	Explain the steps in developing agroenterprise	At planning workshops	2–3 hours	Field exercise 1.1
Visioning	Focus group method to help people think about long term ambitions and steps needed to get there	Various times, including opening sessions with community focus groups and at more detailed market focused sessions with farmer groups	1–2 hours	Field exercise 1.1

Role plays help community members to present a new idea, act out the idea and then discuss it amongst themselves. See Lesson 4, Field exercise 4b in the **Introductory Guide**, which outlines the “crossing the river” role play. Using this role play is an effective way of explaining the need for people to learn how to work with markets. The field agents will not do the marketing for them.

Games are a fun way to start taking about marketing and business. The “Market Basics” course contains information on Field exercises that can be used to get people thinking about entrepreneurship and marketing and to help them learn the marketing words.

Focus groups are a kind of open-ended group interview (See Introductory Guide **Field lesson 4a**). They are a good way to gather information about a particular subject, identify challenges and opportunities, and explore interest in possible solutions.

Explaining the agro-enterprise process. It is important that the community members are clear about the process they are embarking on. They should realize that it consists of multiple steps, some of which may last up to several months. You can use **Field exercise 1a** to introduce the ideas within the 7 steps to farmers. Consider repeating this exercise at various stages during the process to remind people of progress and the actions still to be taken.



Visioning. Visioning is a technique used to help a community or any type of group to think about what they want to achieve in the future (See **Introductory Guide 4c** and this Guide **Field exercise 2a**). This method can be used to help people think about what they want to achieve in the long term and the steps they need to take to reach their future goals.

For this process, you can start by asking the group about their long-term vision. Start this process by asking the farmers to imagine what they would like their production and marketing to be like in, say, 5 or 10 years. This is a useful way of finding out the group's ambitions. Remember that different 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.

At the beginning of a project, a visioning session can help people think about why they would want to be part of an agro-enterprise project. You can also use the visioning method for more detailed planning work, we will return to using visioning in **Field exercise 2a**.

Quiz for Lesson 2. Working with the community

4. Marketing projects are like production-oriented projects, only with marketing aspects added on.

- A. Correct. The two approaches are very similar.
- B. Not necessarily. Marketing starts by looking at the market, then working out how farmers can produce and sell products that are in demand.

Correct answer: B. While there are some similarities, the marketing approach depends on a good understanding of the market for the farmers' products.

5. A marketing project tells the farmers what to grow, then buys the produce from them and sells it.

- A. Correct. The project will buy what the farmers produce and take care of transport and sales.
- B. Not correct. The farmers have to do these tasks themselves. The project will give them the skills they need.

Correct answer: B. The project must not act as a trader or marketing agent. The farmers have to learn these skills!

6. The project will work with everyone in the community.

- A. Correct. The project will work with everyone who is interested.
- B. Not necessarily. The project will work with interested people, but only those who have the potential to produce and sell products to sell.

Correct answer: B. The project will have to select participants and products carefully. It is up to the farmers themselves to choose who will take part and what they will produce.

Field exercise 2a. Visioning “basic sessions”

Teaching Tip: Visioning is a method that can be used at various levels in a project to help people imagine what their situation could be like in the future and the steps they need to take to achieve that future goal.

Objective

After this exercise the participants will be able to:

- Describe the desired future for their community or farmers’ group.
- Identify the steps they will need to take to reach this desired situation.

Equipment needed

Large sheets of paper, marker pens

Expected outputs

A long-term goal and a series of concrete steps to achieve this goal.

Time required

1 hour

Preparation

None

Suggested procedure

1. Ask the community group to think about their current food security and income situation. Get them to draw a picture of their existing situation.
2. Ask the community members to imagine what they would like to change in their farm or village in the **long term**, in 10 years’ time. List these goals on a second sheet of paper under the same headings.
3. Ask the group members to think of the **long-term activities** they will need to do in order to reach this goal. For example, if they want to build a school, bring more land into cultivation? Install irrigation? Get a loan from the bank? List these activities on another sheet of paper.
4. Ask the group members to repeat this exercise, but this time to think of **activities in the medium term** – say, three or five 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.

Visioning

Where we are now



Where we want to be



Figure 12. Visioning

Lesson 3. Asset transfers and being sustainable

In this lesson

After this lesson you will be able to:

- Explain why giving free handouts is generally a bad idea
- List some alternative ways to ensure farmers get the assets they need to improve their agroenterprise.

Think about sustainability



Figure 13. Giving things for free can make it more difficult for farmers in the long term

Before starting work with the community, the project must consider the sustainability of the project. This means the project team needs to have some clear rules about the way training and assets will be delivered. The project team should review the types of assets that will be used in the project and set rules about how they will be transferred to communities. The types of inputs used in agricultural projects include things like (seeds, tools, fertilizer but also, equipment, facilities such as mills, stores, drying platforms, plows, tillers, vehicles and buildings, etc.).

Remember that everything you or the project gives away free to farmers, will not be available for free when you leave. If you try to change the existing system by giving away inputs, the project will be less sustainable in the future. For this reason, try to have a light “investment footprint”. Do not give things to farmers, if local business men are selling the same products in your project area. The best market facilitators have a strict rule: “No free handouts!”

The best market facilitators have a strict rule: “No free handouts!”

In many projects, we understand that the design means you need to provide farmers with some assets, so the project can achieve a measurable effect before it ends. Even in such cases, keep asset transfers as small as possible, and limit free handouts. Remember, the community will need to pay for all goods

and services themselves when the project ends. The sustainability of a project will decline as the level of handouts increase.

Free handouts

Providing assets for free should be a **last resort**. Instead, try to find alternative approaches to managing assets, or make sure the farmers or the community pay for them over time. Whilst everyone likes being given free things, this does not work in a business approach, avoid being Father Christmas.



Using vouchers

If your project focuses on the poorest and most vulnerable groups, consider using **vouchers** or similar subsidy arrangements to jump-start activities. Vouchers are a more accountable form of exchange than cash, as someone can redeem them only with certain vendors or for particular types of goods. For example, vouchers can be used by farmers with agricultural input dealers to access seeds, tools, fertilizers and agro-chemicals. Vouchers can either be full payment or partial payment, and linking the farmers with the inputs dealers through vouchers, helps to build a relationship between farmers and technology vendors.



Co-investment

If you are working with the community to build specific assets, such as irrigation channels, check dams, grain stores, cement drying-floors etc. that require significant labor, discuss ways in which the community can co-invest. Work with the community to co-invest in the construction, for example, the

project can provide basic materials and expertise in construction on the condition that the beneficiary community provides free labor.



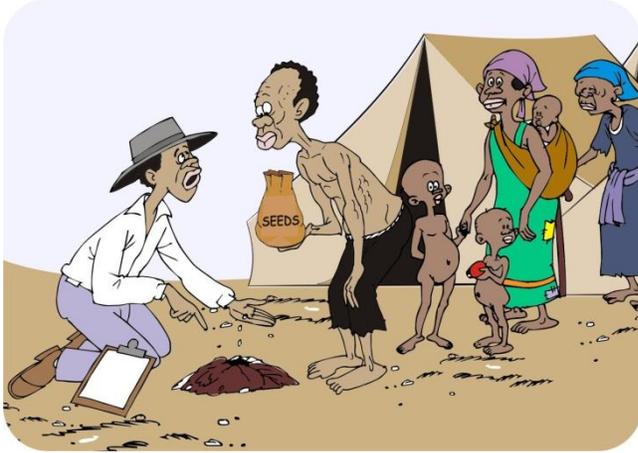
Physical assets

Avoid giving farmers large physical assets for free. For example, try to avoid giving farmers free hammer mills, or a free dairy coolers and seed stores, unless this is essential to making progress. If you do make major transfers, make sure that these large assets are transferred along with a clear business plan on how the community or an entrepreneur will use and manage the asset over time. This should include costing the use, charging fees for use, so that the asset can be maintained over its useful life and then replaced. These are important enterprise principles to avoid mismanagement, under-use or capture by a local elite.



After a disaster

Following a disaster, farmers may have lost all their assets. In such situations it may be necessary to provide start up seeds, fertilizer and tools packages to help farmers' restart their agricultural production. However, for enterprise groups it is better to avoid hand-outs. If asset transfers are used, any such support measure should be clearly identified as a special start up investment and such types of subsidies should not be considered as a regular annual handout. Farmers who are given seeds, get it once. Where possible give farmers small amounts of improved seed and work with them to multiply this seed and manage it carefully in the future. Essentially, all groups should be formed to achieve a goal that merits a collective effort without having to resort to subsidized monetary incentives.



Should training be free?

Most farmers expect that training will be given for free. However, as projects seek greater scale, they are training local community workers who charge for their training after an initial grace period. It is likely that future development project services will use this process to increase both employment options and build in more sustainability. CRS is already training savings and loans agents to charge for their training and we anticipate integrating the 5 skills set into the local private sector service provider process. Skills set training may be introduced to the community on a no-cost basis at first. In the future, we anticipate the training of farmers will be introduced on a cost basis, where for example, farmers may receive the first 2 skills free, but have to pay for subsequent skills.



Conclusion

This Lesson has covered ways to introduce the idea of self-reliance, agroenterprise and marketing to local people. Because the project focuses on enterprise development, it is important to avoid giving away assets for free. That way the farmers will realize early on that they will have to think in a business way, and make the investments necessary to establish their enterprise and that in the future, they will need to invest to grow their enterprise.

The initial discussions with the community help orient the team members and farmers on what the agroenterprise project aims to do, how it is different from a purely production based project. The focus groups with farmers should start a discussion on product ideas, market risks and what it means to be a farmer marketing group.

The next Lesson looks at choosing an entry point for your work in the community.

Quiz for Lesson 3. Asset transfers and being sustainable

7. A mobile phone would be very useful for the farmers' group to contact potential buyers. But they say they cannot afford to buy one. What should you do?

- A. Give them a cheap mobile phone plus airtime for free.
- B. Give them a cheap mobile phone, but ask them to pay for airtime.
- C. Ask one of the richer farmers in the village to pay half the cost of the phone.
- D. Suggest that the group invest some of their savings in a phone.

Correct answer: D.

8. The farmers need seed and fertilizer at the start of the season, but they do not have the cash to buy them. Here are some possibilities. Choose three of the possible solutions below.

Select all that apply.

- A. Help the farmers organize a savings group so they can invest the money.
- B. Arrange for a local moneylender to loan them the money at a fair interest rate.
- C. Give them money to buy these inputs, but make it clear you will not do so again.
- D. Give them vouchers to pay for half of the inputs they need.
- E. Arrange for the dealer to provide the inputs on credit, for repayment at the end of the season at a guaranteed price.

Correct answer: A, B, E. Each of these approaches has advantages and disadvantages, and the best answer will depend on the particular situation.

9. Match the set of skills to the correct purpose.

- | | |
|--|------------------------------|
| A The farmers have lost their animals in a flood, so the project provides them with some goats | 1 Co-investment of labor |
| B The project provides cement to build a check-dam; the farmers bring sand and stones | 2 Co-investment of materials |
| C The project provides cement, wood and roofing; farmers use it to build a warehouse | 3 Vouchers |
| D The project gives seeds to the farmers | 4 Free handout |
| E The project provides each farmer with a piece of paper that they can exchange for seeds at a supply store. | 5 Post-disaster recovery |

Correct answer: A5, B2, C1, D4, E3

Lesson 4. Deciding where to start the project

In this lesson

After this lesson you will be able to:

- Describe possible entry points for an agroenterprise project.
- Help local people decide on the entry point.

Choosing an entry point



Figure 14. Identifying the best starting point for your project

Where and how to start the agroenterprise process depends on a number of factors. They will be guided by the project document, in-house assessments, and the site assessment.

Projects rarely start from zero. Farmers already grow crops and raise livestock. Traders already do business, markets function, and consumers buy goods and services. Many projects are already running when funds become available to start work on agroenterprise. Even after a severe crisis such as a drought or civil war, markets can rebound very quickly, and support agencies should find ways to rejuvenate marketing systems rather than providing free hand outs or trying to build parallel and subsidized marketing systems.

Below we discuss the various entry points that agroenterprise projects may use.

Table 8 gives a checklist you can use to plan your entry point for your project.

Entry point 1: Production and natural resource management



In some cases it may be necessary to deal with some critical production or natural resource issues before an agroenterprise project can begin. For example, it may be necessary to control erosion or manage water by building dams or bunds before commercial production can begin. Protecting and maintaining soil and water resources is a vital part of sustainable agroenterprise development.

See the 5 skills course on production and natural resources management for more information.

Entry point 2: Start with savings and loans



There is increasing interest in the use of savings groups as a means of organizing farmers before entering into agroenterprise. The first six to 12 months of the project is used to bring together farmers and to build their skills in group and financial management. There are several advantages to this approach. Farmers decide who they want to learn and save with; they generally choose people with a similar level of wealth and outlook. Regular meetings build trust and help them learn basic financial literacy skills. This approach is particularly helpful when working with poor farmers and with women. It may also improve the group's sustainability and increase their prospects of working together in a business environment.

Entry point 3: Pre-selected commodity



Development projects are often based on a proposal where a commodity or product has already been chosen. The starting point in the agroenterprise process is then to strengthen or form farmer groups and develop a business plan for the selected product. This approach skips the market opportunity identification stage to select a product. It enables the agroenterprise team and farmers' group to get to the business planning stage more quickly. The focus of this option is to increase sales of the selected product.

Entry point 4: Pilot testing



Farmers may want to evaluate a new crop or variety before they plant it on a commercial scale. It may be necessary to find ways to lengthen a crop's production season by using irrigation, mulch or plastic greenhouses so that farmers can gain better market prices.

In such a case, consider starting a demonstration pilot project, so that the farmers can see and understand the approach. A successful pilot will allow both the agroenterprise team and farmers' groups to learn about the production and marketing issues of a product before going to scale.

Entry point 5: Support to farmers already in groups, farmers segments



If the farmers are already working in groups, build on them. Start by assessing the groups' skills, markets and access to services. You can then help them upgrade their business linkages, bulk goods to sell collectively, and strengthen the services they need. The focus is to strengthen key skills, such as group management, marketing skills, financial skills; optimize links to existing markets; investigate new, higher-value options; ; and improve links to financial, marketing and business services.

Alternatively, the project may want to target specific types of farmers. For example, the project may want to only work with women farmers, with poor smallholder farmers having access to less than 3 acres of land; livestock farmers, farmers with irrigation. Whatever the criteria, the field agent will need to work with the local community to identify the target farmer segment, set criteria for selection of candidates and hold community meetings that provides an opportunity to meet and register specific types of farmers for the project.

Entry point 6: Existing buyer or contract farming



Sometimes, an entrepreneur, trading company or support agency will seek assistance in supplying a particular product. For example a feed mill, factory processor or an exporter will ask to work with an NGO that is linked with farmer groups to develop the supply of a specific product. In this case, work with the buyers to determine their delivery needs (price, quality, volume, etc.), and help the farmers' groups to increase the quality and competitiveness of their output. Support the farmers to negotiate a fair and sustainable deal that meet the commercial specifications.

Entry point 7: Support for business services



The most important constraint to improving a marketing chain may be access to a particular business service: inputs, logistics, storage, milling, processing, packaging, etc. You can help the farmers develop a business plan that gets them access to such services. You may also consider strengthening local business service firms, or introducing service providers to the project area.

Business services are also a vital part of any exit strategies at the end of the project. To improve the durability of the agroenterprise, make sure that services provided by external agencies are transferred to local business counterparts during the life of the project.

Conclusion

This Lesson helps you decide on your entry point – where to start the agroenterprise approach. You will have discussed these ideas with farmers and selected one or more possible ways to get started.

You will use the insights you have gained more in the next Step, which deals with identifying products and organizing groups.

Quiz for Lesson 4. Deciding where to start the project

10. You are working with a farmers' group that has worked together on pest and disease control, but has never worked on marketing before. What might an appropriate entry point be?

Select all that apply.

- A. Organizing the farmers into a group.
- B. Pilot testing: starting an agroenterprise on a small scale
- C. Helping the group organize a savings and loan scheme in order to build their capital
- D. Increasing their scale of operations.

Correct answers: B, C.

11. A restaurant chain has approached you for help in organizing farmers to grow fresh vegetables to supply it on a regular basis. Do you focus on helping the farmers...

- A. Increase their scale of operations?
- B. Start a savings and loans scheme?
- C. Build an irrigation scheme?
- D. Plan how to supply the product on a competitive basis?

Correct answer: D.

12. Your agroenterprise team is experienced in marketing, but the farmers' group is new, and many members can only just feed their own families. What should you do?

- A. Help the farmers start selling to the market
- B. Organize the farmers to sell in bulk
- C. Develop detailed plans on improving profitability
- D. Help the farmers diversify into specialty products

Correct answer: A.

Staff exercise 2. Choosing an entry point

This exercise helps the project team to work with the community and the community leaders to choose an entry point for the agroenterprise development project and outline their initial activities.

The idea is not to dictate to the local community what they should do, but to evaluate the situation and narrow down the range of possibilities to those that are realistic. There may be only one realistic entry point; there may be several alternatives to choose from; or the entry point may be a combination of several of those considered here. Decisions on the entry point are likely to be decided based on the project proposal document, local conditions and the wishes of the community.

This exercise may take place in stages:

- A discussion with the project team, partners and possibly the donor; and
- Focus groups with target community / communities to collect any relevant information and
- Review of entry points, with additional information from the community, in preparation for a decision on the entry point.

Objective

After this exercise the participants will be able to:

- Identify the most suitable entry points for the team to start helping the local community develop their agroenterprise.

Equipment needed

Large sheets of paper, marker pens

Expected outputs

One or more possible entry points for agroenterprise development efforts.

A list of initial steps to undertake for each of the possible entry points.

Time

2-3 hours with one or more sessions.

Preparation with project team

Write the seven possible entry points (

Table 8) on a large sheet of paper so everyone can see it. Identify important gaps in knowledge about the community that may help influence a decision. Project team may be required to gather information from target community and target farmer types to make a clear decision.

Suggested procedure

1. Bring together the project team and any information you have gathered about the local community.
2. Discuss with the group which of the seven entry points are relevant for the community. Eliminate those that are not relevant.
3. For each of the remaining entry points, discuss the situation in detail, identifying the situation and outlining the preliminary steps the team would need to take in order to use this entry point. Note these on the large sheets of paper.
4. Discuss which entry point is likely to be the most promising. It is likely that you can combine elements of several entry points to come up with the most appropriate approach.
5. Summarize your findings in

6. Table 8.
7. If additional information is required, the team should identify, what information is required, and then a focus group with farmers needs to be done with farmers to gather missing information.
8. Follow on meeting to finalize specific entry point for the project and target farmers.

Questions to stimulate discussion

What decisions have already been made (e.g., in terms of focus on a particular commodity)? What constraints are there (budget, time, staff skills, etc.)?

What major problems do the farmers face? What opportunities might they have for improving their production and marketing?

Are the farmers organized? Might existing groups be adapted to take on agroenterprise activities?

What disadvantaged groups are there in the community (such as women or the landless)? Should they be the focus of the project? How might they be involved?

What types of assistance would the community need? What kinds of investment are required?

In what order should the project activities take place? E.g., should the project select a product first and then establish farmer groups? Or register farmer groups first and then select products?

Will the project begin with a savings approach to groups before working on agroenterprise activities?

Will the project need to invest in some natural resource infrastructure investments prior to starting with production and agroenterprise?

Will the farmers need to increase productivity to achieve surplus produce first, before they can engage with markets?

Notes

If you are working with several communities, you may break the team into smaller groups to discuss each one.

Table 8. Agroenterprise development entry point form

Name of group		Location	Date	Field agent
Entry point	Situation and focus	Identify situation	Outline preliminary steps	
1 Production and natural resource management	Critical natural resource management upgrading or production improvement			
2 Start with savings and loans	Help farmers to learn basic skills in group formation, savings and internal loans. Start agroenterprise after one year of financial training			
3 Pre-selected commodity	Product and market are already selected. Focus is on helping farmers organize and plan how to market this product			
4 Pilot testing	Pilot testing of a marketing process. Scale and investment are limited in first season as learning exercise			
5 Farmers already in groups	Farmers have limited market experience. Focus is on improving their market linkages or identifying new products or markets			
6 Existing buyer or contract farming	Existing buyer or contract arrangement drives the value chain. Focus on supplying the product in a competitive way			
7 Support for business services	Weak business services are main constraint. Focus is on strengthening these services and helping farmers access them			

Step 2. Identifying products and organizing groups



This Step discusses how to identify a shortlist of products and market opportunities to consider for the agroenterprise development process. It shows you how to:

- Lesson 5: Discuss and prioritize product and market options and evaluate their risks and gender implications
- Lesson 6: Select and register farmer groups to work with.

We have combined the selection of products and farmer group as these tasks are typically done together and it is possible to select either products or farmer groups first. At the end of this Step you will have:

- Identified farmers who have agreed to work together on a specific market opportunity
- Worked with farmers to select a product for agroenterprise development.

Lesson 5. Choosing products and markets

In this lesson

After this lesson you will be able to:

- Guide farmers to list the products they grow for food and for sale.
- Help farmers list new products to grow for sale.
- Help farmers assess the risks of various product and market options.
- Describe how to ensure that women can be involved in choosing products and markets.

Choosing a product

What farm product should your agroenterprise development project focus on? Maize or mangoes? Cabbages or cotton? Meat or melons? Eggs or eggplants?

- Perhaps the decision has already been made: the project designers have decided to promote one particular product (see Staff exercise). If so, you can start identifying farmers in the community who are interested in growing the product, and help them form groups to improve their production and marketing.
- But what if the product has not yet been chosen? You need to help farmers form groups and learn how to identify market opportunities.

There are no strict rules on whether it is better to choose a product beforehand or after the project has started. Some donors prefer to have products selected in the project design; others prefer the products to be chosen during the project itself.

Participatory tools used to assess product and marketing options

There are a number of participatory tools that can be used to help evaluate community resources, skills and opportunities, as shown in Table 9. The project team should decide upon which tools are best for gathering information that will help in the task of selecting groups and products. These tools can also be used at other stages in the marketing process, but projects staff should be sure to use only the tools that provide useful information related to agro-enterprise development and marketing.

For more information on participatory tools, see CRS Guide to participatory tools, <http://www.crsprogramquality.org/agriculture/>.

Table 9. Participatory tools to evaluate farmer types and product options

	Why used	Outcome	Time frame
Community resource and asset map	To get to know your clients, their assets within the project area, with information on village resources, assets, and local markets	Gather information on what is produced where and why, and whether there is land that is not in use that could be made use of	1 day
Farmer segmentation	To understand types of farmers, farm sizes, organizations, assets, income, crops, livestock, laboring, or off-farm activities.	Gather information on farmer types, rich, medium and poor farmers, what distinguishes them?	Half day
Crop calendars	To understand what farmers grow during the year and compare labor needs for	Produce a calendar of the basic cropping pattern or system being used in the target	Half day

	existing products and proposed new products	area.	
Product selection criteria	Set up some criteria for product selection, such as: has a good market, price is high, we know how to produce it, we can eat and sell, labor use, # of farmers growing product	Farmers understand voting system and use it to select a product, they can vote by showing hands, or buy putting stones next to pictures of the most desirable option. Voting with hands is quick, voting by stones is more secret and can avoid people being dominated by richer or more powerful individuals.	1 hour
Product ranking exercise	Based on selection criteria, a focus group can identify and prioritize top 5 food and the top 5 marketed products. Repeat exercise in focus groups with specific farmer segments such as men, women, youth.	Identify top 5 food and income crops, Identify how many farmers grow and sell the top 5 marketed products. Come up with 1, 2 or 3 products that the field agent and farmers will investigate in more detail for investment	Half day
Assessing market risk for products	Identify how risky a product is in terms of market options and knowledge of product	Farmers learn how risky a product is for their investments	1 hour
Market visits	To gather information from markets on prioritized products. This process is an essential part of the business planning process.	A visit to the market can confirm the demand for product proposed by the farmers and also identify any new products that were not suggested by the farmers.	1-2 days
New product evaluation	Brainstorm on new products that the farmers would like to produce and why they would like to produce them.	Identify if there are any products that farmers would like to invest in, which they are currently not growing.	1-2 days

Discussing product options with farmers, traders and others





Discuss ideas for marketing products with farmers, traders, extension workers, and others involved in the potential value chain.

- With **farmers**, you can discuss marketing at their regular **group meetings**. It is usually in the farmers' interest to work together, so they will help each other come to a joint decision. See below for how to do this.
- With **traders**, it is best to interview them **individually**. Traders operate their businesses as individuals, so have little interest in cooperating with each other. If you interview a group of traders, they may exaggerate their answers, so it will be hard to get reliable information.
- Also discuss ideas with **extension personnel, local government staff, and service providers** such as input suppliers, banks, NGOs and other development projects. They may be able to provide information and insights into opportunities and challenges.
- You should also draw on information from **other sources**, such as the project document, your preliminary market survey (

- Field exercise 7b), or participatory appraisals.

Identifying market opportunities for products



You can start the process of selecting a product at a meeting with a mixed group of farmers – men and women, large- and small-scale, young and elderly. Based on the results of this group, you can also work with smaller groups (just men, women or young people) to get more detailed information about the specific needs of these groups, if they are your target segment, see Field exercise 5a and

Field exercise 5b for how to do this.

Farmers will probably have diverse views on which product is best. For example:

- Richer farmers may want to invest in larger **livestock** (but poorer farmers cannot afford to buy or keep large animals).
- Farmers with irrigation may want to grow **vegetables** all year round (but farmers with no irrigation may not be able to do so).
- Women may prefer items such as **eggs**, because they can produce and sell them close to their homes and can keep the income.

Products and marketing opportunities for women



In many communities, women do much of the manual farm work. But they tend to have little say in what is produced and sold. Women farmers also generally get less attention than men from extension services. So you should make a special effort to help women directly, looking into their production and marketing problems and opportunities, and giving them new skills.

The general marketing approach is the same for both men and women, but gender may influence the type of product, the scale of operation and type of market.

How to include women in agroenterprise development

- Hold meetings only with women and ask them what products, they could work on where they could keep all or most of the income. Many cultures have products that are considered “women’s products”, to help women farmers you can work on these products.
- Hire women field agents work with women farmers.
- When working with mixed groups, make sure that women have the opportunity to speak. For example, direct questions to them, or separate men and women into different groups.
- If translation is needed, find a woman to act as translator. Make sure the women answer the questions, and not the translator. Make it a rule to ignore any comments offered by a translator, if a translator tries to answer a question themselves, ask them to put the question again to the group members.

- Combine agricultural development with savings and loans activities. These two skills will build their trust and confidence in production, finance and marketing. Women are often more interested in starting with a savings led approach than men.
- Raise women's issues with community leaders.
- Do not try to get women to work on community plots, as this creates an artificial production and marketing situation that will generally fail after the project ends. You can work on a demonstration plot, but get women farmers to work their own land for production and marketing purposes.

Some things to ask women



- Find out what women do in production and sales. Ask them the same types of questions that you ask the men about the crops they grow, and what they produce and sell. Ask them to suggest improvements in production and sales.
- Find out where they get vegetables and fruit for the family. Are there any crops that are normally thought of as women's crops? Would women be interested to work on field or intensive backyard production?
- If you can identify products that are controlled by women, find out if it might be possible to improve the marketing of these products. What business opportunities would suit women's role in the community?
- Explore whether women are members of mixed farmers' groups. Do they have women-only groups? Would it be better to form separate groups from men?

Products and marketing opportunities for men or mixed groups

When selecting products for men or mixed groups, you can repeat the exercise above, but in this case, you can focus on the needs of the men or mixed farming groups. Be sure to ask people about specific crops with market opportunities.

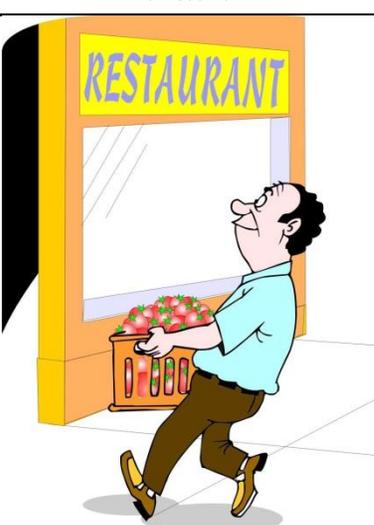
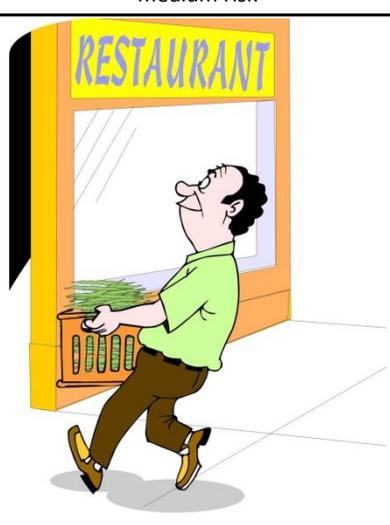
Assessing risks of product and marketing options

All businesses are risky – and agriculture is particularly risky because of variable weather, pest and disease attacks, uncertain markets, and price fluctuations. When selecting product and market options, it is important to consider these risks.

One way to assess risks is using the product/market matrix (Table 10; see also \$\$\$Module 1). This shows the answers to two questions about a particular crop or livestock product:

- Do the farmers already sell the product? Or is it a new product for them?
- Do they already sell it to a particular buyer or market? Or do they want to sell it in a new market?

Table 10. Marketing strategies: The product/market matrix

	Existing product	New product
Existing market	 <p>1 Market penetration lowest risk</p>	 <p>2 Product development medium risk</p>
New market	 <p>3 Market development medium risk</p>	 <p>4 Diversification high risk</p>

There are four possible answers to these questions:

1. **Farmers already sell the product to a particular market.** This is the **least risky** option.
 - **Example:** You could help the farmers increase their yields of cassava (a crop they already grow and sell) to sell at the local marketplace.
2. **They want to sell a new product to an existing market.** This is a **medium-risk** option.
 - **Example:** You could help the farmers sell vegetables (a new crop) to the buyers in the local marketplace. The farmers need to learn how to grow vegetables, invest time and money, and build relations with the local buyers to sell their produce.
3. **They want to sell an existing crop to a new market.** This is also a **medium-risk** option.
 - **Example:** You could help them sell their cassava to a wholesaler in the city. You will have to help them assess market demand for the cassava in the new market, then organize to produce more cassava and transport it to the city, as well as identify and negotiate terms of sale with the wholesaler.
4. **They want to sell a new product to a new market.** This is the **riskiest** option.
 - **Example:** You could help them assess demand for vegetables to be sold into the city wholesale market. This approach is attractive because the returns are much higher. But the risks are higher too. The farmers need to learn new skills, be more organized and build their links to the new buyers. And there may be no secondary markets if that channel fails.

If the advisory team is experienced, the farmers are well-organized and skilled in marketing, and if they have a good relationship with a trader or processor, consider the highest-risk option. Otherwise, it is probably better to start with a lower-risk option. They can move on to riskier options later.

See

Field exercise 5c for how to assess the risk of different products and markets.

Conclusion

This first step in marketing helps farmers identify product and market options they think are interesting and want to explore further. You and the farmers may want to start work on a single product. But they may also wish to learn more about the market prospects of two or three products that they feel have potential. The next chapter will provide you with information about how to investigate market options and make a final decision. You should work with them to explore the most promising opportunities and start developing their agroenterprise skills.

Quiz for Lesson 5. Choosing products and markets

13. You should agree if farmers want you to help them sell a new product to a new market

- A. Correct. You should always agree to what the farmers want.
- B. Not necessarily. First help them consider other options, and point out the risks of being over-ambitious.

Correct answer: B. You should help the farmers consider all the options so they can make an informed decision.

14. The men in the village want to focus on marketing maize, while the women want to sell eggs. Which is the best alternative for you?

- A. Support the men because they are the ones who make the decisions.
- B. Support the women to help them improve their status.
- C. Try to get the two groups to agree on a different product.
- D. Support them to market both products.

Correct answer: D. If it is not possible to reach agreement, it may be better to form two marketing groups, one for maize and another for eggs.

15. When choosing products for marketing, which is the best way to find out the traders' opinions?

- A. Conduct interviews with individual traders.
- B. Hold group interviews with several traders at a time.
- C. Right from the start, invite traders to meetings with the farmers.
- D. It is not necessary to get their opinions.

Correct answer: A. It is important to understand the traders' views and listen to their opinions/ But it is best to talk to traders individually, as they are unlikely to give accurate information if they part of a group.

16. Match these product/market options with the level of risk.

- | | |
|----------------------------------|----------------|
| A New crop, new market | 1 Lowest risk |
| B Familiar crop, new market | 2 Medium risk |
| C Familiar crop, familiar market | 3 Highest risk |
| D New crop, familiar market | |

Correct answer: A3, B2, C1, D2

Field exercise 5a. Choosing Food products and Market products

Teaching Tip: For illiterate farmers, use big pictures of crops so they can contribute to selecting products.

This exercise enables farmers to list the most important products they grow for food, as well as the most important products that they grow to sell.

Objective

After this exercise the participants will be able to:

- Identify the five most important agricultural products the farmers grow for food and the top five they grow to sell.

Equipment needed

Large sheets of paper, marker pens

Expected outputs

A list of the five most important agricultural products they grow for food.

A list of the five most important agricultural products they grow to sell.

Time required

1-3 hours depending on number of people, and groups (men, women, mixed, youth etc...)

Preparation

For some farmers who are illiterate, you can prepare some large pictures of crops that farmers can either point to, or place a stone next to, in a selection process.

Suggested procedure for food crop selection

1. Divide the farmers into two separate groups: men and women. Then ask the members of each group to name and rank the **five most important** products that they produce as **food** for their own families.
2. Ask each group to rank the products in order of importance. They can vote with a show of hands, or put stones next to **pictures of the products** they think are most important.
3. Ask them why each of these products is important. If there is disagreement, stimulate a discussion about the different opinions. For example, perhaps **some farmers do not grow** certain crops that others think are important. List these products and reasons using the form in Table 11.
4. Ask each group to choose the five most important **products they sell**, and to rank them in order of importance. Again, stimulate a discussion if there is disagreement. Find out where and how each product is marketed. List this information in the form in Table 12.
5. In some cases, women may raise the issue of income generation through handicrafts, or petty trading, take this into account, as this maybe something the project can accept as an income generating activity, especially for women who do not have access to land.

Summarize the findings of the sessions and write up a new Table that shows the priority of products they sell, as shown in

6. Table 13.

Questions you can use to stimulate discussion

How many farmers grow each crop or livestock product? How much does each farmer produce (in terms of kilograms or sacks)? Is there enough left over to sell?

How big an area of each crop do the farmers plant? How many animals do they raise?

Is the product something that only rich farmers grow and sell, or is this something that poorer farmers with less land also regularly grow and sell?

Where are the products sold? How far away from the village?

Where do the farmers sell the crops and livestock products? From the farm, the roadside, or in a market?

Do farmers sell together or as individuals?

Who are the main buyers? Are they regular buyers? Or do farmers sell to whichever trader happens to be in the market?

How should the products be ranked? According to market demand, high price, ability to grow the product, or other criteria?

Table 11. Form to list farmers' top five FOOD products

The examples included are for illustration only.

Top five for men farmers	
Product	Why important
1 Maize	Staple food
2 Beans	Important food
3	
4	
5	

Top five for women farmers	
Product	Why important
1 Eggs	Important for health
2 Onions	Flavor in food
3	
4	
5	

Table 12. Form to list farmers' top five MARKETED products (cash crops)

The examples included are for illustration only.

Priority by men farmers	
Product	Where/how sold
1 Maize	Local market
2 Sorghum	Local trader
3	
4	

Priority by women farmers	
Product	Where/how sold
1 Milk	Local trader
2 Tomatoes	Local trader
3	
4	

5	
---	--

5	
---	--

Table 13. Comparing men's and women's marketed (cash crop) priorities

The examples included are for illustration only.

Selected product	Priority by men farmers	Priority by women farmers	Overall priority
Maize	1	5	3
Sorghum	3	4	3.5
Milk	2	1	1.5
Tomatoes	5	2	3.5
Beans	4	3	4.5

In this example, the highest-priority product overall is milk.

Notes

Instead of men and women farmers, consider splitting the farmers into different groups – for example, farmers with and without livestock, or farmers with and without irrigated land.

If you are sure there are no major differences between the opinions of different groups of farmers, do not divide the farmers into groups for this exercise.

Field exercise 5b. Let's think about new products

In some cases, farmers might want to try to sell a new crop, or the technical project team may have new information about a crop or livestock product that farmers are not growing, but can be produced in the area and has high demand. The field team can introduce the idea of new products to farmers which they could produce and sell. This exercise helps them think about the range of products that they may be able to grow and market.

Objective

After this exercise the participants will be able to:

- List products they think they could sell: both those they currently grow, as well as products they do not yet grow but for which there is market demand

Equipment needed

Large sheets of paper, marker pens

Expected outputs

A list of crops and livestock products that farmers think they could grow and sell.

Time required

30 minutes – 1 hour

Preparation

Bring with you the lists of crops and livestock products that farmers currently produce (from Field exercise 5a).

Suggested procedure

1. Briefly review the lists the most important food and marketed products.
2. Divide the farmers into small groups of 5–10 people each.
3. Ask each group to think of a crop or livestock product that they **currently produce** which the market wants and that they could produce more of.
4. When each group has chosen a product, ask them to list the reasons why they would like to grow this product.
5. If the field team has ideas, they can also introduce these products and get a reaction from the farmers about this new product.
6. For a new product ask the groups to think about a **new product** that they do not currently produce at all, but which they could feasibly produce without too much extra investment.
7. Ask them to list the reasons why they would like to grow this product.
8. Ask each group to report back to the plenary about their two choices (Table 14).
9. Stimulate a discussion about the different products suggested. Help the group agree on a shortlist of products to consider further.

Table 14. Form for minor and new crop and livestock products

The examples included are for illustration only.

Currently grown minor product		New product	
Name of product	Reasons for liking	Name of product	Reasons for liking
Onions	Easy to store, good price	Tree resin	Easy to harvest, high demand
Quail eggs	Good market		

Questions to stimulate discussion

Can you grow this crop (or raise this type of livestock)? Do you have the skills and resources? What other skills and resources would you need? How much would it cost?

Where might the new product be produced? On land that is currently under-used? At what time of year? Would it interfere with the production of other crops or livestock?

Is there are market for this product? How do you know? Would it be profitable? Who can we ask to find out about local prices and volumes required?

Field exercise 5c. Assessing risks of product and marketing options

Teaching tip: Start with what the farmers know: their existing products and markets. Then ask about new markets for their existing products, followed by new products in existing markets. End with new products in new markets – the least familiar option.

This exercise helps farmers understand the various market opportunities open to them, using the product/market matrix.

Objective

After this exercise the participants will be able to:

- Put agricultural products into categories according to whether they are existing or new products, and whether they can supply existing or new markets.
- Describe the risks of growing and marketing each type of product.

Equipment needed

Flip chart or large piece of paper, marker pens

Expected outputs

A product/market matrix showing different combinations of products and markets.

For each product/market combination, a list of issues for farmers to consider further.

Time

30 minutes for preparation, 5 minutes per group for presentation

Preparation

Draw a product/market table on a flip chart as shown overleaf.

Suggested procedure

1. On a large sheet of paper, draw the product and market matrix. Ask the farmers to place their top 5 market products, and any new ideas into this matrix.
2. Invite the farmers to consider the various options they have come up with. Ask them to choose the top two or three options in terms of priority.
3. Summarize the discussion by listing the selected products in the product/market matrix shown earlier in (Table 10).

Questions to stimulate discussion

What sorts of risks are associated with each product and market? In terms of production, quality, quantity, storage, processing, transport, marketing, price variation, etc?

Which combination of products and markets do the farmers think would be the easiest and least risky? Which would be the most risky?

Which combination would cost the least (in terms of money, time and effort)? Which would bring in the most income? Which would be most profitable?

Which product? Which market?



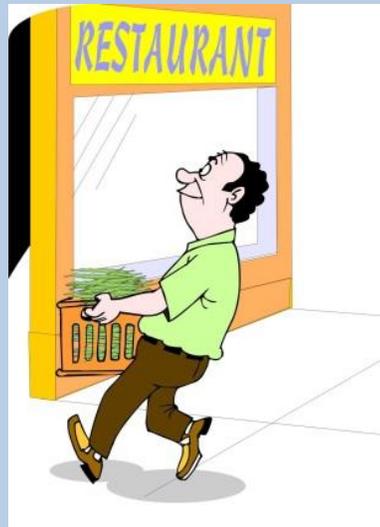
Existing product
Existing market



New product
Existing market



Existing product
New market



New product
New market

Figure 15. Working out the right product and market

Lesson 6. Working with farmers' groups

In this lesson

After this lesson you will be able to:

- Describe the requirements for a marketing group.
- Assist a group to get organized and registered.
- Plan a work program with the group.

Building on existing groups

As a group, we are stronger!



Farmers' groups already exist in many communities. It is a good idea to try to work with such groups as this saves time and builds on local skills. You can work with any type of group on marketing. One of the most frequent is a **farmer field school**, which typically focuses on finding ways to improve yields (for example, by testing new varieties) or to control a pest or disease. Other types of farmers' groups include **adult literacy groups**, **women's groups**, **youth groups** and village **savings and lending** groups.

If there are no viable groups in the community – which is common after an emergency, for example – you may have to help farmers form new groups. The group members however, need to be clear that the project will focus on production and **marketing**. Farmers will have to invest their time and their own money in starting a business. They will need to understand the business mentality. They will not get regular free handouts or be paid to come to meetings. They will work on their own farms (not like in a farmer field school, where members often work on a group farm). Any demonstration plots will be small, and there will be no collective production farming. Farmers will come together to buy inputs and market their products collectively.

Marketing groups produce as individuals but sell their output collectively

See “Marketing Basics” Field exercises 10a – 10c for games that highlight the entrepreneurial spirit among farmers.



Figure 16. Organization of individual farmers to farmer produce marketing groups

Figure 16 shows a situation where a community has farmers who are interested in producing different products for market. In this case the farmers who grow different products are shown with different colored or shaded hats. In discussions with the farmers, the field agents identified the different products and organized farmers into groups, according to the products they wanted to sell into the market. These farmers then work together to collectively buy inputs and collectively sell their surplus production.

Requirements for a marketing group



Here are some guidelines for marketing groups. Table 15 gives a checklist you can use when checking a group's status.

Group size

A group should have between 15 and 30 members – and never fewer than 10 members. This number is manageable, everyone knows each other, and they should trust the other members.

More farmers may want to join, and larger numbers may be needed to fulfill larger market requirements. If the group grows to more than 30 members, it should be split into two or more smaller groups, each with 15–30 members.

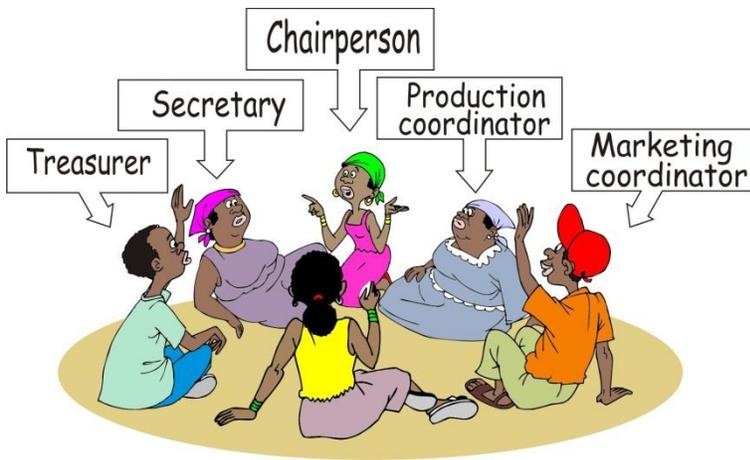
Selection of members

The process of forming a group should be transparent and open to all community members. The members should select themselves, not be appointed or forced to join. The group members should all have a similar culture and economic status. In some cultures, it may be important to have separate groups for men and women.

Vision

The members should establish a clear, shared idea about the purpose of the group, what they expect to gain from it, and what they want to achieve within a certain timeframe – say, 1, 3, or 5 years. These goals may be social or business-related. The members must be clear that they own the group, and that strong groups rely on the principles of purpose, unity and self-reliance. Groups that are not clearly owned by their members are likely to fail.

Leadership



A group of 25 farmers should have some or all of the following officers:

- Chairperson
- Treasurer
- Secretary
- Production coordinator (lead farmer)
- Marketing coordinator.

A person should be nominated and democratically elected by the group members for each of these posts. Each of the officers should be re-elected on an annual basis. The roles and responsibilities of each officer should be clear. The members should audit the performance of the officers at the end of each year. You can help them do this.

Meetings and records

The group should meet regularly to plan and implement each stage in the work. These meetings and the decisions taken should be documented adequately. Investments and profits should also be documented adequately.

Here is one way to divide up the responsibility for keeping records:

- **Chairperson.** Overall coordination

- **Treasurer.** Financial records, membership fees, loans, purchases, sales, payments due
- **Secretary.** Records of meetings, lists of members, constitution, bylaws, business plan
- **Production coordinator.** Production targets and actual production figures
- **Marketing coordinator.** Marketing targets, profits and actual amounts sold.

Bylaws



The group should decide upon its own bylaws, and all members should understand them well. They should cover aspects such as the number of members allowed in the group, the level of membership fees, the frequency of meetings each month, how officers are elected, the duration of posts, how to share costs, how records will be kept, etc. They should also state what action should be taken when a member does not comply with one of these rules. Penalties are generally in the form of small fines. If a member does not attend three meetings in a row, he or she may be asked to leave the group.

Constitution



The group should have a written constitution. Many service providers have standard formats for such documents. They cover aspects such as the group name, list of members, purpose of the group, vision, bylaws, membership fees, share costs, rules on how to hold meetings, record-keeping procedures, financial procedures, banking details, penalties, and monitoring or performance appraisal methods. In many countries, a formal constitution is required to register an organization with the authorities and to open a bank account.

Business plan



The group should develop a basic business plan. This should give the product type, production plan, financial investments and costs, the target production volume and quality, the target sales price and target buyer(s). The business plan should include sections related to pre-production, production, post-harvest, marketing, and monitoring and evaluation. The business plan should be accompanied with an implementation plan, which provides details about who does what in the production to marketing cycle of a product. Each new business venture, or investment in a product value chain, should be supported with a new business plan.

Helping farmers develop a business plan is a key aspect of the agroenterprise development process. We will cover this in detail in Step 4.

Internal savings and lending



Agroenterprise groups should have access to a system where members save money into a common pool that can be lent out to other members at interest. This enables the group to generate capital, reduce the members' vulnerability, strengthen the group's capabilities, and enables members to learn financial responsibility and financial management skills.

Relationship with the support agency

The members should have a clear view of what they should expect from the support agency. Before the facilitation begins, both the group and the support agency should be clear about their roles,

responsibilities and aims. The group members should realize that the support agency will not provide handouts, but will help them improve their ability to produce and market their products.

Table 15. Checklist of requirements for marketing group

Name of group		Location	Date	Field agent
Category	Things to check for	Achieved?	Notes	
Group size	15–30 members	?		
Members	Self-selected	?		
	Similar backgrounds	?		
Vision	Clear business goals	?		
	Strong unity of purpose	?		
	Strong sense of ownership	?		
Leadership	Elected positions	?		
	Regular elections	?		
	Members evaluate performance	?		
Meetings and records	Regular meetings	?		
	Decisions documented	?		
	Financial records in order	?		
Bylaws	Rules clear and agreed	?		
	Rules enforced	?		
Constitution	Written constitution	?		
Business plan	Business plan prepared	?		
	Business plan followed	?		
	Review at end of production cycle	?		
	Plan adjusted as needed	?		
Internal savings and lending	Scheme established	?		
	Savings generated	?		
	Loans disbursed	?		
	Loans being repaid	?		
Relationship with support agency	Clear understanding of relationship	?		
	Regular meetings	?		
	Trust established	?		

Registering the farmers' group

Once the group has been formed (or an existing group has agreed to take part in the project), it must be registered with the project. This is necessary so the project can provide services to the group and monitor progress.

Use Table 16 to gather the information needed. An online version is available at \$\$\$\$. In addition, you may also have to advise the group how to register with the government so it is officially recognized and can open a bank account.

Table 16. Farmers' group sign-up sheet

Name of group	Location	Date	Field agent
The farmers' group			
Registration (tick one)	New group <input type="checkbox"/>	Existing group <input type="checkbox"/>	
Name of group			
Country			
District			
Village			
Diocese			
Phone number of group			
Number of members	Male:	Female:	Total:
New group?	<input type="checkbox"/>		
Year group was formed			
Year group started work with CRS			
The area where the group farms (from GIS)			
Elevation (meters)			
Longitude (decimal degrees)			
Latitude (decimal degrees)			

Planning your work with the group

Your work with the farmers' group will consist of several types of activities:

- Training and coaching
- Facilitating activities
- Monitoring and information gathering

In a short (2-year) project, you should provide support to the farmers regularly throughout.

In a longer project of 3 years or more, you can organize your support in three phases:

- An **intensive start-up training period** (first production cycle)
- A **coaching period** (second production cycle),
- A **consolidation period** when you provide training intermittently or on request (third and subsequent production cycles).

This training plan pattern enables you to transfer your attention to other farmers' groups after the start-up period.

When you start working with a group you should visit each farmer group at least once a week, for 1–3 hours. The regular visits let you get to know the farmers, learn about their farming systems, help them identify marketing opportunities and plan their agroenterprise, and follow up on their progress.

Designing a curriculum

For each farmer group you will need to develop a training timetable or curriculum. **Table 17** lists some topics to discuss at each stage in the production and marketing cycle. Adjust this to suit the particular product and situation.

Table 17. Key issues to address at meetings with farmers' groups

Time	Purpose	Output
Before production (market)	Identify product Analyze and plan marketing Analyze and plan production Analyze and plan finance Analyze and plan business support Develop a business plan Plan implementation	Business plan Implementation plan
Before production (crop)	Ensure that inputs are available Agree on when to plant, how to plant and how to manage the crop	Crop established
During production	Review crop performance	Estimate of likely output
At and after harvest	Review harvesting plans, availability of required inputs and storage facilities Train on harvest and post-harvest handling – threshing, sorting, storage, packaging, etc. Facilitate contacts with traders to confirm intention to purchase and negotiate price	Crop harvested, threshed, sorted and stored Volume and quality for sale recorded Plans for sale confirmed
Marketing	Accompany sales process Advise on time of sales, market information, volumes to sell, etc.	Product sold Record of volumes and prices
After marketing	Evaluate production and marketing experience and results Support gross margin analysis and profit share-out Plan for next production cycle	Learning and new ideas Business plan for next cycle Implementation plan for next cycle

Some groups are much stronger than others: how to share time?

However good your training and coaching, some groups will fail. It is better to focus your attention on those groups who are motivated and interested in investing their time and money in the developing their agroenterprise.

Some support agencies have clear rules on providing free market training: if members do not turn up to the meeting, they pay a fine. If the group does not make an effort to achieve its targets, the group is dropped. This approach puts responsibility onto the group to focus on the goals. It is your job to provide them with effective support that both meets their business needs and motivates them.

Be prepared to set rules, and to drop farmers' groups who do not comply

Challenges with farmer groups



In some situations, farmers can gain little from joining a group, but may still be able to benefit by learning new methods and improving their marketing as individuals. You should be open to the possibility that groups are not always going to provide additional income gains.

In addition, groups may fail for many reasons. Some examples of group problems include:

- **Highly dispersed population:** people cannot meet to share ideas and plan or invest in an effective manner.
- **Poor governance:** weak rules, poor leadership, lack of record keeping, mismanagement of funds.
- **Dominance** by the rich and powerful, or by a particular tribe or ethnic group.
- **High market access:** where farmers do not need to bulk their products in order to access the market.
- **Low barriers to entry** within a specific market, for example farmers are all near to the market and can easily get there to sell their produce, so forming a group to sell produce confers no real income gains.

If it is clear that farmers will gain little from marketing collectively, it may still be useful to train them in groups. The members can then use what they have learned to improve their marketing as individuals. It is much more efficient for a field agent to train a group of people on a regular basis, than try to teach many individuals.

Conclusion

This Lesson has focused on the characteristics that farmers' groups need for marketing and enterprise development, and how to register them and plan your work with them.

It has not tried to cover all aspects of forming and strengthening groups. See the module on \$\$\$ for details on how to do this.

Marketing groups can in some ways be easier to facilitate than other types of groups because the members are committed to a single purpose – making a profit from their agroenterprise.

Quiz for Lesson 6. Working with farmers' groups

17. How many members should a marketing group have?

- A. 5–15
- B. 15–30
- C. 30–50
- D. As many as possible

Correct answer: B. If the group has more than 30 members, consider splitting it in two.

18. The marketing group already has a chairperson, secretary, production coordinator and marketing coordinator. Which vital position must it still fill?

- A. Treasurer
- B. Deputy chairperson
- C. Communication coordinator
- D. Auditor

Correct answer: A. The group may also want to fill the other positions, but the treasurer is vital.

19. Match each of these documents with the correct description.

- | | |
|-----------------------|--|
| A Constitution | 1 Notes of who attended and the decisions made |
| B Bylaws | 2 The ground rules of the farmers' organization |
| C Records of meetings | 3 The smaller rules that govern how the organization works |
| D Business plan | 4 A description of how the enterprise will work |

Correct answer: A2, B3, C1, D4

Step 3. Collecting information for the business plan



Figure 17. Gathering data 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). The key areas of information to be gathered include (i) market information, (ii) production information, (iii) financial information, and (iv) 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

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 and the **demand** for a product, we need to be sure that all the field agents are collecting information that is in standard weights and measures.



Figure 18. Standard weights and measures allows us to compare products and sales

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 are 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 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, 50kg 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 Field exercise 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

Field 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 to 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 in the answer. 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. **Field exercise 7c** describes how to go about this.

In many cases, the information collected in the survey will be incomplete, and some additional information is needed. 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? What was scary?

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.

Table 18 summarizes a market survey by farmers in Uganda.

Table 18. Results of a survey conducted by farmers in Soroti market, Uganda

	Rice
Buyer	Ben Ophrah
Telephone number	204-234-XXXX
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 broken
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

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)?

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.

Figure 19. As supply goes up, prices tend to fall

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 than 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 for Lesson 7. Market analysis

20. “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.

Correct answer: B. Standard measurement systems are important because they allow unambiguous record keeping.

21. 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.

Correct answer: B. A small group that the farmers select themselves is probably the best option.

22. 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.

Correct answer: B. The map shows the location of the different actors (e.g. producers, traders, processors and consumers, input dealers and other service providers). It can show several actual and potential markets, as well as the prices of the product at each stage when it is sold.

Field 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

Bring with you the map of resources and assets drawn in \$\$\$\$. 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 (see Figure 20).
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.

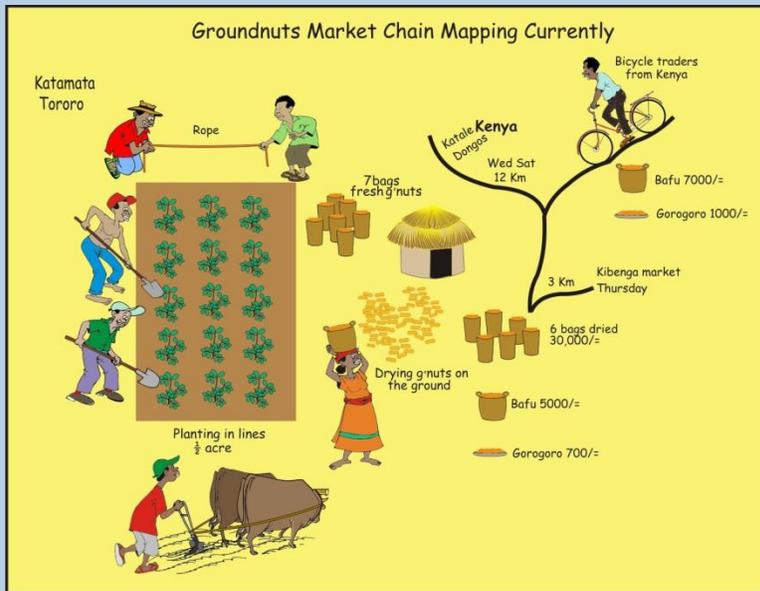


Figure 20. Market map drawn by farmers for groundnut in Embu district

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.

Field 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. **Choose 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 (**Field exercise**) 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

1. **Visit the market** with the team of farmers. Make contact with any market officials, to tell them what are you 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.
2. **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.
3. **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.
4. **Afterwards,** collate the information you have collected so you can analyze it and present it (see **Field 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 inaccurate 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?	

Field exercise 7c. Analyzing market information

This activity is based on and follows immediately after the market survey (

Field 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

Field 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 or 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) <input type="checkbox"/>				New (farmers do not produce this product) <input type="checkbox"/>			
Is this a new market?	Existing (the farmers already sell here) <input type="checkbox"/>				New (the farmers do not yet sell here) <input type="checkbox"/>			
What farmers do now								
Where do the farmers sell? (Tick all that apply)	Farm gate <input type="checkbox"/>	Local market <input type="checkbox"/>	District market <input type="checkbox"/>	Processor <input type="checkbox"/>	National market <input type="checkbox"/>	Super-market <input type="checkbox"/>	Export market <input type="checkbox"/>	Other <input type="checkbox"/>
What is the current marketing chain? (Tick all that apply)	Farmer <input checked="" type="checkbox"/>	Collector <input type="checkbox"/>	Local trader <input type="checkbox"/>	Traveling trader <input type="checkbox"/>	Processor <input type="checkbox"/>	Wholesaler <input type="checkbox"/>	Retailer <input type="checkbox"/>	Consumer <input type="checkbox"/>
What is the price of product?	Main season			Off season			Now	
How much product does the	Amount per farmer per season				Total amount for group per season			

group sell?								
What farmers hope to do in the future								
What is the target market?	Farm gate <input type="checkbox"/>	Local market <input type="checkbox"/>	District market <input type="checkbox"/>	Processor <input type="checkbox"/>	National market <input type="checkbox"/>	Super-market <input type="checkbox"/>	Export market <input type="checkbox"/>	Other <input type="checkbox"/>
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 <input type="checkbox"/>	Medium <input type="checkbox"/>	Low <input type="checkbox"/>	Rising <input type="checkbox"/>	Stable <input type="checkbox"/>	Falling <input type="checkbox"/>		
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 <input type="checkbox"/>	Handshake <input type="checkbox"/>		Agreement <input type="checkbox"/>		Contract <input type="checkbox"/>		
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.

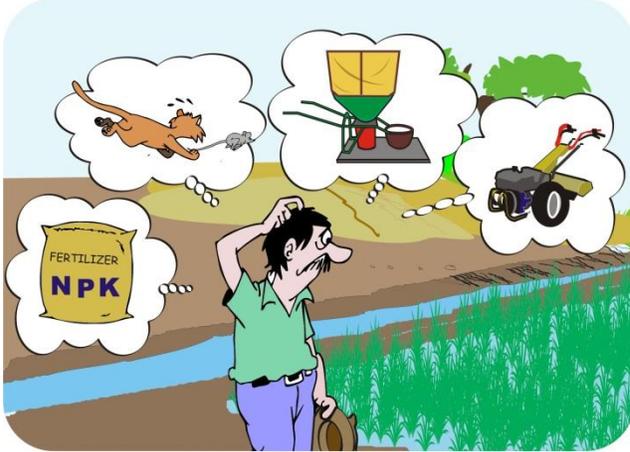
Lesson 8. Analyzing production

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. You can help them:

- 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. **Field exercise 8a** gives one way to do this.

See also the course on **sustainable production and natural resource management** \$\$\$ 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 for Lesson 8. Analyzing production

23. Match the strategy with the correct timing.

Strategy	When?
A Preparing seedlings	1 Before planting
B Regular weeding	2 After planting
C Bulking produce	3 After harvest
D Storage	
E Greater land area	

Correct answer: A1, B2, C3, D3, E1

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

Strategy	Disadvantage
A Regular weeding	1 Water not available
B Increase land area	2 Takes a lot of work
C Irrigate	3 Cost of seed
D Plant new varieties	4 Land needed for other crops

Correct answer: A2, B4, C1, D3

25. The farmers' group is considering ways to increase their income. Which of the following will promises to increase the output, and which will increase the product price?

Strategy	Advantage
A Selling in bulk	1 Increases output
B Regular weeding	2 Increases price
C Increase land area	3 Increases both output and price
D Processing	
E New crop variety	

Correct answer: A2, B1, C1, D2, E3

Field exercise 8a. 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 ?				Improved ?				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 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.

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 Introductory Guide Field lesson 4) and also avoid being a “Father Christmas” as outlined in the asset transfer section, (ref, \$\$\$)

Here are some ways to evaluate these 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 (Field exercise 9a).
- Interviewing farmers and service providers (you can help the farmers' marketing team do a survey similar to the market survey in

- **Field 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 them and how much they cost. 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 is 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 cut into profit, so remove all but essential costs.
- 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 **Field exercise 9a**, 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.	→	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 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 US\$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.

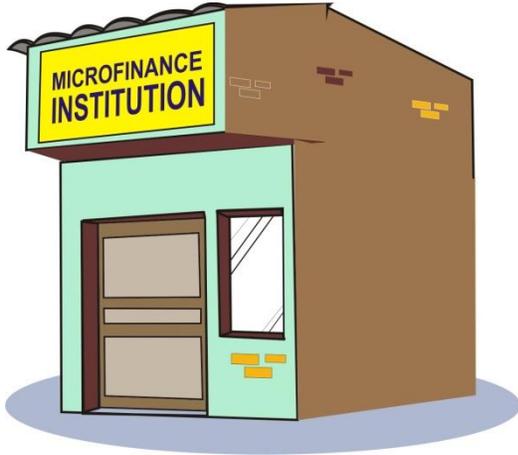
Savings groups. By saving, groups of farmers can reduce the costs of investing in their agroenterprise. They pay a small amount every week into a common pot. The treasurer keeps a record of how much each person has saved. At the start of the season, the money is distributed to the members so they can 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 for Lesson 9. Surveying and fostering business services

26. Which of the following are business services?

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

Correct answer: A, C, D, E, F, G. The trader (B) is a core chain actor as he or she takes ownership of the product.

27. 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.

Correct answer: A, C.

28. 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

Correct answer: E.

29. 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

Correct answer: B.

30. 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

Correct answer: A

31. 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

Correct answer: C

Field exercise 9a. 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 take a fresh sheet of paper, and redraw the market chain, 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)? 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?

Table 23. Business services needed for production and marketing

Product type							
Stage	Type of service	Priority 1 = essential 2 = desirable 3 = not needed	Supplier exists? Yes No	Distance km	Capacity of service 1 = strong 2 = medium 3 = weak	Cost Free Paid	How 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						
Marketing	Telephone						
	Transport						
	Finance						

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 for the business plan.

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.

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 with these calculations and also shopkeepers can help farmers.

Where to get financial information

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

Farmer records

By far 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 or field workers do this – so the information will not be available, and 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 decisions.

Researching and verifying information

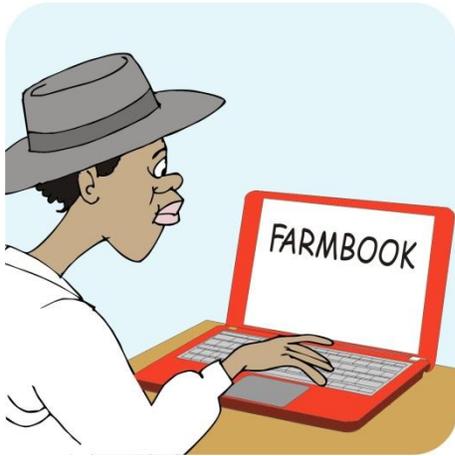


If you do not know a farmer, you will find that in first interviews, farmers often give false information on costs and income. Some do not want to share information that they think is sensitive. Others are not sure of the real figures, so guess.

So be careful when recording information. Ask clear questions, double-check the answers, and probe if you are not convinced. Discard figures that are obviously wrong, inflated or misleading. You can get help on this work by doing two things.

- Before you ask your farmers about their costs, visit a lead farmer in the area and ask him / 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.
- It is also very helpful to visit an agri-dealer 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, input costs.

Gathering information on costs of production



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.

Farmers may be embarrassed by these 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. If the farmers are all illiterate, ask them to bring along a relative who is literate and numerate.

See **Field exercise 10aa** 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 www.farmbookhub@crs.org or go to www.farm-book.biz.

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, it can be helpful to 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 a field agent is working with many farmers within a number of groups it will take a long time to create individual cost data for everyone. To accelerate costs estimates with many farmers, the field agent can gather information from a number of representative farmers and then use this sampled information to generate approximate costs for other farmers in a farmer group.

For example, a field agent can gather information from 3 farmers, take an average of this information and then use the average costing information to estimate the costs of other farmers based on their area

of production for the same crop, in the same location. However, when creating these types of estimates, the field agent needs to think about the way sample information is taken.

Sampling: If you want to use sample farmers as a means to estimate costs for other farmers, you will need to use a sampling method to generate an average set of values that can be used to estimate costs for others.

Sampling similar farmers in a group: in some cases farmers in a group may be relatively similar in the types of technologies they use for production and the land area may not vary very much between farmers. In this case, the sampling can be based on the average costing of 3 representative farmers. The sample farmers can be selected based on their land area. A selection can be made in a number of ways, including a selection of the “**mode**” farmers, or by using selection methods that choose the “**mean**” farmers, or by selecting the smallest, middle and largest farmers and then taking an average.

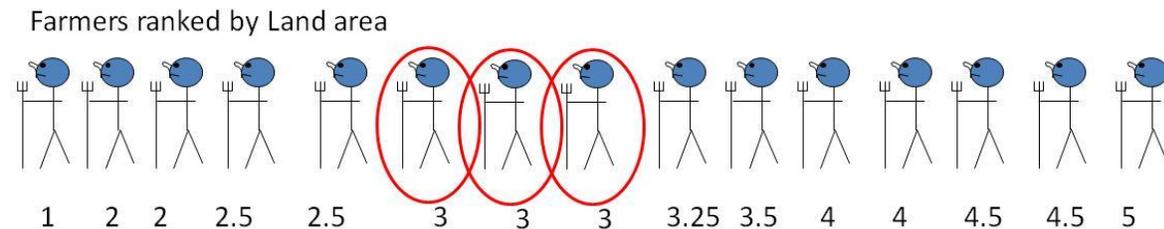


Figure 21. Farmers selected from the group according to farm size

[GRAPHIC 7S 084: REDRAW DIAGRAM ABOVE: 3 selected farmers: Farmers in a row with selection of the mode farmers based on their land area.

Jargon buster: the "mean" is the standard idea of "average", to get a mean from a series of numbers, you add up all the numbers and then divide by the number of numbers. The "median" is the "middle" value in the list of numbers. To find the median, write down your numbers in numerical order and then find the number in the middle. The "mode" is the value that occurs most often.

Conduct individual cost interviews with the three selected individuals based on their actual area of production. Based on their costs of production calculate these costs on a unit area basis and then calculate an average costing per unit area.

Use the average cost of production per unit area, for example per acre, to estimate the costs for each of all the farmers in the group by multiplying the average costs per unit area, by the size of land that each farmer is going to produce that season. When you add up the land area to be sown to a specific crop, you can multiply this by the average costs per unit to get the total costs for the group as a whole.

Sampling from different types of farmers in a group: Use caution when making your samples. In some cases, farmers in a group may use different types of technology and this may cause large differences in the land area they farm and their cost structures: examples of this includes farmers who use difference types of technology, such as farmers who use irrigation or not, or another case where some farmers use fertilizer at recommended dosage levels, versus farmers who never use fertilizer. In another case you may find most farmers in a group have 1-2 acres of land to farm but a few farmers have 10 acres of land, these two sets of farmers are likely to have very different costs structures for their production. In such cases, using average data from highly heterogeneous farmers may not generate useful information on costs for the other non-sample farmers.

Solution: In this case, you may need to divide farmers into sub-groups. For example you might select groups of farmers who have more than 5 ha of land and farmers who have plots of less than 2 ha. Work

out costs for sample farmers within these two categories, you will need to create two sets of average information for production costs for each set of farmers.

When calculating costs for the non-sample farmers in each group, you will first need to categorize them into your sub-sample groups before calculating their respective costs. Once you have the averages for the two groups, you can multiply the area of production by the average cost values of the sub-sets of farmers. In this case, the average of the larger farmers is used to estimate costs for non sample farmers with farms above 5 ha; and the average for the farmers with less than 2 ha is use to estimate costs for the other non sample farmers with less than 2 ha of land.

In addition to land area, another type of selection process within a group, could be based on the types of technology farmers use, such as, sub-group 1, includes all those farmers who use hybrid seeds and fertilizer, versus farmers in sub-group 2 who use no inputs;

In some cases the major differences of farmers within a group may be caused by their water management, for example in a tomato producer group, one sub-group 1 may include all those farmers who use irrigation versus sub-group 2 which includes farmers who rely on rainfed production.

In situations, where there are major differences in farmers within a group, develop an average costing for the major sub-groups within a group and then use the most appropriate average costing to create estimates of costs for non sample farmers who fall into the different categories.

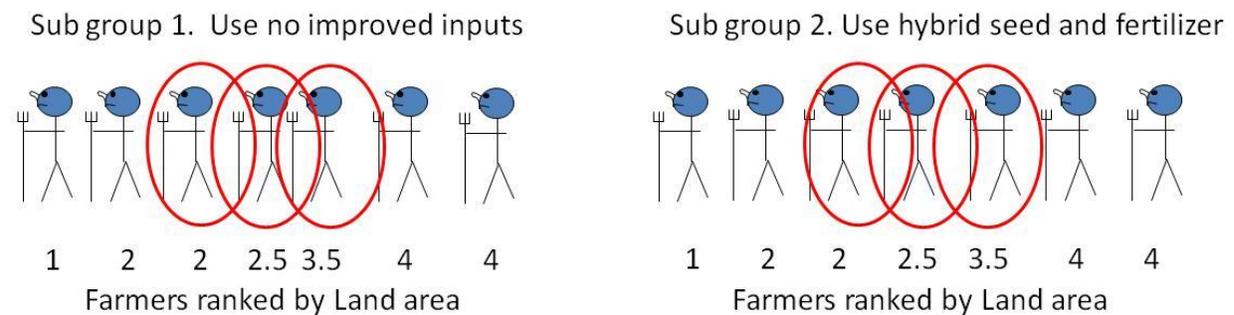


Figure 22. Farmers selected from the sub-groups based on farm size

[GRAPHIC 7S 084: REDRAW DIAGRAM ABOVE: 3 selected farmers: Farmers in a row with selection of the mode farmers based on their land area.

Cost of materials

To get the costs of production the field agent should talk with an individual farmer. This next section gathers information through a series of interviews. The interview process will build up costs of materials and labor required to produce a target crop, within a defined area. The following costing deals with gathering information from a maize farmer in Tanzania, based on the costs of producing 1 acre of maize.

The interview begins with information about consumable materials used, as shown in Table 24, then moves onto durable material costs, before gathering information on labor costs.

There are two main types of costs: **material costs**, and **labor costs**. First, let us look at the material costs.

Material costs include two types of items: **consumables** and **durables**.



Figure 21. Working out costs of materials

Consumable materials: things that get used up in the production cycle or year. These include the costs of renting land and buildings, hiring equipment, irrigation water, seed, 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.

Table 24. Example of estimating material costs

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

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



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

For example, if an irrigation pump costs US\$ 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. Costs for a plow will not change for modest increases in farm sizes such as 1 to 2 acres, whereas consumable costs increase incrementally with land area.

Table 25 shows an example of calculating the costs of durable items.

Table 25. Example of estimating costs of durable items

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

Durable items	Units	Quantity A	Price per unit B	Years used C	Cost per year A × B / C
Plow	Item	1	100.00	10.00	10.00
Hoes	Item	2	6.00	4.00	3.00
Machetes	Item	2	9.00	3.00	6.00
Baskets	Item	5	1.00	5.00	1.00
Storehouse	Building	1	300.00	20.00	15.00
Mobile phone	Item	1	25.00	5.00	5.00
Total cost of durable items per year					40.00

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.

$$\text{Total material costs} = \text{consumable materials costs} + \text{durable material costs}$$

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

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, bird watching, 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 labor 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. So 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 amounts for this.

See Table 27 for an example of calculating the cost of labor.

Table 27. Example of estimating costs of labor

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

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								
	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
Post-harvest costs								
	Harvesting	2	2	2	2	4	4	8
	Drying, sorting	0	6	2	2	0	12	12
Total post-harvest costs						4	16	20
Marketing costs								
	Transport	0	4		2	0	8	8
Total marketing costs						0	8	8
						Hired	Family	Total
Total labor costs						16	54	70

Total costs

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

$$\text{Total costs} = \text{Material costs} + \text{Labor costs}$$

Table 28. Total costs

1 acre of maize, Sanya Juu, Tanzania. Currency: Dollars

		US Dollars
Total materials costs (consumable and durable)	A	130
Total labor costs	B	70
Total costs	C = A + B	200

Field 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 farmers have calculated the costs of producing and marketing a particular product, they 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.

Table 29. Estimating income (one-time sale)

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

Income	Date sold	Unit	No. of units	Price per unit (US Dollars)	Income
			A	B	=A+B
Sale of maize	15 th August	90-kg bags	15	28	420
Total income					420

In some cases a farmer may have written down the values they received for the sales of their produce in the previous year. You can use this information also. In this case the farmer sold his grain in three separate sales, add them together to obtain the total revenue (Table 30). It is best to use average information on production levels and prices from the last few years.

For production, you can check what a farmer is saying against the national 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 for the estimates.

Table 30. Estimating income (multiple sales)

1 acre of maize, Sanya Juu, Tanzania. Currency: Dollars

Income	Date sold	Unit	No. of units	Price per unit (dollars)	Income
			A	B	=A+B
Sale of maize	5 th August	90-kg bag	5	27	135
Sale of maize	15 th August	90-kg bag	5	28	140
Sale of maize	30 th August	90-kg bag	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).

Table 31. Estimating profit

1 acre of maize, Sanya Juu, Tanzania. Currency: Dollars

		US Dollars
Total income	A	420
Total materials costs	B	130
Total labor	C	70
Total costs	D = B + C	200
Profit (gross margin) per acre	A - D	220

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.

Family labor



Farmers often do not count the cost of family labor. But it is important to do so when planning an agroenterprise as labor needs change for example:

- One enterprise option such as tomatoes, may require a lot more labor than another enterprise option such as maize.
- Certain members of the family (especially women) may be burdened with more work.

- 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.

Table 32 shows how to estimate the profit ignoring the cost of family labor.

Table 32. Estimating profit excluding family labor

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

		US dollars
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

Multiple harvests

It is relatively simple to calculate the costs, income and profit for some types of products. Maize, for example, grows and is harvested in a single season but can be sold on multiple occasions.

Other products are more complicated:

- Vegetables can be planted and harvested several times in a season with multiple production cycles and sales.
- 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. 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 milk take more than a single season to start producing, then continue producing over a number of years. The farmer must pay many of the costs up front, then wait for the trees to grow or the cows to mature. Two useful methods for calculating profitability over a number of years are the **net present value** and the **internal rate of return**. Microsoft Excel can calculate these for you.

Growing for food and income

Many farmers try to grow all the food they need, and then sell any surplus; for example, in the major maize growing areas of Africa, 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 retained on farm. If we use the data from the previous example, but this time, consider the food security needs of

the family; then from this 1 acre calculation the family retains 10 bags with a market value of US\$ 280. They sell 5 bags with a market value of US\$ 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 US\$ -6 dollars.

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. But they are not making a profit with such low yields and a small plot size.

Table 33. Estimating profit with household consumption

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

		US Dollars
Total income from sale of all 15 bags	A1	420
Value of 10 bags retained on farm	A2	280
Total income from sale of 5 bags	A3	140
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	A3 – D	-6

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. This approach comes with a major caveat that when planting on additional land, this often means using more marginal, less fertile land 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 the use of best agricultural practices. This generally means a combination of increased use of technology, which requires investing in things like seed, fertilizer, irrigation or equipment and 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

Rather than planting more maize, to increase overall profitability of the farm, an 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. This can be achieved by use of specific innovations such as, micro-dosage of fertilizer, which can be lower costs than broadcast fertilizer; better use of water resources, to ensure crops do not suffer from drought, in some cases spraying herbicides can reduce the labor costs required 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. For more on this aspect, see Chapter 11 for details on the cost of borrowing money.

Off-farm employment

Increasing populations over the past 30-40 years has meant that as average plots sizes have declined. For millions of farmers, particularly those with less than 3-4 hectares (7.5 – 10 acres) they have insufficient land to farmer grain crops at a commercial scale. For farmers with less than 1 hectare (2.5 acres), farmers may not be able to make ends meet. These farmers must find additional off –farm forms of income generation. Off-farm incomes may include providing labor to neighboring farms, working in a shop in the local village, or working on construction sites. Given the expected increases in populations over the next 20-30 years, millions of rural people will need to find off-farm work.

Comparing among farmers

Farmers face many challenges, particularly smallholders, but 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 good farmers manage their money to increase their production and income. Making comparisons between good farmers and others, is often called “benchmarking”, as you collect information on different farmers, try to find good farmers that you can use as a benchmark with farmers who are learning to improve their business.

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 has covered 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 for Lesson 10. Tools for financial analysis

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

Correct answer: A2, B1, C3, D1

33. “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?”

Correct answer: B, D. Many farmers will be skeptical and suspicious of you at first. Explain why it’s important to keep track of costs , and help them do so.

34. 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.

Correct answer: C. She took a total of 7 days, multiplied by Rs 30 per day = Rs 210 for half a hectare. Multiply by 2 because she farms half a hectare: Rs 420.

35. A farmer calculates that to grow 5 quintals of teff, he must spend a total of birr 1500. 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

Correct answer: B. Five quintals x birr 1,200 per quintal = birr 6,000. Minus birr 1,500 in costs leaves birr 4,500 in profit.

Field exercise 10a. Calculating costs of production and marketing

This Exercise guides the farmers through the task of listing the costs of materials and labor, and helps them calculate the cost of materials. This Exercise is designed for a focus group of up to 8 farmers. You can 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 and 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 35 and Table 36:

$$\begin{aligned} \text{Total costs} &= \text{Consumable material costs} \\ &+ \text{Durable items cost per year} \\ &+ \text{Labor} \end{aligned}$$

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					
Post-harvest					
	Bags				
Total post-harvest costs					
Marketing costs					
	Transport to market				
	Market fees				
	Communications				
	Other				
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								
Post-harvest costs								
	Harvesting							
	Drying							
	Threshing							
	Storage							
Total post-harvest costs								
Marketing costs								
	Packaging							
	Cleaning							
	Sorting / grading							
	Produce to market							
Total marketing costs								
Total labor costs								

Field exercise 10b. Calculating income and profit

This Exercise uses the information generated in **Field 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 **Field 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 **Field 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	$C - D$			

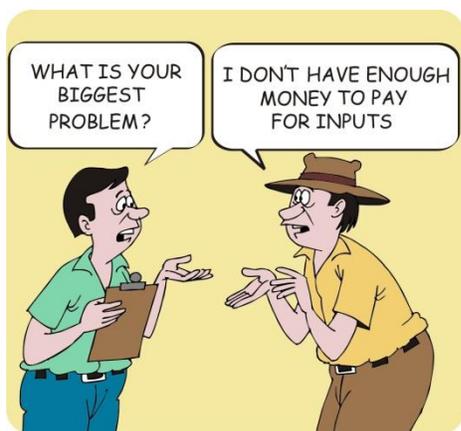
Lesson 11. Deciding on credit

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.
- Help farmers choose an agroenterprise.

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, often require references, some form of collateral or credit history; and 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. Moneylenders are a major source of finance. Talk to the moneylenders 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

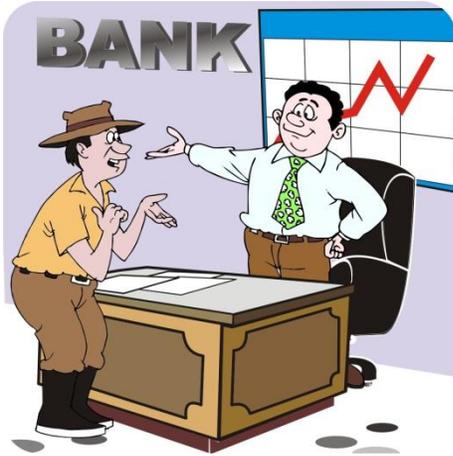


Here are some important words to know:

- **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		US\$ 100
Interest rate	10% per month	\$10
Loan period	4 months	4
Total interest due (the cost of the loan)	$US\$ 100 \times 10\% \times 4$	US\$ 40
Total to repay at end of loan period		US\$ 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, at storage time. The value of the multi-phase loan as that farmers get funds when they need it, which reduces funds being spent on unintended needs, and farmers only pay interest when the various portions of the loan have been disbursed, which saves them on interest payments.

Should farmers borrow?



Farmers should not borrow too much money, as they may find it difficult to repay, or they will eat up all their profits in loan repayment. But if they borrow too little, they will not be able to buy production 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, disease or is eaten by animals, 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 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):

$$\text{Amount of money needed} = \text{Total costs} - \text{Amount of money available}$$

Table 39. Estimating the amount of money a farmer needs

1 acre of maize, Tanzania. Currency: Dollars

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

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 “**loan cost**”

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

$$\text{Cost of loan} = \text{Amount of loan} \times \text{Interest rate per month} \times \text{Number of months}$$

The amount to be repaid is the interest (the cost of the loan) plus the amount borrowed (the principal).

$$\text{Amount to be repaid} = \text{Amount of loan} + \text{Cost of loan}$$

Table 40. Calculating the cost of a loan

1 acre of maize, Tanzania. Currency: Dollars

Amount of loan	D		116
Interest rate per month	$E = D \times 10\%^*$	10% per month	11.6
Number of months	F	4 months	
Cost of loan	$G = E \times F$		46.4
Amount to be repaid	D + G		162.4

* This rate is fixed by the lender.

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?

Table 41. Calculating gross margin of 1 acre of maize

		Yield (100 kg bags)	Costs of production	Income	Gross margin
	Columns	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

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 produces least.

Now look at the costs of production (column B). The costs of using fertilizer are higher too – 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 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 US\$ 66. Without fertilizer, she earns US\$ 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 US\$ 146, but could be expected to produce a yield of 15 bags an acre, and an income of USD420, giving a gross margin of US\$ 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.

$$\begin{aligned}\text{Net profit} &= \text{Total income} - \text{Total costs} - \text{Cost of loan} \\ &= \text{Gross margin} - \text{Cost of loan}\end{aligned}$$

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:

$$\text{Cost of loan} = \text{Amount of loan} \times \text{Interest rate per month} \times \text{Number of months}$$

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

$$\text{Cost of loan} = \text{US\$ } 90 \times 10\% \times 4 \text{ months} = \text{US\$ } 36$$

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 US\$ 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 US\$ 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 US\$ 215.6.

Table 42. Calculating the profitability of a loan

		Yield (100 kg bags)	Costs of production (=loan amount)	Income	Gross margin	Cost of loan	Net profit
		A	B	C	D = B - A	E	F = D - E
No fertilizer	Farm seed	5	90	140	50	36	14
	Open-pollinated	8	98	224	126	39.2	86.8
	Hybrid	11	106	308	202	42.4	159.6
With fertilizer	Farm seed	7	130	196	66	52	14
	Open-pollinated	13	138	364	226	55.2	170.8
	Hybrid	15	146	420	274	58.4	215.6

1 acre of maize, Morogoro, Tanzania. Currency: US Dollars

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 US\$ 30. Instead of a loan of US\$ 166 (to buy hybrid seed and fertilizer) she will now need to borrow US\$ 136.

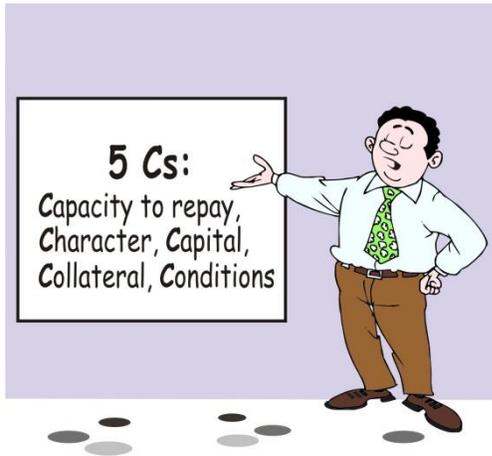
Table 43 shows this possibility. Now, the risks for all farmers are reduced and it would be profitable to get a loan for all of the options. The best option is still hybrid seed and fertilizer: it gives a net profit of US\$ 229.60.

Table 43. Calculating the profitability of a smaller loan

		Yield (100 kg bags)	Costs of production	Income	Gross margin	With US\$ 30 savings		
						Loan amount	Cost of loan	Net profit
		A	B	C	D = B - A		G	H = D - G
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

1 acre of maize, Morogoro, Tanzania. Currency: Dollars

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 C's**:

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

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 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 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?

More information

http://www.ruralfinance.org/training/self-study-guides/agricultural-lending/en/?no_cache=1, Lesson 3

Quiz for Lesson 11. Deciding on

36. 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.

Correct answer: B

37. 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 \times 3\% = \3
- C. $\$100 \times 3\% \times 4 = \12
- D. $\$100 + (\$100 \times 3\% \times 4) = \112

Correct answer: C

38. 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. $\$100 + (\$100 \times 3\%) = \$103$
- C. $\$100 \times 3\% \times 4 = \12
- D. $\$100 + (\$100 \times 3\% \times 4) = \112

Correct answer: D

39. Match the Five Cs with the right 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? |

Correct answer: A2, B4, C1, D5, E3

Field exercise 11a. Calculating the cost of a loan

This Exercise uses the information generated in Field exercise 10a and

Field 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 as a whole.

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 **Field exercise 10a** and

Field 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.

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, 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).

Table 44. Examples of loan conditions from different lenders

In this example, we have used USD\$, you may want to use your local currency with farmers.

Lender	Maximum loan (US\$)	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 USD \$20	7% interest over 6 months

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 **Field exercise 10a** and

7. Field exercise 10b for details.). Use your data from previous gross margin analyses with the farmers.
8. Ask them to say how much money they have available to pay for these costs.
9. Get them to calculate the shortfall:

$$\text{Amount of money needed} = \text{Total costs} - \text{Amount of money available}$$

10. Ask them to say how much they would like to borrow. This may be the same as the shortfall, or more, or less
11. Ask them what they will spend the money on in terms of technologies and the expected gains from using these technologies.
12. 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.)

$$\text{Cost of loan} = \text{Amount of loan} \times \text{Interest rate per month} \times \text{Number of months}$$

$$\text{Amount to be repaid} = \text{Amount of loan} + \text{Cost of loan}$$

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 \$
	D	E	F	$G = D \times E \times F$	D + G
Family member					
Moneylender					
Trader					
Postal Bank					

13. 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?

Lesson 12. Choosing an agroenterprise



In this lesson

After this lesson you will be able to:

- Help farmers choose an agroenterprise.

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. 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 sell in which market. 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 module for details.

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

Fundamental criteria

- 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**?

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 \$\$\$ in the Marketing Basics module 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 **Field exercise 12a** 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. Selling a new product into an existing market may seem complicated at first. But it may 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. The 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, and 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). They need a good knowledge of the price movements, and have to plant and harvest at the right times. Groups of farmers may need to coordinate their production and marketing so they can sell the right volumes at the right times.

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 wet or be damaged by pests and 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. Farmers must also know when to sell – and that means having access to 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 for Lesson 12. Choosing an agroenterprise

40. 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

Correct answer: D. If they cannot make a profit, they should drop this option.

41. 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

Correct answer: C.

42. 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.

Correct answer: C. If two groups strongly prefer different products, it is probably best to support them both. Especially if women form one of the groups, since they often have different interests from the men.

43. 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.

Correct answer: A, D. The others may be important criteria, but they are not fundamental to the choice of an agroenterprise.

Field exercise 12a. Choosing a product and market

This Exercise helps the farmers evaluate the information they have gathered about potential products and markets, and to 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.

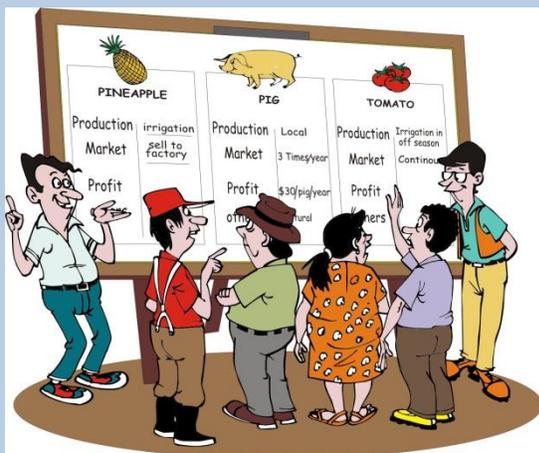


Figure 22. Market agent explaining pros and cons of the different product options

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?

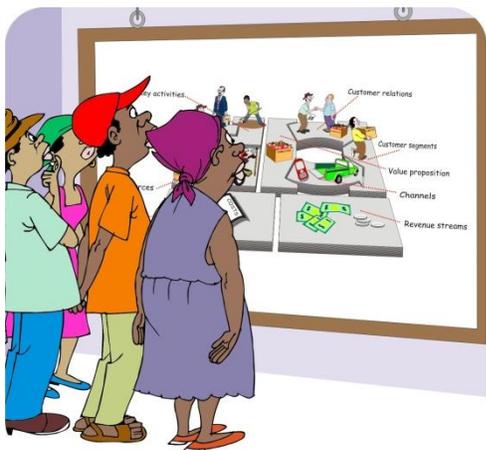
Is the product favored by any particular **government or private-sector policies** or regulations?

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.)

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 it 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 2-3 pages up to 50 pages depending on the need.

Why write a business plan?

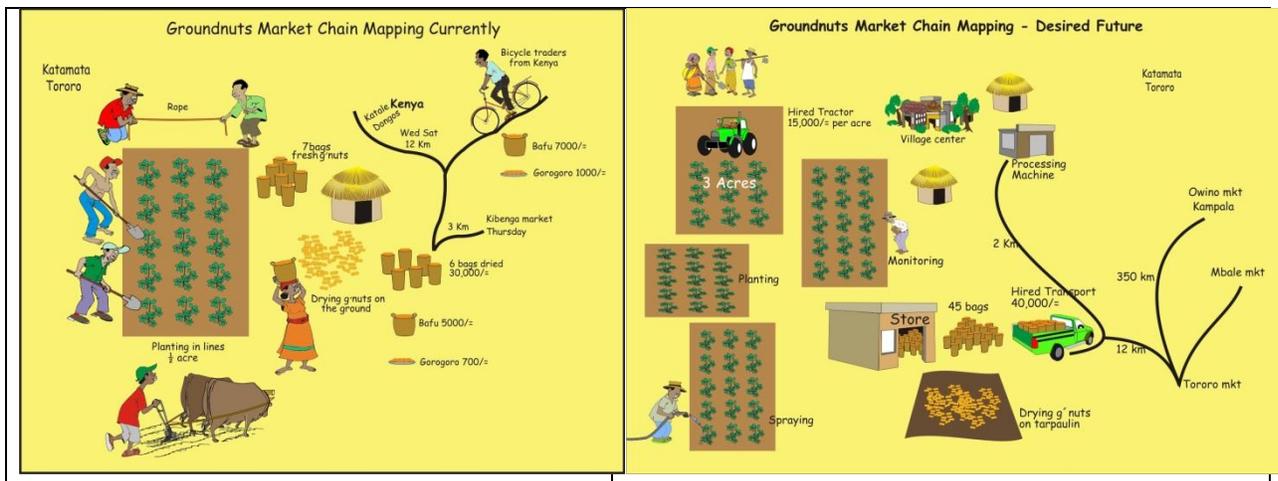


Writing a business plan is important for several reasons:

- **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)



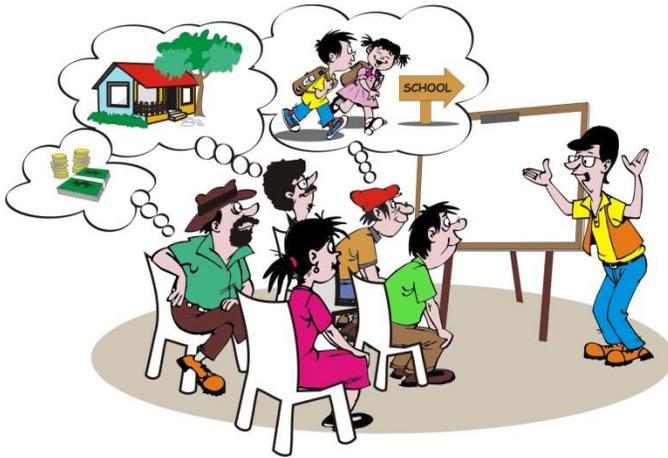
Early in the agroenterprise development process (Lesson 7 and

Field 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.

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

Visioning



Visioning is a technique, we discussed in **Field exercise 2a**, 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 begin 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

Field 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 them to think of what they need to do to achieve this target. That in turn means they have to think of realistic changes in their production, post-harvest 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 supermarket 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 or if there are pest or disease problems. 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.

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.

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

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

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.”

Field exercise 13e describes how to do a pathway analysis.

Quiz for Lesson 13. Tools for business planning

44. “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.

Correct answer: B.

45. 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.

Correct answer: C. It is best to start off with the long-term vision, then work backwards to mid- and short-term. But remember that you may have to change the long-term vision if it turns out to be unrealistic.

46. Match the approach to the best description.

- | | |
|----------------------|---|
| A Problem analysis | 1 Deciding how much to produce and then monitoring whether you are on course to achieve this. |
| B Future mapping | 2 Helping farmers imagine the future of their enterprise, then working out how to get there in the long, medium and short terms |
| C Pathway analysis | 3 Working out what you need to do at each stage in the production and marketing process in order to achieve your enterprise goals |
| D Production targets | 4 Drawing a diagram of the production and marketing you aim for, then working out the changes you need to make to achieve this |
| E Visioning | 5 Identifying challenges and looking for ways to overcome them |

Correct answer: A5, B4, C3, D1, E2

Field 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.



Figure 23. Using visioning for the agroenterprise

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 post-harvest 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,” “post-harvest,” “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?

Post-harvest 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 (where we are now)	Short-term activities (in next year)	Medium-term activities (in next 5 years)	Long-term activities (in next 10–15 years)	Long-term goal (where we want to be in 10–15 years)
Production					
Post-harvest					
Marketing					
Business services					

Field 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.



Figure 24. Preparing a marketing map for new agroenterprise

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 **Field exercise** .

Information on product prices and markets from the market survey and analysis (

Field exercise 7b and Field 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 **Field exercise** , showing the farmers' initial understanding of the production and marketing of their product. Also bring the information gathered during the market survey and analysis (

Field exercise 7b and **Field 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 (see Figure 25).
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 changes 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 have? 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

Figure 25 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.

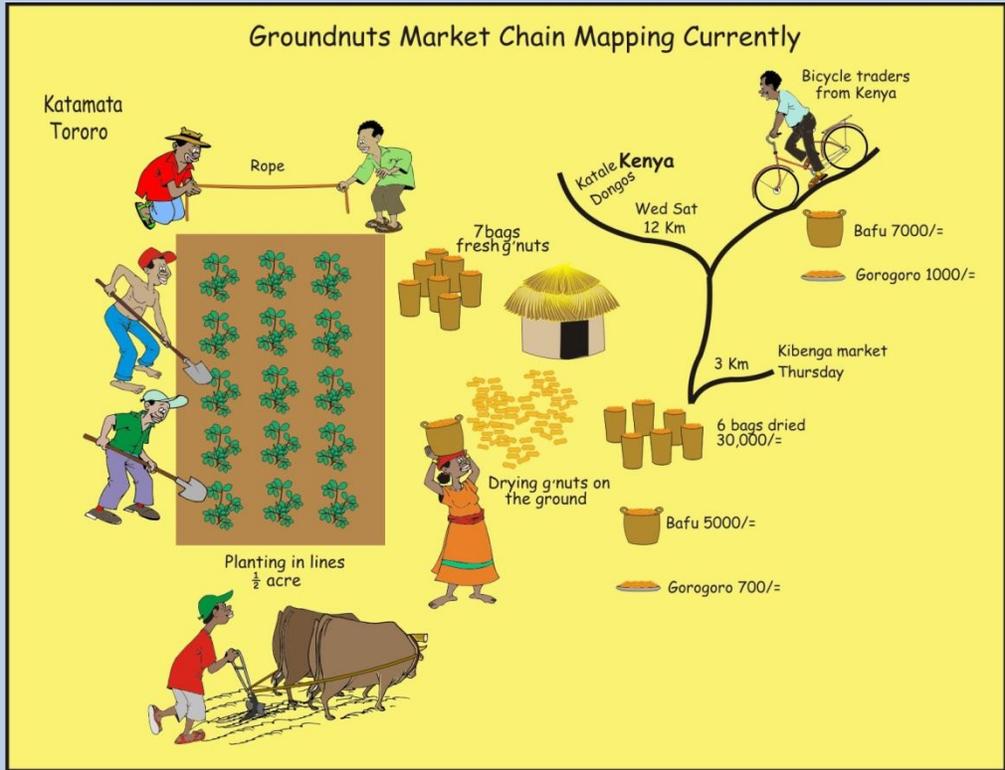


Figure 25. Market map drawn by farmers for groundnut in Embu district, Kenya

Figure 26 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.



Figure 26. Market map for desired marketing of groundnut in Embu district, Kenya

Field 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.

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

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 advise farmers what is feasible.

Field 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

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.

Table 49. Form for planning production for a crop

Expected yield (tons/ha)	Planting date	Harvest date	Delivery date

Farmer	Area to plant Ha	Target output tons	Actual output tons
Farmer 1			
Farmer 2			
Farmer 3			
Farmer 4			
Farmer 5			
...			
...			
Total			
Amount required by buyer			

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.

Field 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 Figure 27 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, post-harvest 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, post-harvest and marketing.

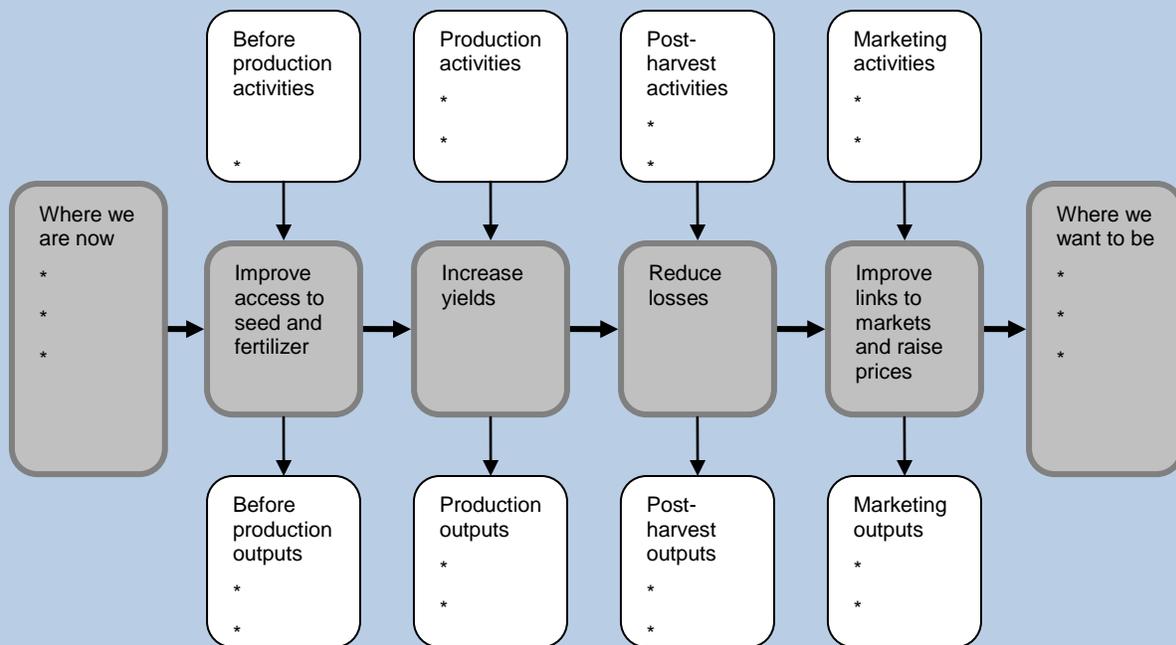


Figure 27. Pathway analysis for production and marketing

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 visual 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 has been devised by Osterwalder and Pigneur (2010). They call their business planning tool a business model canvas, as shown in **Figure 29**. 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.

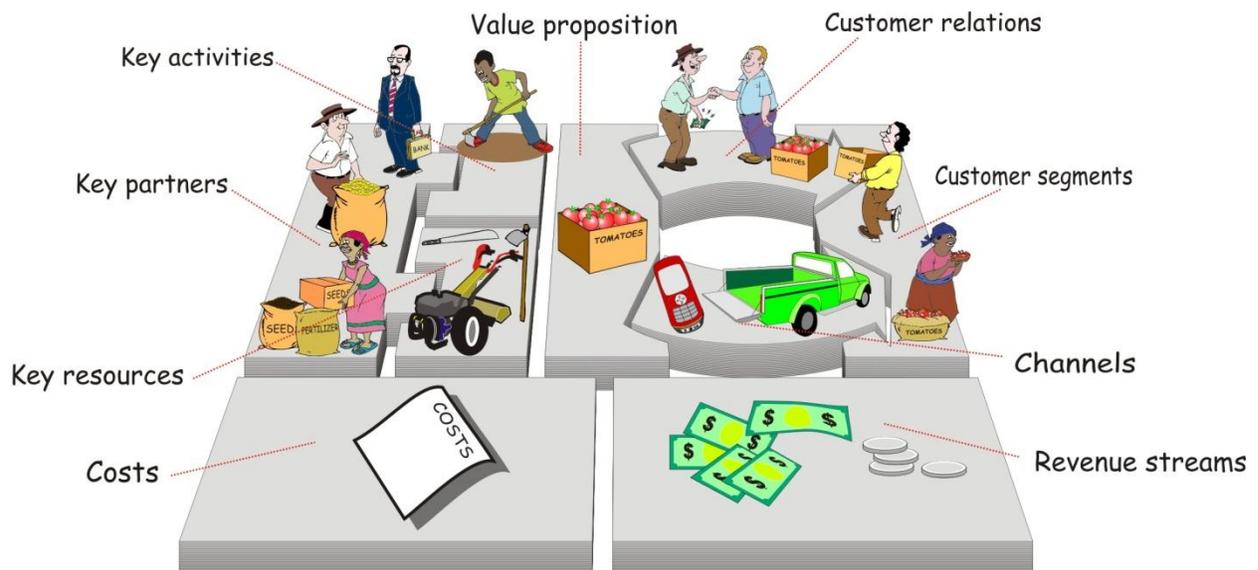


Figure 28. How the parts of a business plan fit together

Based on the picture in Figure 29, Osterwalder et al., developed a “business model canvas” (Figure 29) which 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. To watch a short video about the canvas, see <http://www.youtube.com/watch?v=QoAOzMTLP5s>

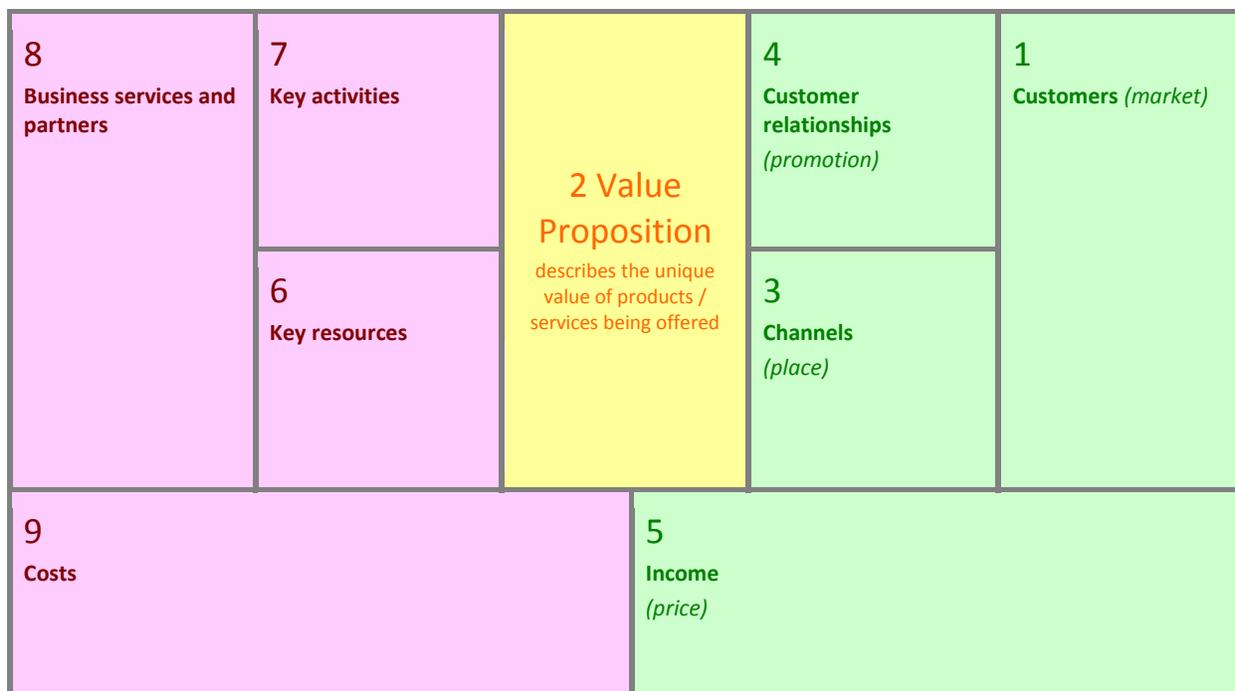
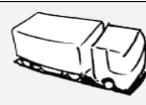


Figure 29. The business model canvas

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.

	<p>7. Key activities. These are the activities the group plans to do to produce the product – such as planting, crop management, harvesting and drying.</p>
	<p>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.</p>
	<p>9. Costs. These are the costs that the group incurs in order to produce and market the product.</p>

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

Interpreting the canvas

Figure 30 shows the relationships between the different areas of the canvas.

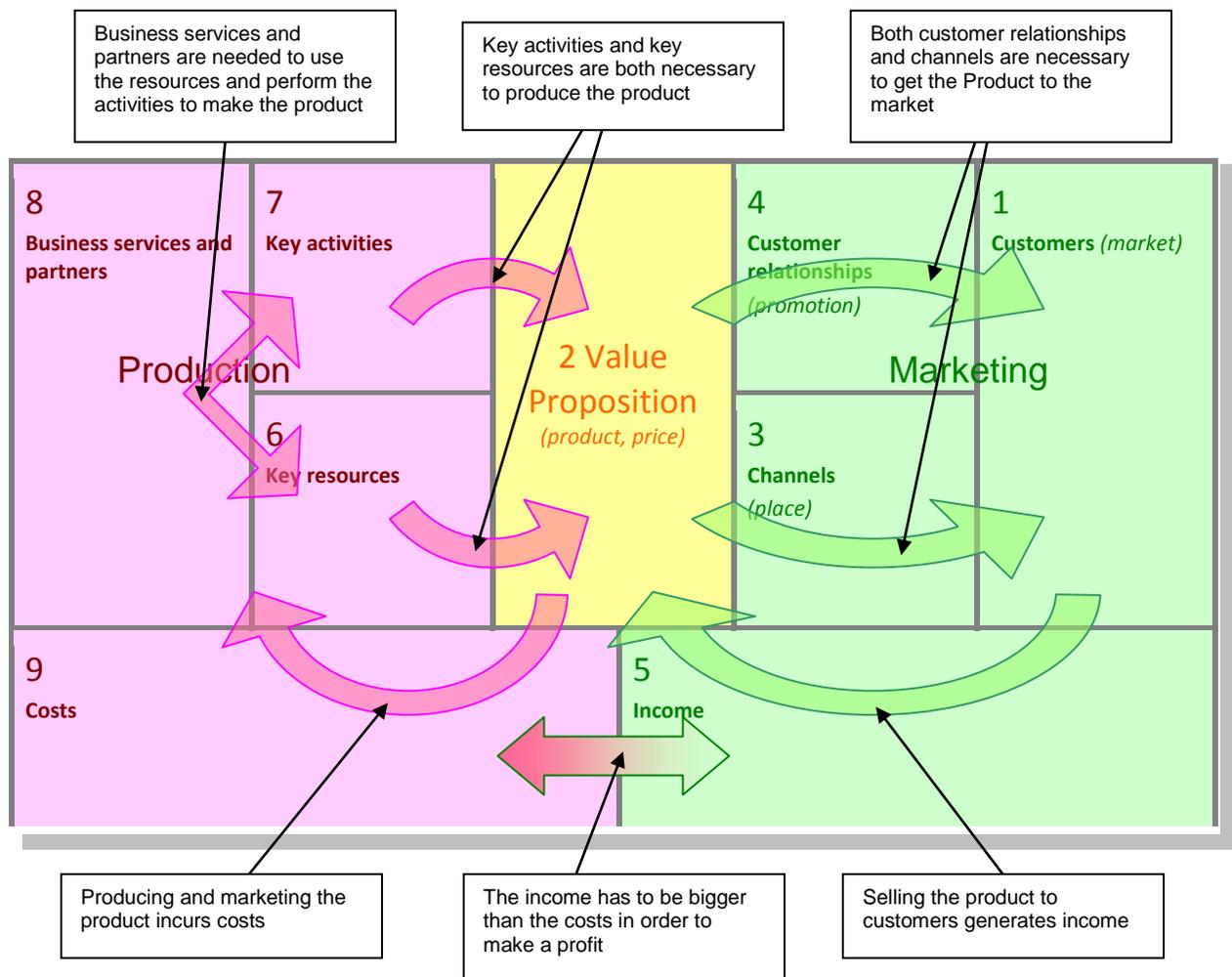


Figure 30. Interpreting the business model canvas

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.

With your help, farmers can use sticky notes (or small pieces of paper and cellotape) to write down their business ideas and information from their market surveys into these nine areas. The sticky notes allow them 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 also for planning a new business venture.

The power of the business canvass is that many people, or an individual can see all the components of the plan at one time, can see how to arrange the information and then use this information to work on new ideas. This is an important first step in arranging business information, and using these ideas in preparing a more formal, written business plan. Figure 31 shows the business canvas being used to understand an existing market situation. Figure 32 shows the business canvas being used to plan a new business for maize. In both cases the information for the maize business plans are laid out on the 9 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 accept 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.

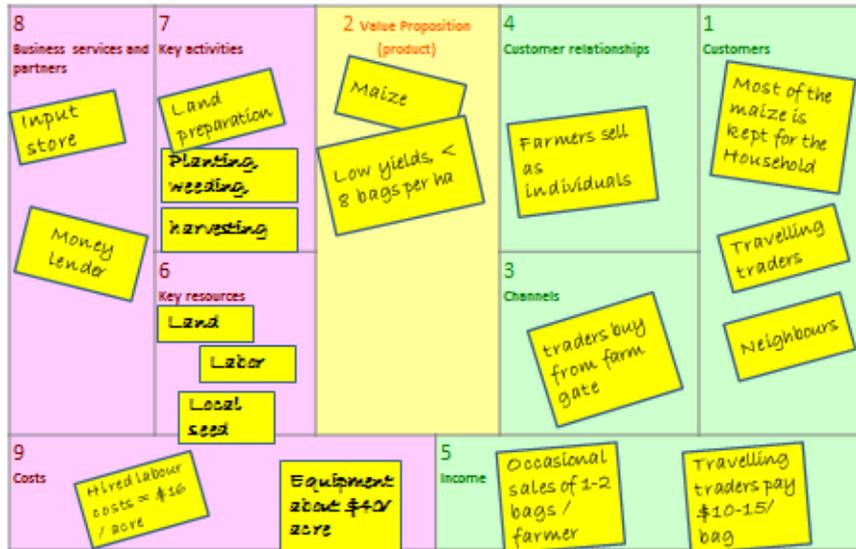


Figure 31. Example of the business model canvas showing production and marketing system

Using the canvas to organize information for a business plan

Figure 32 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. In Figure 32, the farmers have reworked their thinking to design a new business plan.



Figure 32. Example of the business model canvas showing production and marketing system

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, see plan outline below Figure 33, Lesson 14. 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.

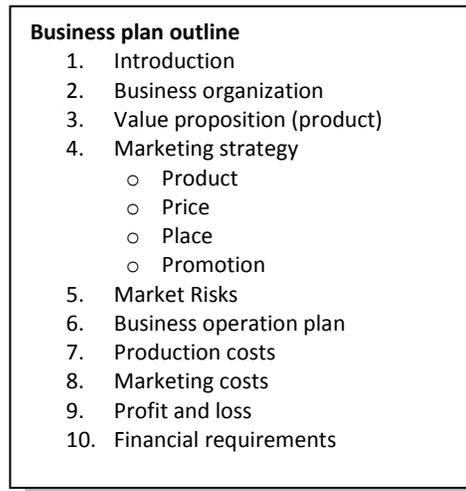


Figure 33. Business plan outline

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 Value Proposition and Price subsections of the part of the business plan that deals with Marketing strategy (Figure 34).

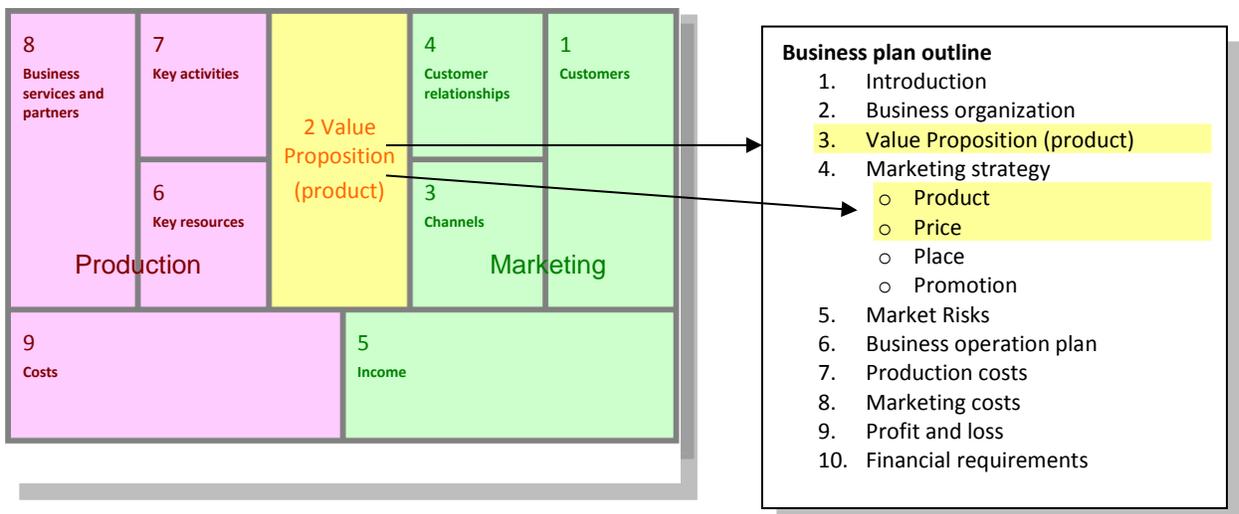


Figure 34. How the canvas relates to a standard business plan: Value Proposition

Marketing

Put information on the **Customers** into the Marketing strategy section of the business plan (Figure 35).

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.

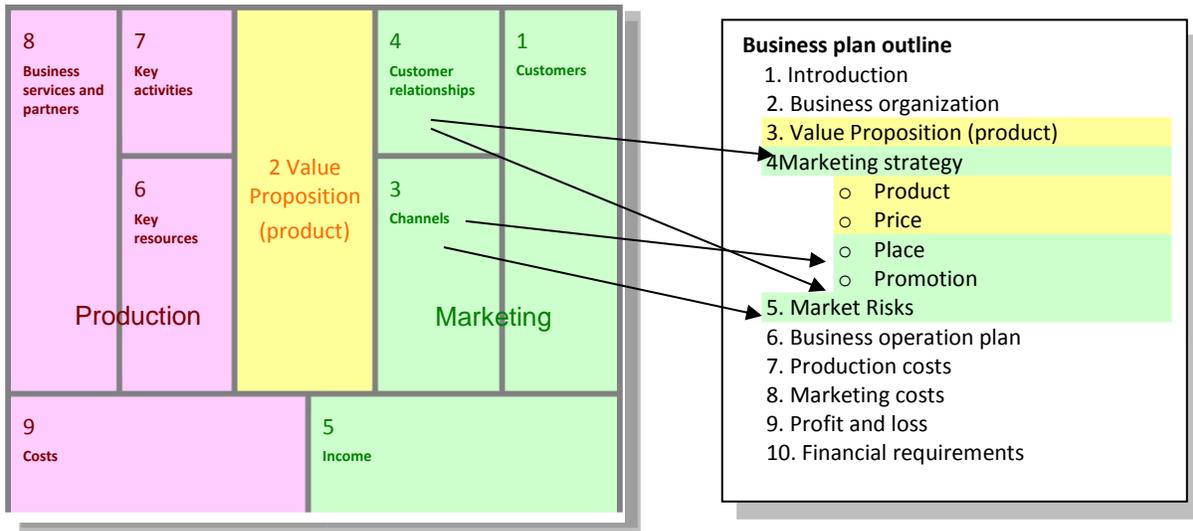


Figure 35. How the canvas relates to a standard business plan: Marketing

Production

The information on **Key resources**, **Key activities** and **Business services and partners** all go into the Business operation plan section (Figure 36).

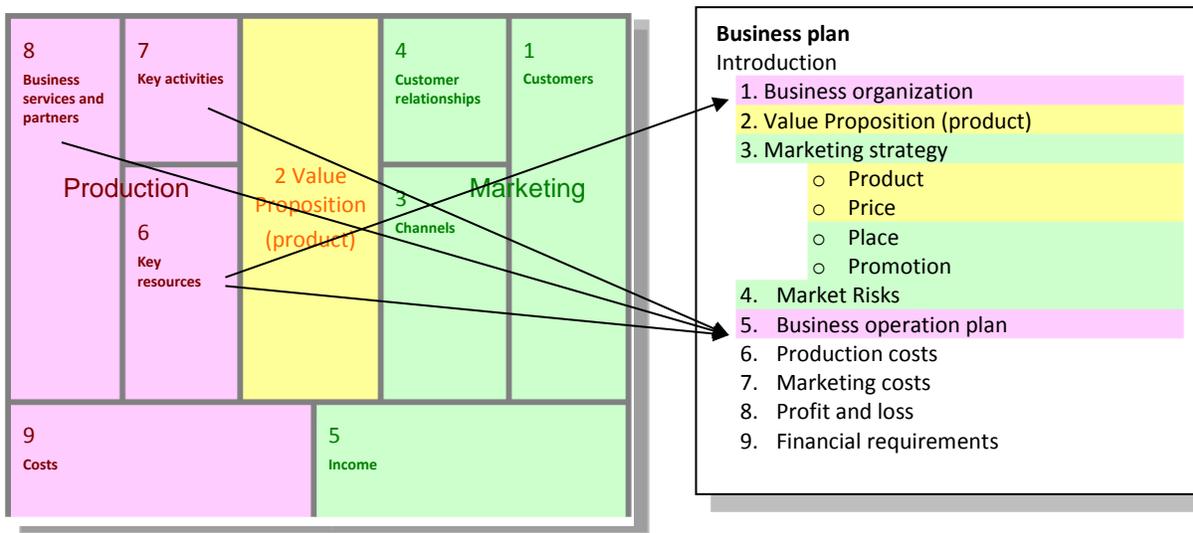


Figure 36. How the canvas relates to a standard business plan: Production

Costs and income

Put the information on **Costs** into the Costs section (Figure 37).

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.

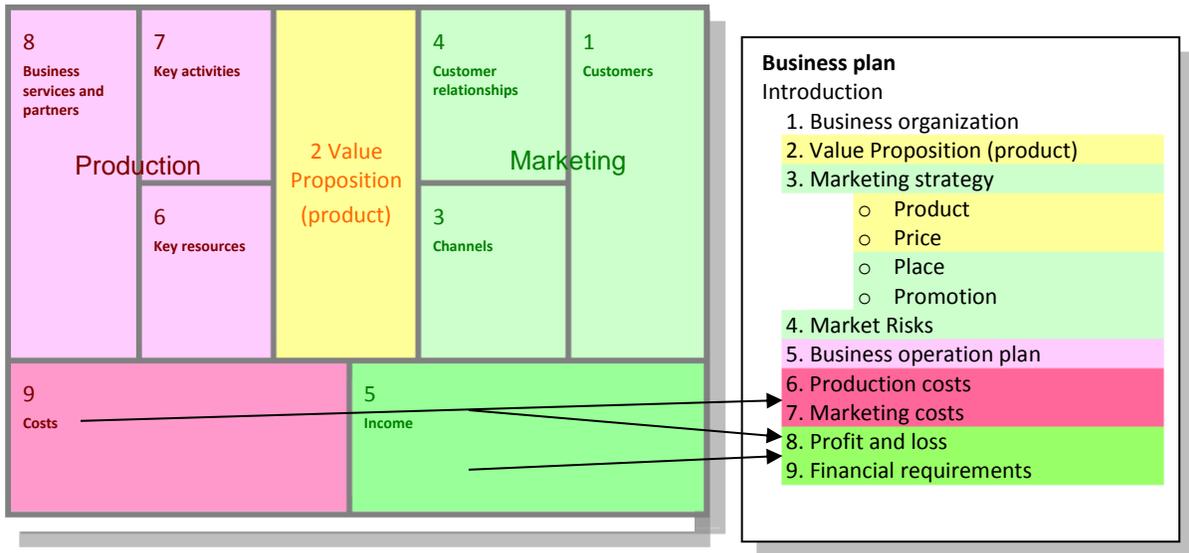
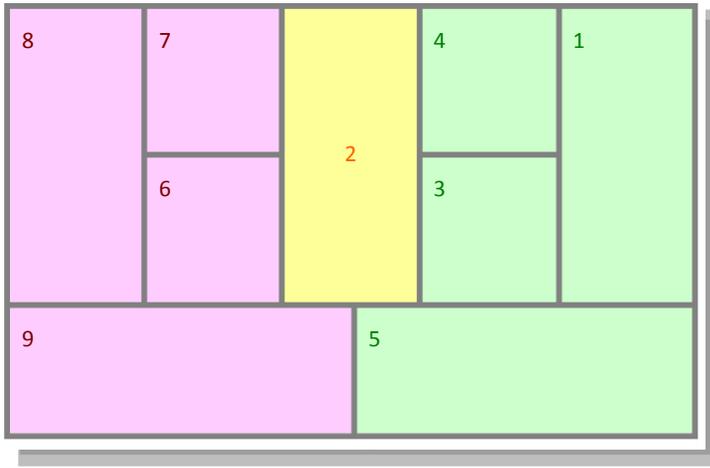


Figure 37. How the canvas relates to a standard business plan: Costs and income

Quiz for Lesson 14. The business model canvas

47. 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)

Correct answer: A8, B3, C9, D4, E2, F5, G7, H6, I1

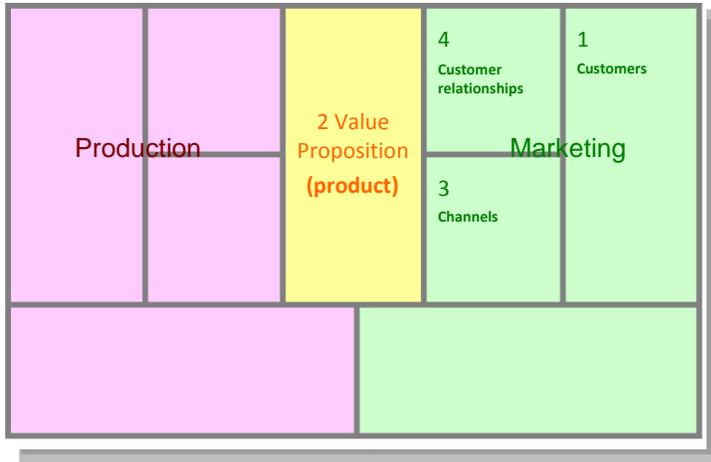
48. If you want to plan a completely new production and marketing system, in which part of the business model canvas should you start?

- 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.

Correct answer: A. It is best to start with the marketing, then choose the product(s) you can sell to these customers. But keep other aspects in mind as you do so.

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

(Some of the canvas areas match more than one part of the business plan.)



Business plan

Introduction

Business organization

A Value Proposition (product)

B Marketing strategy

- C Customer relations
- D Product
- E Price
- F Place
- G Promotion

• Risks

Business operation plan

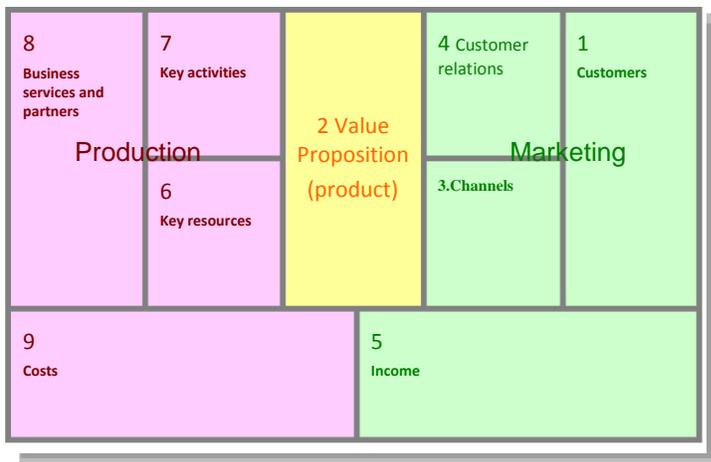
Financial

- Costs
- Income
- Profit and loss
- Financial requirements

Correct answer: A1, B2, C4, D1, E1, F3, G4

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

(Some of the canvas areas match more than one part of the business plan.)



Business plan

Introduction

Business organization

Value Proposition (product)

Marketing strategy

- Customer relations
- Product
- Price
- Place
- Promotion
- Risks

H Business operation plan

Financial

- I Costs
- J Income
- Profit and loss
- Financial requirements

Correct answer: H678, I19, J5

Field exercise 14a. 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 (Figure 38).

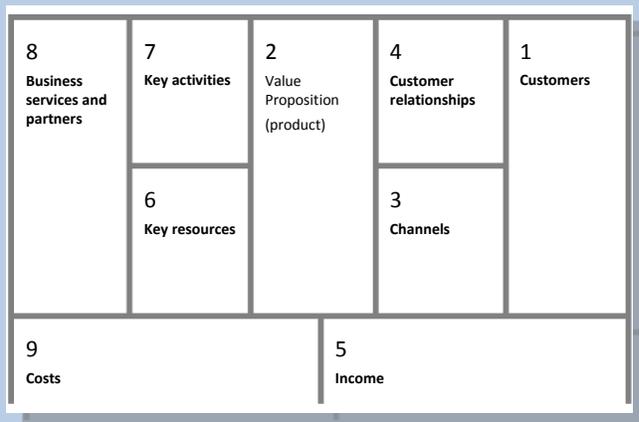


Figure 38. Empty business model canvas

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, like in Figure 39.

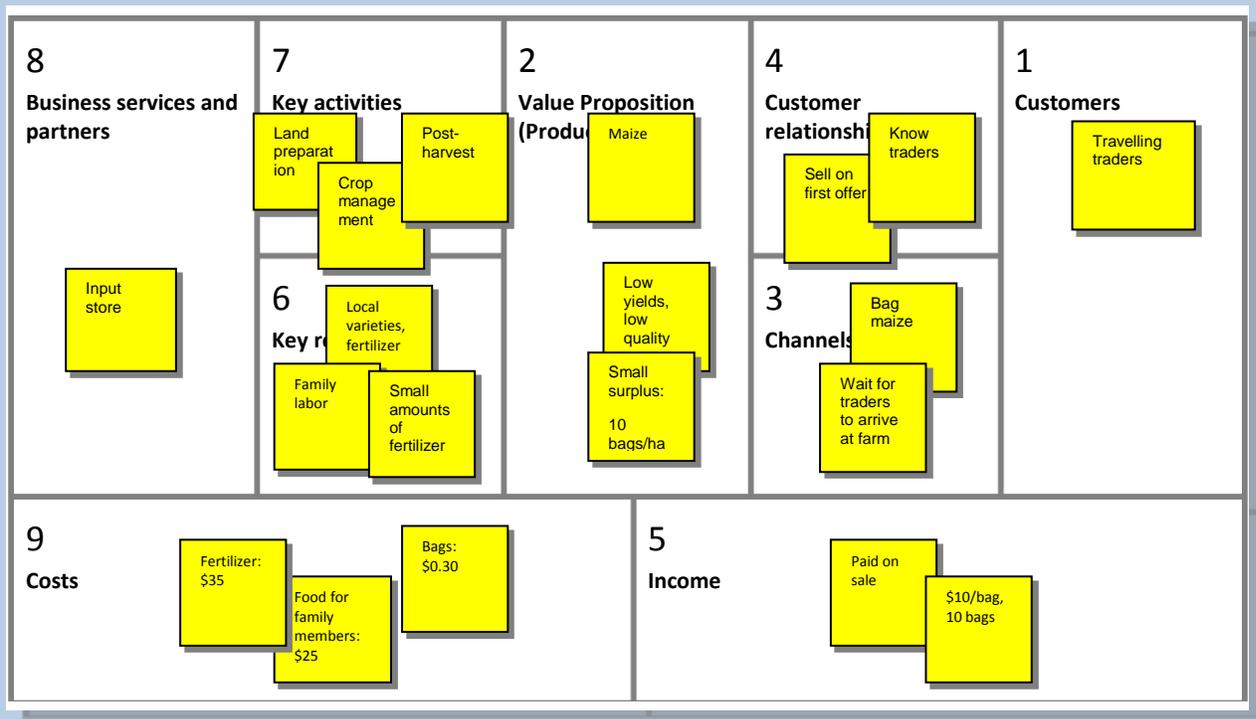


Figure 39. Canvas with sticky notes showing current situation

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.

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.

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,
	Post-harvest 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?

Farmbook software

CRS has developed software called FARMBOOK to help you create a business plan. You can use this software by visiting www.farmbookhub.crs.org 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 the 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.

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			

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

The business plan given in the information below is not the only one that is possible to derive from this case. In fact, it may not even be the best plan. Read the Annex and make up your own mind how you would decide if you were the farmers!

Part 1: Outline of the business

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).

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 US\$ 440, deposited in an account with the Postal Bank, Hai.

3 Product

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

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).

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 (US\$ 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:- Travelling traders (US\$ 24 per bag) Local traders (US\$ 28 per bag). Kasese Traders in Hai (US\$ 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.

Customer relations

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

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 Traders 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.

Product

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

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.

Price

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

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 come 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.

Place

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

Table 59. Business plan: 4.5 Marketing strategy: place

Item	Explanation	Example
How will you get product to market	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.

Promotion

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

Table 60. Business plan: 4.6 Marketing strategy: promotion

Item	Explanation	Example
How will you tell customers about your product	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 likely 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?	<p>Pests: There are a number of foliar diseases and pests that attack maize.</p> <p>Drought: The region is prone to regular drought cycles.</p> <p>Prices: Market prices fluctuate widely according to demand and supply.</p> <p>Side-selling: Farmers often agree to sell with the group, but when it comes to harvest, some sell outside of the group.</p>
What risk mitigation plans	Are there ways of minimizing the risks?	<p>Pests: The group use a combination of integrated pest management approaches to manage the large grain borer.</p> <p>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.</p> <p>Prices: Market prices fluctuate widely, but Kasese traders have said they will pay a \$4-5 premium on local traders prices.</p> <p>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.</p>

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
<i>Describe your business flow from production to sale</i>	<i>Describe the activities that make your plan operational</i>	
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 post harvest activities	Post-harvest 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 costs, income and profit are calculated. 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:

- 1 Costs
- 2 Income
- 3 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 unit area, (acre or hectare, etc.), then to multiply the amounts by the number of unit areas 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, 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.

Table 63. Business plan: 7 Costs

(table shows costs of hired labor only and hired and family labor costs)

Item	Explanation	Example data maize plot 1 acre costs		
			US\$/acre	US\$/acre
Materials and other costs	Calculate costs of production and marketing per unit of production (e.g., per acre / ha) for one season or year.	Non durable costs		US\$/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
		Totals	USD 90.00	USD 90.00
		Durable costs		
		Plow	10	10
		Hoes	3	3
		Machete	6	6
		Baskets	1	1
		Store	15	15
		Phone	5	5
		Totals		
		Total per acre	USD 40.00	USD 40.00
Labor costs	Calculate costs of production and marketing per unit of production (e.g., per hectare) for one season or year. <i>(Costs in the left hand column are for only for hired labor)</i> <i>(Costs in the right column include both hired and family costs)</i>		Hired labor	All Labor
			USD/ acre	USD/acre
		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 per acre	USD 16.00	USD 70.00
Total costs	Calculate the total of labor and services + materials and other costs.		USD\$/acre	USD\$/acre
		Consumable materials	90	90
		Durable materials	40	40
		Labor	16	70
		Total costs per acre	146	200

8 Income

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

Table 64. Business plan: 8 Income

Item	Explanation	Example	
Project sales volumes	Planned sales volumes / Give clear units of sale bag – 100kg	Yield per acre 100kg 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)	US\$ 28
		Production/acre	15 bags
		Total income per acre	USD\$ 420

* This calculation is from a 1 acre assessment.

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.

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 into the calculation		Hired labor	All Labor
			USD \$	USD \$
		Total income per acre	420	420
		Total costs per acre	146	200
		Gross margin per acre	274	220

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 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 bag – 100kg	Plot size	1 acre	2 acres	3 acres
		Yield per acre 100kg 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 based on plot size – family food.	Price per bag US\$ (estimate)	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			

*This calculation includes hired labor costs only.

Table 67. Expected revenues per farmer based on land area and estimated costs and sales price

- Assumptions in the table below,*
1. Each family has retained ten bags of maize for food.
 2. Labor* costs include hired labor only

Farmers	Maize production area	Bags produced	Bags for House hold	Bags for sale	Expected revenue US\$	Material costs	Hired Labor* costs	Total costs USD	Estimate profit (USD)
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

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 and it 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).

Table 68. Business plan: Financial requirements

Farmers	Maize production area	Full projected costs USD	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 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.**

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. Savings is therefore an effective means of increasing profit.

Quiz for Lesson 15. Filling in the business plan

51. Put these sections of the business plan in the correct order

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

Correct answer:

Part 1: 8, 2, 9, 10, 5, 6

Part 2: 7, 1, 6

Part 3: 3

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

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

Correct answer: A2, B4, C3, D1

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

- Calculate the gross margin
- Calculate the loan amount required
- Calculate the cost of the loan
- Calculate the costs of production and marketing
- Calculate the income from selling the product

Correct answer: D, E, A, B, C

Field exercise 15a. 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

Computer with word-processing and spreadsheet software or the FARMBOOK software

Printer, paper.

Expected outputs

A completed business plan for the group.

Time

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:

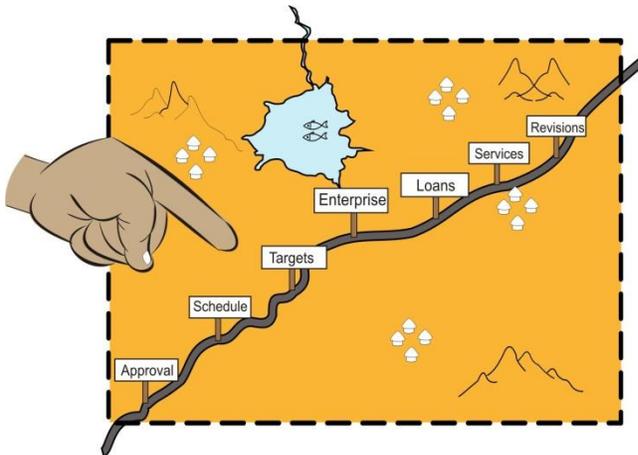
- Describe what to do with a business plan after it has been prepared.
- Develop an implementation plan.
- Show farmers how to keep a record of their costs.
- Show farmers how to assess their performance against targets



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

Field 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 necessary, 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. 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 fills in 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.

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	John	2 May and ongoing	
Develop and maintain contact	FG 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	FG Mary, NGO Jane	15 Jun	
Train leaders and group members on enterprise management	FG 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	G management NARO	2 May	
Prepare fields for planting	FG 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, NARO	10 Jul	
Train group members on ware potato management techniques	NFG members, Africare, NARO	15 Sep–Nov	
Arrange with research on seed of identified varieties for Nando’s	NFG management, NARO	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	
Post-harvest			
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	FG John, NGO Paul		
Supply off-size products and rejects to secondary markets	John and Sydney		

A normal implementation plan is divided into sections for pre-production, production, post-harvest 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 **Field exercise 16a** 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 70. Example of target setting for marketing

	Targets	Activities
Volume	Two Hundred 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 the costs of both materials and labor. 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 as 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 several farmers record information 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.

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					
Post-harvest					
	Bags				
Total post-harvest costs					
Marketing costs					
	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 (\$)					

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								
Post-harvest costs								
	Harvesting							
	Drying							
	Threshing							
	Storage							
Total post-harvest costs								
Marketing costs								
	Packaging							
	Cleaning							
	Sorting / grading							
Total marketing costs								
Total labor costs								
Total labor costs (\$)								

Conclusion

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. Making these

plans also 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 essential business services will also be part of the discussions and the process of helping farmers to evaluate their market situation allows the field agent and project managers to assess how much they will need to invest into the farmer agroenterprises and how much in 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 agents 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; 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?

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 numbers required to produce the product from at least one member of the target farmer group.
- Run the profitability of the business plan with details of
 1. material costs
 2. labor costs
 3. service costs
 4. 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.

Quiz for Lesson 16. Putting the business plan into effect

54. 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)

Correct answer: A, B, C

55. 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.

Correct answer: B. While it is desirable for all the farmers to keep records, it is probably unrealistic. Choose three farmers instead to represent the group.

56. 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.

Correct answer: B, D, A, E, C

Field exercise 16a. 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

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			
Post-harvest			
Marketing			

Step 5. Marketing as a group



Figure 40. Marketing together has many advantages: higher volumes, better quality, higher prices.

As part of their business plan, farmers will have decided to produce a certain amount of product for a specific market. This step describes how the farmers should organize themselves to market this product. It includes the following Lessons:

- Lesson 17: Why market as a group?
- Lesson 18: Learning how to decide on prices.

At the end of this Step you will have:

- Agreed on a process to sell collectively
- Agreed on a marketing strategy
- Farmers understand the advantages and disadvantages of collective marketing
- In some cases will have elected a farmer to serve on the cluster trade committee
- Field agent and market agent will have collected phone numbers of traders
- Identified possible storage sites
- Discussed transport issues
- Clarified costs of marketing to farmers
- Explained and gained agreement on how the produce will be bulked, sold and how revenue from the sale will be shared amongst farmers.

Lesson 17. Why market as a group?

In this lesson

After this lesson you will be able to:

- Describe why both traders and farmers can benefit if farmers market as a group.
- Describe how a typical sale by a farmers' group works.
- List the costs incurred by the group's marketing committee.
- Explain some considerations when negotiating with a buyer.
- Describe the agreements that the group members may have to make among themselves.
- Explain the advantages of cooperatives and second-order marketing associations.
- Describe some of the problems that may occur with collective marketing.

Imagine you are an onion trader



You arrive in the village with your pickup, and there is one farmer waiting there with 10 sacks of onions. That is only one-third of the load your pickup can carry. You either have to drive all the way back to town with a mostly empty vehicle, or you have to find some more farmers to buy from.

The first farmer tells you there are other farmers in the village growing onions. You go to find these farmers to see if they have onions for sale. The first asks you to come back tomorrow when he has finished harvesting. The second has harvested already, but her onions are a different size and quality from those already on your pickup. A third insists on a higher price than you are willing to pay. And the fourth – well, last year you bought onions from him, and you found a lot of stones in the bottom of his sacks. Driving around and negotiating with all the individuals takes a lot of time and you end up with a pickup only half-full of onions of differing types and quality, which will be difficult to sell once you get to town.

How much easier it would be if you could just fill your vehicle at one place, with sacks filled with produce of uniform size and quality! You have even heard of some farmers who call the traders in the town when they are ready to sell! You would be prepared to pay extra if the farmers could just get

organized and make this possible. And it would be even better if you could pick up a load of onions each week: that way you could keep the buyers in town supplied with fresh onions throughout the season.

Figure 41. Trader trying to find a full load

Now imagine you are an onion farmer



You have harvested your onions, and are waiting for the trader to arrive. When he turns up – three hours later than expected – he offers you a price that is lower than you had hoped. In fact, it's only just above your cost of production. You have a choice: sell now, or hope that another trader comes along and offers you a better price. What do you do?

The answer to both the trader's and the farmer's problems is **collective marketing**. This is where farmers get together and market their output as a group.

Advantages of collective marketing



Collective marketing means that several farmers bring small amounts of their product together at harvest time and sell them as a batch. Bulk selling has several advantages for both the farmers and the trader:

- **Bigger volumes.** Farmers can pool their output (this is called **bulking**) so traders can buy more at the same time and can fill up their vehicles or stores more easily. The traders can negotiate with one seller – a representative of the farmers’ group – rather than with lots of individual farmers. They make one payment – often via a bank – rather than lots of small cash transactions. That is more convenient and saves having to carry lots of cash around.
- **Uniform quality.** Traders do not want big and small, ripe and unripe produce all mixed together. They want the produce they buy to be the same size and quality, and is free of dirt, sticks and other impurities. With a larger volume, it is worthwhile for farmers to **clean, sort and grade** their product.
- **Reliable sellers.** Pests can attack a crop, the weather may spoil the harvest, and the farmer may fall ill. Many things can come in the way of a successful trade. But they are more likely to happen to an individual farmer than to a group. If one farmer experiences a production problem, chances are that the other members of the group will be able to make up the shortfall. That reduces the risk that the trader will have to drive home with a half-empty pickup.
- **Reliable buyers.** Reliability works the other way too. If a trader knows there is a big consignment waiting, she will make sure to pick it up as promised and will pay the agreed price. By selling collectively, the farmers can be more confident that the buyer will be reliable.
- **Continuous supply.** Many traders want a continuous supply of a product throughout the season. Groups of farmers can organize staggered plantings and harvests, or store produce, so they can deliver several truckloads of the product over an extended marketing period.
- **Higher price.** Bulked, cleaned and graded produce is more valuable, so traders are usually more willing to pay a better price for it. But by organizing as a group, the farmers improve their bargaining position – for example by negotiating with several potential buyers for the best terms and conditions.
- **Organization.** Marketing collectively means that farmers have to get organized. But organizing brings other benefits: farmers can learn from one another, improve the quality of their produce, set up savings-and-credit arrangements, buy bulk inputs, and so on. Marketing collectively can be a good way to start a farmers’ group or strengthen an existing group.

But remember: Not all products and farmers benefit from collective marketing. Monitor the market and advise the farmers’ group whether collective marketing is a good idea.

Collective marketing does not mean collective production! Farmers should still grow crops and raise animals as individuals. It is only at the time of sale that the product is brought together and offered for sale.

More product means bigger trades

Collective marketing makes it possible to sell to bigger traders who offer better prices and conditions and who serve more distant markets. That may **cut out local traders** (Figure 42). The farmers’ group

takes on some of the functions of smaller traders: transport to a central point, bulking the produce into larger lots, storage, provision of loans to farmers, and so on.



Figure 42. Selling collectively makes it possible to sell to bigger traders

Organizing collective marketing

It is not practical for all 10–30 farmers in the group to negotiate with buyers. So advise the group to nominate a team of two or three members to negotiate with traders on behalf of the whole group. The marketing team should include the group's marketing coordinator, along with the group chairperson or members of the team that did the marketing survey (Step 3). Having two or three people on the team is a good idea to ensure transparency and trust and to reduce the risk of the representative cheating the other members.

A typical sale



A typical sale works something like this:

1. In the market survey there were two or three buyers who showed interest in buying produce from the farmers. The farmers have discussed these options and agreed to sell to one of the buyers, Mr Ibrahim.
2. At the start of the season, Mr Ibrahim, said he needs to fill a 2 ton pick-up with onions, if he is to pay the best prevailing market price, as a full pick-up truck reduces his costs. A two ton pick-up requires 400 5kg sacks of onions. Or if the farmers are selling larger wholesale bags, it would take 40 times 50kg sacks of onions.
3. The group discussed this option and used the amounts indicated by Mr Ibrahim in their target setting.
4. At the harvest the farmers in the group period discuss the planned sales with Mr Ibrahim and **advise the marketing team** about the amounts they could sell, the possible timing, the desired price and other conditions the group would like fulfilled, such as method of payment.
5. The marketing team returns to the buyer, in this case Mr Ibrahim to **negotiate or confirm a deal** with the buyer and report back to the group.
6. First deals are usually done in person, but repeat negotiations and sales can be done by mobile phone, when a trading relationship has been established.
7. The group's production coordinator arranges for the farmers to **deliver their product** at the right time and place.
8. The marketing coordinator **weighs each farmer's product** and checks that the quality of the produce is up to standard. If some farmers have unclean produce, the marketing coordinator will hire labor to clean the produce and this fee will be charged to the farmer.
9. The group secretary **keeps a record** of how much each farmer has supplied.
10. The buyer comes to **pick up the product**. The marketing coordinator arranges for members to load it onto the truck.
11. The group's treasurer **receives the payment** from the buyer. Any outstanding fees or costs of administration are deducted, the treasurer then pays the individual members according to the amount each one supplied.

Variations

There are many variations to this sequence:

- The group may undertake additional tasks, such as storage, cleaning, drying, sorting, grading and packaging.
- It may appoint members to handle specific tasks. For example, a store manager may handle the weighing and record-keeping.
- If the group has capital, it may pay the farmers in part or in full immediately when they deliver the product. The buyer (or a bank) may give the group a short-term loan to make this possible.
- If the deal is made before the season begins, the production manager can coordinate how much each farmer plants and the timing of planting and harvesting.
- The group may accept deliveries from non-members in order to increase the amount that it has to sell.

Costs of marketing



The marketing team or trading committee will incur some costs. These may include:

- The marketing team's or committee members' time (they could be earning money doing something else)
- Cleaning, grading and sorting
- Packaging and labeling
- Storage, loading and transport
- Communications and travel.
- Mobile phone costs.

The group should understand and approve these costs beforehand. The costs should be covered by deducting a small amount for each kilogram or bag of produce sold.

Finding a buyer

It's a good idea to identify and reach an agreement with a specific buyer for the product **beforehand** – even before the farmers have planted the crop. That gives the farmers a degree of certainty that they will be able to sell the crop – so makes them willing to invest in growing it. It also gives the buyer some certainty that there will indeed be a crop to buy.

Make sure the buyer is **reliable and trustworthy**. That means the buyer is able to handle the amount of product the farmers plan to produce, and has a reputation for paying on time. Don't agree to sell ten truckloads to a buyer who normally buys only three sacks.

During the marketing survey (Step 3) the farmers will have identified various potential buyers. Writing the business plan (Step 4) will have helped them refine the choice further. The role of the marketing team, is to return to these buyers, before the sales take place to negotiate and confirm a serious buyer.

In some cases, farmers will need to identify more than one buyer, this is because, the buyer who offers the best price, may have specific buying conditions, in terms of size, quality, timing, packaging. If the farmers are not able to offer their produce at these specifications, they may need to sell part of their produce into a lower quality, lower price market. This is normal and farmers should be prepared ahead of their sales to sell produce of different qualities into different markets. For example, farmers may sell their best quality tomatoes into a local restaurant, but sell the lower quality tomatoes to the local wholesale market.

Waste produce, is another issue. It is common for farmers to have produce that cannot be sold into a market, because it is damaged, off size, too small / too large, or rotten. Sometimes, this low quality produce can be sold to a local market or livestock farmers as animal feed. Any income gained through sales of waste produce, increases overall profitability.

Fill a truck and take it to the market?



It is important for the farmers to negotiate with buyers about the timing of their sales and to be clear about the time of delivery, method of payment and the price. Do not just load a truck and take it to the market, hoping to “outsmart” the traders. Traders do not like unexpected competition: without a prior arrangement, the farmers will suddenly find the traders unwilling to buy that day! They may have to sell for less than a trader had previously offered. They may even fail to sell the consignment and have to take it home again.

Traders do not like being forced into trades. Traders know each other and tend to work together to regulate the amount of produce that comes into a market. If too much produce arrives, prices fall and everyone loses. So farmers need to work with traders, and not against them.

Negotiating with buyers



Farmers’ groups can reach many different types of arrangements with buyers. Here are some:

- **Wait for buyer.** Many individual farmers wait for traveling traders to come along to buy their few sacks of onions or beans. Groups of farmers can do the same: because they are

selling larger amounts, they can negotiate for a better price. Bigger volumes are also more attractive for buyers, so the group may not feel they have to sell to the first buyer that comes along. Although this approach is probably better than individual sales, it misses many of the opportunities offered by the approaches below.

- **Reliable buyer.** Many farmers sell to a particular buyer each year. This has advantages for both sides: they can get to know and trust each other. The buyer may give the farmers loans to pay for inputs, while the farmers may agree to wait for payment until the buyer has sold the product. Do not attempt this with traders who you do not know!
- **Pre-arranged sale.** The group may agree to sell to a particular buyer before the harvest, at whatever the market price is at harvest time. This reduces the risk of no buyer turning up, and makes it possible to organize times, amounts, quality, and so on.
- **Agreed fixed price.** This is a special sort of pre-arranged sale, where the buyer and seller agree on a certain price beforehand. Fixing a price reduces the risk for both farmers and the buyer and this can be very useful for year round supplies. But there are dangers: if the market price at harvest time is higher than the agreed level, individual farmers may be tempted to side-sell to other buyers. Buyers can also do the same.
- **Agreed minimum price.** The buyer agrees to pay at least a minimum price. This gives the farmers more confidence to grow a crop. If the market price is higher at harvest time, the buyer agrees to pay the market price instead.
- **Auction.** The farmers may deliver their product to an auction, where potential buyers compete to buy it. The auction house may set quality grades and handle things like storage and payments; they will charge a fee for any services. Auctions are a common way of selling commodities such as coffee.
- **Contract farming.** The buyer signs a contract with a group of farmers to produce a certain product on a strict schedule. The buyer may provide loans for inputs, training, and guidance on how to grow the crop, and checks regularly that the farmers are complying with these requirements. Contract farming is especially common in the production of vegetables and other high-value crops when supplying formal buyers. It is also common with processed crops, such as cotton, cocoa, oilseeds, as the factory needs supply.
- **Fair trade.** The buyers must comply with strict standards set by a certifying organization that ensure that farmers receive reasonable prices for their produce. For this to work, both farmers and traders have to be well organized, the production on a farm needs to be tested and approved as certified, and then audited on a regular basis. Fair trade accounts for a very small percentage of world trade, but is significant in certain commodities such as coffee and cocoa.
- **Organic certification.** This works in a similar way to fair trade: the farmers must ensure that they do not use artificial pesticides or fertilizers. A certifying organization checks that they do not. This is costly to arrange, but certified organic produce fetches a premium price. Like fair trade, it is important in certain commodities and countries.

Things to negotiate



Here are some things for the marketing team to negotiate with the potential buyer:

- **Price.** What price will the buyer pay? For the best-quality product? For second-best? Is there a premium for consistently top-quality produce, or for reliable deliveries? When will the price be fixed – at the start of the season, when the contract is signed, at the time of sale, or after the time of sale (for example, depending on the export price)?
- **Quantity.** What amount of the product will the buyer take? How will this be measured – by weight or volume? In kilograms, sacks, truckloads? Will each bag be weighed? Who will provide the scales? What if there is a surplus or shortfall?
- **Quality.** What quality requirements does the buyer specify? What production methods should the farmers use (for example, avoiding the use of pesticides, or drying for a certain period)? What are the grading specifications? How should the product be sorted – by size, color, maturity, visual appearance? Who should do the sorting? How will the quality be checked?
- **Place and transport.** Will the buyer pick the product up at each farm, or at a central location? Or do the farmers have to deliver it to a particular place? Who will pay for transport, loading and unloading and storage?
- **Packaging.** How should the product be packaged? In sacks, boxes, bags or crates, or loose? Who will supply the packaging?
- **Payment conditions.** When and how will the payment take place? Immediately on exchange of the product? After a delay (of how long)? In cash, by check, by bank transfer, or via mobile phone payment? Who will pay any tax due?
- **Pre-finance.** Will the buyer provide a deposit or loan (for example so farmers can pay for inputs at the start of the season, or to cover the costs of harvesting and transport)?
- **Timing.** When will the sale take place? On what date and at what time will the buyer come to pick up the product? Is this a one-off sale, or does the buyer require a regular supply throughout the season or over several years?
- **Formality.** Is there a written contract or agreement? Or is everything on the basis of mutual trust? A handshake? What happens if one side breaks the agreement – for

example, if the farmers fail to deliver the right amount or quality, or if the trader fails to buy the agreed amount?

Agreements within the farmers' group



The farmers will need to agree on certain things. For **crops**, these might include:

- What type of crop and the variety to plant.
- How large an area will each farmer plant.
- When will each farmer plant their crop.
- What management techniques to use (fertilizer applications, irrigation, pest and disease control, etc.) so they produce the right amounts and quality.
- When will each farmer harvest the crop.
- What processing to do after the harvest (such as drying, washing, dehusking, cleaning, sorting and grading).
- How to package the crop (the types of bags or crates, labels, etc.).
- Where to store the crop so the buyer can pick it up.



For **livestock** and livestock products, things to agree on include:

- What type and breed of animal to produce.
- How many animals to raise.

- How to manage the animals (feeding, breeding, veterinary care).
- When each farmer should sell the animals.
- What market preparation is required (such as weighing, sorting and grading).
- How to maintain hygiene (for products such as milk and honey).
- How to prepare the product for transport (e.g., putting eggs in cartons or milk into churns).
- Where to keep the animals or the products so the buyer can pick them up.

Maintaining a continuous supply



Month	Expected output
January	20
February	30
March	15

Some buyers need a regular supply of the product throughout the season. A restaurant may want deliveries of a specific amount of fresh tomatoes every few days. It is no good having lots of tomatoes for sale this week, but none next week.

To serve this demand, the farmers will have to think about a number of options in terms of how much they can deliver, when they can deliver the amount of vegetables needed. They will need to agree on who plants and harvests how much of the crop on what dates. The farmers will need to develop a production schedule, (ref production guide). They will need to work on methods such as those shown below to extend their production season, methods include:-

- stagger their planting and harvesting dates
- using irrigation
- planting in different areas, such as highland, lowland and wetland areas
- using different varieties, (short and long duration varieties)

Maintaining quality



Buyers will pay a premium only if the produce meets agreed specifications, of the right quality. It is important that all the farmers produce the right quality. If even one farm does not, then everyone else suffers. That means helping the farmers' group:

- Find out what the buyers' requirements or produce "specifications" are, and negotiate a **price premium** if the farmers consistently comply with these.
- Ensure that all the members understand what the **quality requirements** are and know how to achieve them. You may have to give them training or help them invest in new equipment.
- **Monitor** the quality of the product in the field and after harvest – for example, by checking for pests and diseases, and making sure that no one supplies a sub-standard product.

Maintaining discipline



The farmers will need a way of encouraging members to stick to the agreements that have been made. There are two basic approaches: carrots and sticks.

- **Carrots.** Rewarding farmers who attend all the meetings, comply with all the agreements made, and deliver the right amounts and the right quality at the right time. For example, the farmers' group could give recognition awards for farmers who perform well.

- **Sticks.** It may be necessary to punish members who break the rules – for example if they do not attend meetings, fail to deliver the promised amounts, side sell, or if their quality is below standard. Punishments may include fines, exclusion from a credit arrangement, or even expulsion from the group.

Keeping buyers informed



Agriculture is inherently risky. Many things can affect a crop or livestock product: too little rain or too much, attacks by pests and diseases, and livestock trampling a field. Animals may have more or fewer offspring than expected.

Buyers like to know beforehand how much of the product they can expect. For example, a trader may have promised to supply a certain amount of the product to a processor. If she does not have enough produce, she will have to buy it elsewhere to avoid the factory keeping workers and equipment idle

So farmer groups should monitor the crop in the field and try to forecast how much will be produced. They should keep the prospective buyer informed about any changes in their anticipated production and also production costs. If the harvest is better than expected, the buyer can bring a bigger truck. If the weather is wet, she may be able to delay the purchase a few days to allow the product to dry.

Developing a market strategy around quality options

What to do if the farmers produce too much? How to sell tomatoes that are too big or too small, or fruit that has blemishes? What to do with produce that has been stored too long and is no longer at its best? For many farmers, the ability to sell rejects makes the difference between profit and loss.

We can divide marketing into three categories or segments:

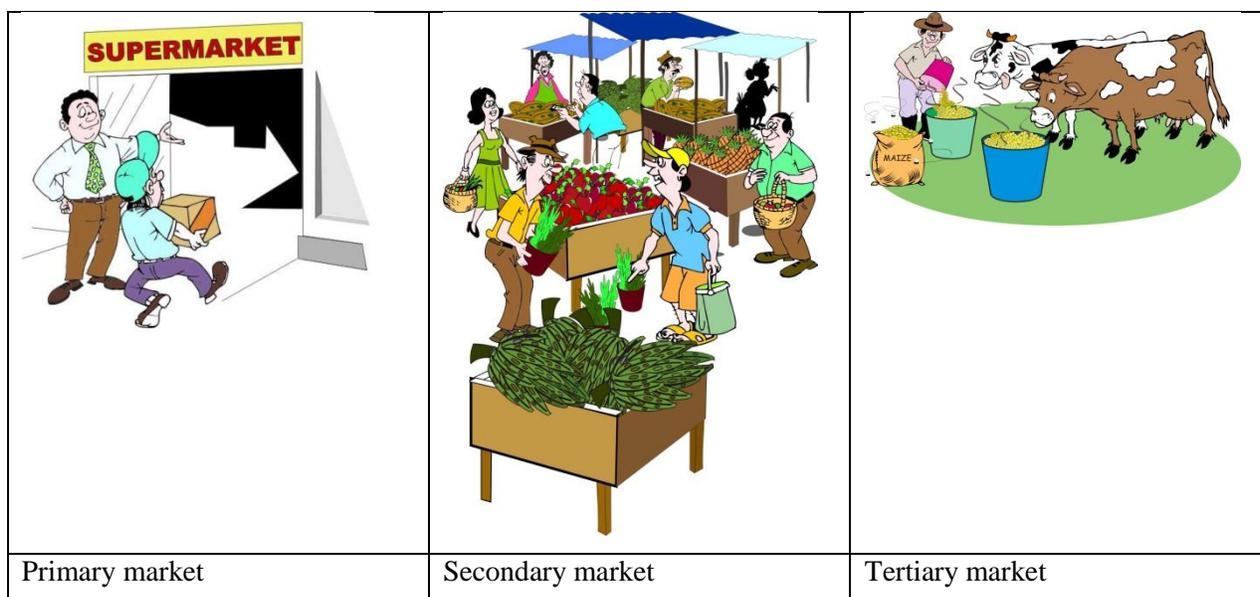


Figure 43. Selling to different market segments

Primary markets. These are often formal markets where an enterprise sells the highest-quality produce for the highest prices. Formal or modern markets have strict quality standards, and buyers will refuse to buy sub-standard produce. In this market, fresh fruit and vegetable products tend to have higher quality thresholds than grain. Farmers supplying these markets must sort their produce before delivering it and fully understand the buyer requirements or specifications to reduce the risk of rejects and to maintain their reputation as a reliable supplier.

- Examples: supermarkets, restaurants, food processors, export.

Secondary markets. These informal markets are where farmers currently sell most of their produce. These types of markets have few or no quality standards, but the produce sold here will fetch a lower price. For most smallholder farmers this market is the most important point of sales.

- Example: urban wholesale and retail markets, rural wholesale and retail markets, assembly markets, road side stalls, farm gate.

Tertiary markets. These low value markets are where farmers can sell poor quality produce: it may be over-sized, too small, over-ripe, shriveled or diseased. Some people are only seeking price not quality and do not mind off-type produce. Animals also do not care: farmers may be able to sell low quality produce as animal feed, or feed it to their own livestock. Doing so converts waste into a lucrative product (meat). Farmers may also be able to process edible but unsellable produce into longer shelf-life products.

- Examples: local village market, livestock feed, biogas feedstock, fruit jams or preserves, tomato paste, dried cassava chips, dried fish.



Figure 44. The power of mobile phones in trading

Mobiles for marketing

Mobile phones make collective marketing much easier! Before, farmers had to travel for hours just to find out the price at the nearest market. Now, farmers can negotiate a deal just by dialing the trader's number.

Here are some ways farmers can use their mobile phones for marketing:

- **Monitoring market prices** via SMS alerts or by phoning buyers and traders and asking them their buying prices for particular volumes, grades and times.
- **Communicating within the group.** Phones are useful for announcing meetings, telling members their production targets, checking on expected yields, and arranging deliveries to the collection point.
- **Arranging transport.** Some transport companies offer cheaper rates if their trucks have delivered a load and would otherwise return empty.
- **Arranging sales.** Phones are useful for contacting buyers and making arrangements for delivery, pick up and payments.
- **Maintaining business relationships.** It is important that buyers know farmers are serious about a sale, that they have the produce, and that they want to do business on a regular basis. Many traders work only with only farmers they can contact. Communication is especially important for trading in perishable goods that require regular deliveries in a season, such as fruit, vegetables and milk.
- **Accessing input credits.** In several countries farmers can get input credits from support agencies or local input suppliers sent directly to their phones. The e-credits, gives them a loan for, say, \$20 worth of inputs. Farmers can take these electronic credits to a supplier in the system and access goods. They pay back the loan at the end of the season with interest.
- **Payments.** In a few countries, phones can be used to transfer cash. It is likely that this system will be available in many more in the near future.

Buying a mobile and paying for airtime costs money. Make sure this cost is included under the costs of marketing.

Mobiles are very useful for field agents too. You can use your mobile to do many things that used to require a visit. Explore ways to use mobile technology to reduce project costs and increase your work efficiency. You can also now use mobile phones to collect survey data and keep records of your service delivery, which can be viewed by your supervisors, so that they know where you are, and the types of services that you providing to your farmer clients.

Second-order marketing associations

For some products and markets, it makes sense for several farmers' groups to come together to market their produce collectively. That will let them offer bigger amounts of the product and keep supplying continuously over a longer period. It also means they can negotiate higher prices.

If you are working in a large project where, you have many farmer groups, you can help the different farmers' groups get organized into a **second-order marketing association**. Each group should appoint two members (the marketing coordinator and perhaps the group chairperson) to an association trading committee.

The trading committee discusses its marketing strategy and agrees on the amounts of produce that each of the groups should supply and the price range it would like to achieve. It may also have recommendations about who to sell to, or which of the potential markets offer good prices.

The committee should assign two of its most experienced members to negotiate the sale with identified buyer(s) (Figure 46). These agents make the arrangements and inform the committee about it. Once the committee has agreed, it arranges the time and location of the sale.

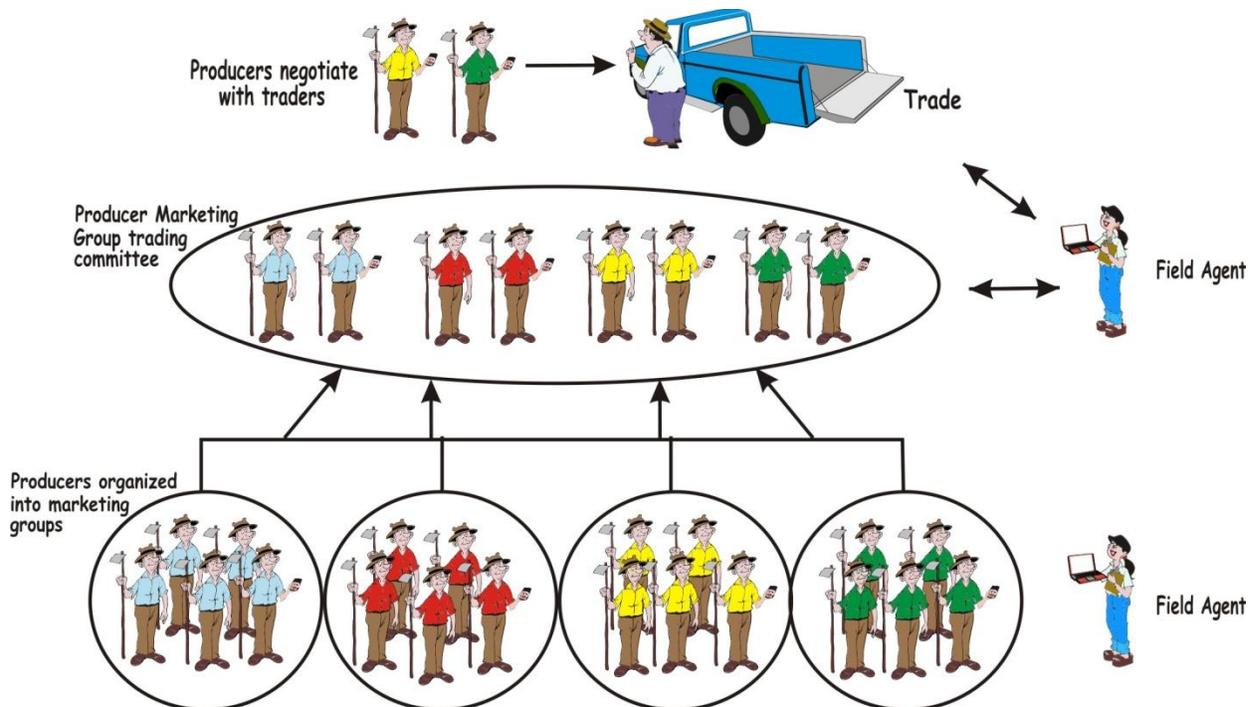


Figure 45. Second-order marketing association

The trading committee is not a full-time organization. It is a light structure that costs little, so most of the sales price goes to the farmers rather than paying for administration.

Cooperatives

Formal farmers' cooperatives can offer their members more services than informal arrangements like trading committees. Cooperatives usually have full-time, paid, skilled committee members who provide a range of services to group members, such as advice on production, finance, new technologies and access to marketing support at subsidized prices. To pay for these services, the cooperative charges a membership fee (or members can buy shares). For more on cooperatives see section **\$\$\$**.

In some countries cooperatives are strong, offer excellent services and have a good reputation. In other countries cooperatives are weak, and suffer from political manipulation and weak financial management. You will need to find out how good a cooperative is by checking with its members. If you plan to work with an existing cooperative, check its management team, and obtain records if you can about their sales transactions, their financial records, storage capacity and whether members trust the management team.

Problems with collective marketing

Here are some common problems with collective marketing, and some suggestions on what to do about them.

Social problems, emergencies. One group member's father has died, and she has to pay for the funeral. Another's daughter is in hospital and needs money to cover the medical bills. A third has to pay for a wedding. These members need money quickly, so are forced to sell their product before the collective sale. The group as a whole is unable to meet its target.



- **What to do.** Try to make sure that the farmers have another source of money. Encourage them to form a savings and internal loans group, or find a microfinance institution that can offer emergency loans. See the course on **\$\$\$**Savings and Internal Lending for more.

Repaying moneylenders. The farmer has borrowed from the local moneylender. But he owes so much that the moneylender takes his harvest as repayment, and values it at a very low price. The farmer is not able to deliver the agreed amount to the group.



- **What to do.** When setting up the collective marketing process, ask the lead farmer or secretary to follow up with farmers at their farms to be sure that farmers are really able to sell with the group. At the group meetings, the question of ability to support the group should also be discussed, it is important that everyone in the group supports the group. If one of the farmers indicates they have problems, the group should discuss this and find a local solution. Encourage the group to form a savings and internal loans group, or find a microfinance institution that can give them an alternative source of loans.

It's been a great year. Let's spend! The group has had a successful year, so naturally they want to celebrate. The other villagers expect successful members to pay for lavish weddings or other celebrations. That can cost a lot more than the year's profits, and push people into debt.



- **What to do.** Be aware of such expectations, and try not to “spoil the party.” But encourage the group to think of their farm as a business. They need to plan their expenditures, and will need money to invest in the next season. A quiet conversation about the effects of the lavish spending leading to future debt can be very helpful in the longer term.

Side-selling. This is a very common problem. The farmers' group has agreed to sell to a particular buyer. But then along comes another trader who offers some members a better deal – a higher price, say, or immediate payment in cash. The members load their produce onto the trader's truck. The group is left without enough to sell to the original buyer.



Figure 46. Side selling is a real problem, farmers should discuss plans to avoid this

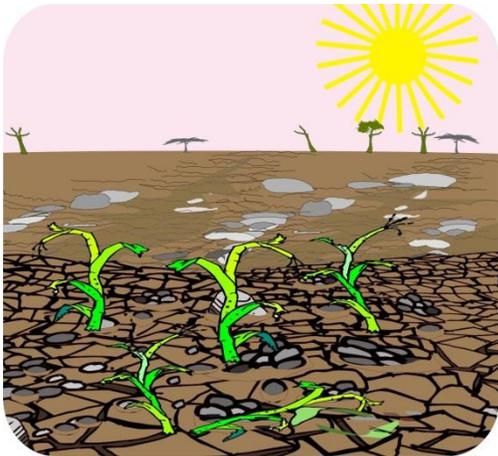
- **What to do.** Strong group leadership is essential. Persuade the group that it is in their interests to stay with the original plan. Discuss the problems of side selling with the group, as you approach the time of harvest, so that they know that it has a bad effect on the group. Make sure the group has severe penalties for side-selling – for example, expelling members who do so. Or suggest that the farmers sell only part of their output collectively, leaving the rest for them to sell individually.

Bad weather. Last year was a good year, and the group harvested 100 tons. They thought they would do the same this year, and agreed to sell this amount to a buyer. But the weather was bad: first drought, then heavy rain. The group harvested only 40 tons.



- **What to do.** Encourage the group to make plans based on a conservative or average yield, not on an outstanding year. The production coordinator should monitor conditions in the field; if problems occur and the yield is lower (or higher) than expected, he or she should tell the marketing team in good time, so the team can inform the buyers. The crop performance is something that the group should discuss at each meeting.

Not just bad weather: it was a disaster! The buyer gave the group a loan to pay for inputs at the beginning of the season, repayable at harvest time. But the rains failed completely, and the farmers have harvested almost nothing. They will go hungry – and they still have the loan to repay.



- **What to do.** When working with the loan agency, ask that loan agreements and contracts have a **disaster clause** and a way of arbitrating or making a fair decision on the ability to repay a loan or honor a contract. For example, the agreement should specify a neutral party (a local research manager, a chief, administrator or extension agent) who decides if the farmers have been unduly affected by a natural disaster. If so, the agreement should allow for reduced repayments or supplies, or for the agreement to be canceled.
- **Insurance.** The problems of loan repayments are a major concern for many farmers who would invest more in their farms, but do not do so because they fear the consequence of not being able to repay the lender. To support farmers, there are now an increasing number of insurance products, aimed at helping smallholder farmers insure against loss of inputs and loss of the crop value. If this type of insurance is available in your area, then work with farmers to find out if it makes sense to invest in insurance.

Variable quality. Some of the group members have delivered high-quality produce, while others have offered poor-quality, unsorted produce that reduces the value of the consignment. The first farmers are frustrated: they say they would have got a better price if they had sold individually.



Figure 47. Farmers who cheat the group will cause frustration

- **What to do.** Make sure that all the members understand the requirements. Illiterate farmers may need extra help to understand that they have to do. Show the farmers a bag of expected quality produce.

Costs of collective marketing. The farmers have delivered the produce, and the buyer has picked it up. The farmers thought they would get their money straight away, but payment will take a couple of weeks. Plus, the members suspect that the marketing team is overpaying itself.



- **What to do.** Help farmers understand the sales process and realize that collective marketing is not free. Make sure that the group agrees with the terms, and that payments to the marketing team (and other group officials) are transparent. Farmers should be aware that being a member of a group is likely to incur costs.

Conclusion

Collective marketing has many advantages for small-scale farmers. This Lesson has looked at these advantages, described how a typical collective sale works, and shown how farmers' groups can organize themselves to market collectively. It has also discussed some of the problems that farmers may encounter when marketing as a group.

Quiz for Lesson 17. Why market as a group?

57. All the farmers in the group should be involved in negotiating a sales deal.

- A. Correct. It's important that everyone has a say in the deal.
- B. Not correct. It is better for the group to nominate a couple of members to negotiate deals.

Correct answer: B. The group should give some general guidelines, but it is better for a small team of two or three people to do the negotiations. The team must keep the larger group informed about decisions made.

58. The farmers can just load a truck and take their products to the market. They will be sure of finding a buyer prepared to pay a good price.

- A. Correct. Markets are full of traders who are looking for things to buy.
- B. Not correct. Traders generally have regular suppliers and cannot deal with large, unexpected loads of produce.

Correct answer: B. While it may be possible to get a good deal by just loading a truck and sending it to market, such situations are rare. It is generally better to try to reach a deal beforehand.

59. Here are some problems you may encounter with collective marketing. What should you do about each one?

- | | | | |
|---|--|---|--|
| A | Drought cuts the output | 1 | Strong leadership and punishment for offenders |
| B | Farmers side-sell to other buyers | 2 | Savings and internal loan group |
| C | A farmer needs to pay medical expenses | 3 | Educate farmers about the sale requirements |
| D | Three of the members deliver unsorted produce to the collection area | 4 | Disaster clause in contract |

Correct answer: A4, B1, C2, D3

60. Put these collective marketing activities into the correct order

- A. The supermarket transfers the money for the first shipment.
- B. The secretary records how many kilograms of onions each farmer has supplied.
- C. The group aims to produce 50 tons of onions and hopes for a price of 10 shillings per kilogram.
- D. The farmers deliver the onions to the collection center on the agreed dates.
- E. Each farmer's onions are inspected and weighed.
- F. The marketing committee arranges a sale to a local supermarket: 5 tons a week for 10 weeks.
- G. The treasurer deducts the cost of marketing, then pays the farmers.
- H. A loading team loads the onions onto a truck to take to the supermarket.
- I. The production coordinator plans the planting and harvesting schedule.

Correct answer: A8, B6, C1, D4, E5, F2, G9, H7, I3

Field exercise 17a. Working out transportation costs

This fun role-play helps farmers understand the advantages of filling a complete truck when transporting produce to market.

Objective

After this exercise the participants will be able to describe the costs of transporting goods to market.

Equipment needed

Wheelbarrow, 10 paper bags with air in them, pieces of paper to act as banknotes, with \$1, \$5 or \$10 written on them (a total of \$200), flipchart, marker pens.

Expected outputs

Farmer understand how they can work together to earn more money by reducing a trader's costs.

Timing

1 hour

Preparation

None

Suggested procedure

1. Explain to everyone that this is a game to find out how much a trader is willing to pay for grain. Say that one side of the room (or teaching area, if you are outside) is the market; the other side is the village, where people have grain to sell. Explain that the paper bags are sacks of grain.
2. Ask one participant to play the role of the trader. Give this person the \$100 in make-believe money. Tell him or her (whisper so no one else can hear) that he or she can sell a sack of grain in the market for \$10. He or she should try to buy as many sacks as possible from the farmers as possible. He or she should try to make a profit, but should not make a loss. Ask this person to go and stand in the "market".
3. Ask another participant to play the role of truck driver. Give this person the wheelbarrow (the "truck"). Explain to the truck owner (again, whisper) that it costs \$30 to hire the truck. Ask this person also to go and stand in the market.
4. Ask another participant to act as a buyer in the market. Give this person \$100 to spend on grain. Whisper to him or her that the price of a sack of grain is \$10. He or she should buy as many sacks as possible from the trader. Tell this person to go and stand in the market.
5. Ask 10 more participants to act as farmers who have grain to sell. Give them the sacks filled with paper (one sack per person). Tell them that they should try to get as high a price as possible from the trader.
6. Ask the participants to act out a role-play. The trader has to hire the "truck" and driver, bring it to the village, buy grain from the farmers, and take it back to the market, and sell it to the buyer.

7. Make a note of the amounts paid each time for grain. Then hand the money back to the original owners to start again.
8. Repeat the role-play several times, with different numbers of farmers. Start off with three farmers, each with one bag of grain to sell. Does the trader want to buy their grain?
9. Then try with five farmers. Does the trader want to buy their grain? At what price?
10. Then try with more farmers, up to a maximum of 10. What happens to the price that the trader is willing to pay?
11. After several rounds, bring all the participants back together to discuss what happened.
12. You can record the transactions on a flip chart as in Table 75.

Table 75. Example of role-play of transport costs

Farmers	Sacks sold	Price per sack	Trader's profit
3	None	None	None
5	5	\$3	\$5
10	10	\$6	\$10

Questions to stimulate discussion

What types of discussions took place?

What price was the trader willing to pay for grain?

How much grain was traded?

How much profit did the trader make? Did the trader make any mistakes?

How much money did the farmers make?

What was better – lots of grain to sell, or just a little?

Who benefits if the trader leaves the village with an empty truck? With a full truck? The farmers, the trader, the buyer – or all three?

Notes

The participants may take a while to get used to this role-play. Be prepared to repeat it several times, and to allow them to make mistakes (and learn from them!).

If the farmers have three bags or less to sell, the trader will refuse to buy them, as he or she cannot hope to make a profit.

If there are four or more bags, the trader should buy them all. The price paid should depend on the number of bags on offer: more bags means a higher price. When the truck is full, the trader's costs per bag are low, so the trader can afford to pay the farmers more.

Make sure to choose a trader who can make calculations quickly in his or head!

Field exercise 17b. A trader's time is the farmers' money

This exercise helps farmers understand the value of bringing their produce to a central collection point and of selling in bulk.

Objective

After this exercise the participants will be able to explain the additional costs that traders incur when they have to collect goods from many places rather than one.

Equipment needed

Paper bags with air in them, watch.

Expected outputs

Farmers understand how they can work together to reduce the trader's costs.

Timing

30 minutes

Preparation

None

Suggested procedure

1. Divide the participants into two or more teams of 10 people each.
2. Ask each team to nominate one of their number to act as a "trader". Ask these individuals to stand at one end of the room (or teaching area). Draw a starting line on the ground in front of the traders.
3. Give the other team members a bag each.
4. Ask the teams to stand about 1 m apart in a line, facing their trader. Each person should put the bag on the ground next to him or her.
5. Tell the traders that they have to run, pick up the first bag and bring it back to the starting line. They then run and pick up the next bag, bring it back, and so on. They may carry only one bag at a time.
6. Start the race, and keep time with the watch.

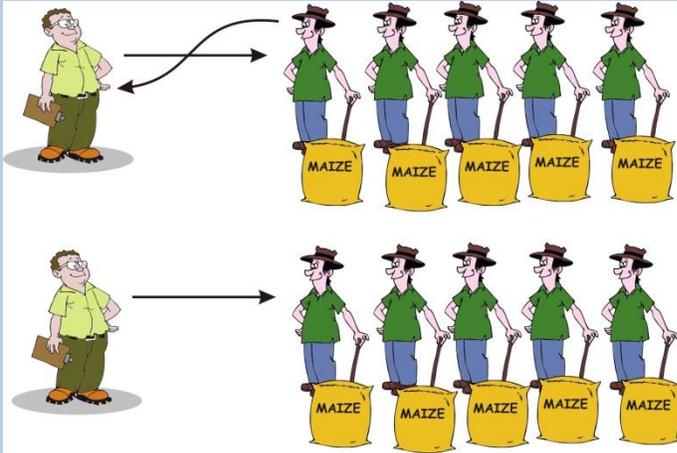


Figure 48. Line up farmers and traders

- At the end of the race, all the bags will be behind the starting line for the trader.

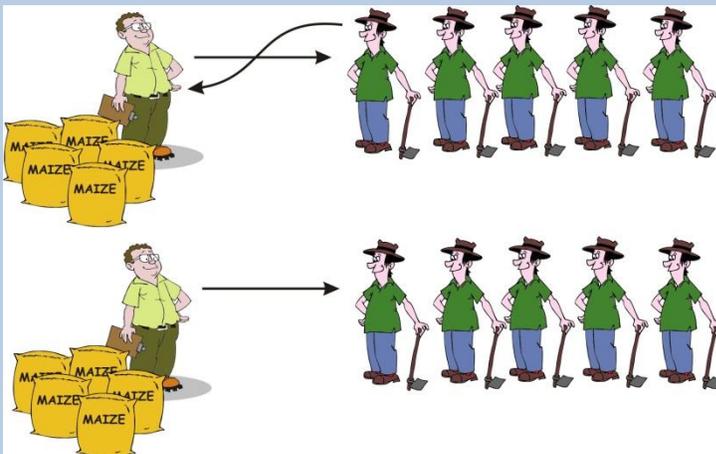


Figure 49. Traders to bring all the bags behind the starting line

- Now repeat the exercise, but this time, tell the members of the first team to group close together. In the second team, ask the farmers to spread out so that they are at least 10 paces away from each other. Now repeat the race and see who wins.

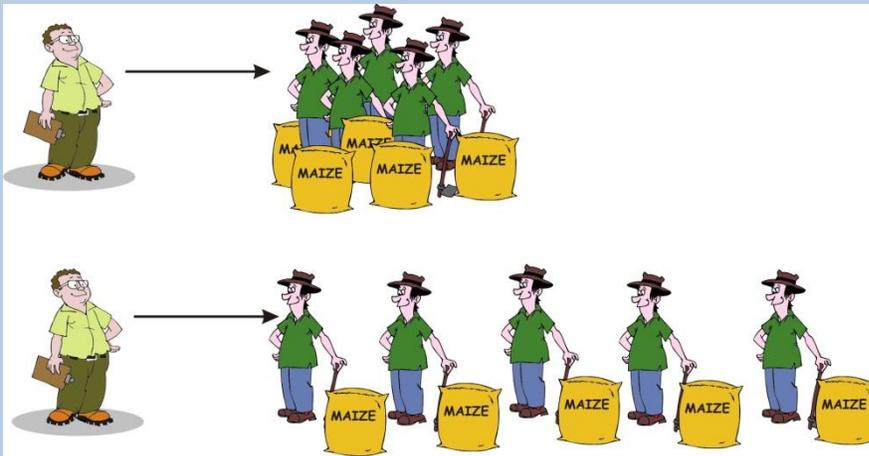


Figure 50. Traders race with group and individuals

9. Bring the participants back together to discuss what happened. (It takes a lot longer more time and effort to collect the produce when it is spread out.)

Questions to stimulate discussion

Why did it take so long to collect the bags on the second round?

Who do you think the traders will go to first, farmers who are organized and have all their produce in one place, or farmers who keep their produce at different places?

Which farmers will get the best price for the “grain” in the bags?

Do the farmers have a central collection place where they can bulk their produce at the time of sale?

Notes

Many farmers do not consider that in addition to the cost of transport there is also a cost for the time that a trader puts into collecting produce. For traders time and distance to collect produce are their major costs. A trader will make a higher profit if he or she can collect produce quickly sell it and then go on to another deal. If the trader is delayed when collecting produce he or she will need to pass that additional cost on to the farmers or his or her customers. It is simpler to charge the farmers, meaning farmers get paid a lower price for their goods if they are not organized.

Field exercise 17c. Let's talk about side-selling



This role play helps farmers think about the effects that side-selling has on the main group and the traders.

Objective

After this exercise the participants will be able to describe the negative effects of side selling on a marketing group.

Equipment needed

25 pieces of paper, each with the word of a specific crop such as “maize” written on it.

Expected outputs

Participants see what happens when some group members do not keep to an agreement to produce to a specific buyer.

Timing

15 minutes preparation with selected members of the group

60 minutes for the role play and discussion

Preparation

Write the word “Maize” on

You will need people to play the following roles. Ask for volunteers from among the group.

- **First trader** (you can play this role yourself).
- **Miller**
- **Five farmers (all members of a farmers' group)**
- **Second trader.**

Take these volunteers aside and explain the role-play to them.

Give each of the five “farmers” five pieces of paper marked with the word “maize.” Explain that each piece of paper represents a bag of maize.

Suggested procedure

Together with the volunteers, perform the following play to the audience of other group members. Feel free to make up the dialogue as you go along. Try to build some humor in to make the role play amusing!

Scene 1 (Wednesday: in the village before the maize harvest). The first trader visits the farmers' group and negotiates to buy 25 bags of maize after the harvest: enough to fill a pickup. The farmers and trader agree on a price of 2,000 shillings per bag. They agree to meet in the village after the harvest next week, when the farmers will hand over the maize and the trader will pay them. The trader and the farmers shake hands, it's a deal!

Scene 2 (Thursday: at the miller's in town). After the meeting with the farmers, the first trader meets with a miller in town and signs a contract to sell 25 bags of maize the following week. The miller has a big order to fulfill and needs maize urgently.

Scene 3 (Tuesday: in the village, after the maize harvest). The day before the expected sale, the second trader visits the village and meets two of the farmers. This trader wants to buy maize now. He offers the farmers 1,850 shillings a bag. The farmers say they already have an offer for 2,000 shillings a bag. The second trader says that first trader is very unreliable: "He will not come, but I will give you 1,900 shillings a bag right now!" The two farmers are worried. They agree and sell their maize to the trader.

Scene 4 (Wednesday). The farmers bring their maize to the collection center. But only three of the five farmers in the group arrive. They have only 15 bags, not the 25 agreed on. The trader arrives and wants to buy all 25 bags.

The trader tells the farmers: "If I cannot get the 25 bags today, I cannot fulfill my contract with the miller. I will have to find more maize whatever the price! If you have only 15 bags to sell I have to give you a lower price!"

The three farmers are very upset, but in the end they have no choice but to agree. The trader gives them 1,800 shillings per bag. "Next year I will find another group to buy from!"

The three farmers are angry with the trader, and angry with the two farmers who sold a day early.

Discussion

Facilitate a discussion among the audience and actors about what happened. Some points to bring out: Because some farmers sold early, everyone is worse off.

- All the farmers were paid less than the price they had negotiated for the full consignment.
- The trader is worried that he or she will not fulfill his contract with the miller. The trader will have to buy maize somewhere else, perhaps at a higher price, and will incur more transport costs to find the maize.
- If the trader cannot deliver, the miller will not be able to fulfill his or her own contract.

The farmers no longer trust each other and they don't like the trader. This is how farmers and traders fail to make good trading relationships and fail to get better deals.

Questions to stimulate discussion

Why did the farmers side-sell?

Will some farmers always side-sell?

Should the farmer groups and traders plan for a degree of side-selling, so that plans have some flexibility?

What would it take to avoid large scale side-selling when farmers are working together?

Lesson 18. How do traders decide on prices?

In this lesson

After this lesson you will be able to:

- Describe how a trader calculates the price he or she offers to farmers.
- Explain the circumstances when a trader is likely to offer lower prices.
- Analyze price trends over several seasons and years.

How does a trader calculate prices?



Figure 51. Setting prices based on location and volume

“The price is too low!” “The traders are cheating us!”

Common complaints from farmers. And sometimes they are true.

But usually, a trader offers farmers a price based on the current price in the market, minus the trader’s costs and profit margin. Let us look at how a trader calculates this price when buying maize from farmers 50 km from the market where he sells (Figure 52).

The trader knows that the current market price for **10 kg of onions**:

- \$5 a bag

He has a pick-up truck that can carry 100 bags. If the pick-up is full, he will be able to earn:

- $100 \times \$5$ = **\$500**

But he also has to pay for his costs. These include:

• A day’s wages for the truck driver	=	\$14
• A day’s wages for the driver’s helper	=	\$8
• Checkpoint fees	=	\$5
• Market fees	=	\$5
• Fuel for 50 km	=	\$12
• Workers to unload the truck: 100 bags \times \$0.20 a bag	=	\$20

He adds up all his costs, and they come to:

- **Total costs** = **\$64**

Naturally he also wants to make a profit, and he needs to cover the costs if the truck has an accident and the load is lost. To cover this, he includes a profit margin of 10%:

- **Profit** = **\$50**

That leaves him with the following amount to pay for the 100 bags of maize:

- $\$500 - \$64 \text{ (costs)} - \$50 \text{ (profit)}$ = **\$386**

That means he is willing to offer the farmers this price per bag:

- $\$386 / 100 \text{ bags}$ = **\$3.86/bag**

He may start by offering a little less than this, and hope he will make more profit. But if he offers more than this, he will make less profit – or maybe no profit at all.

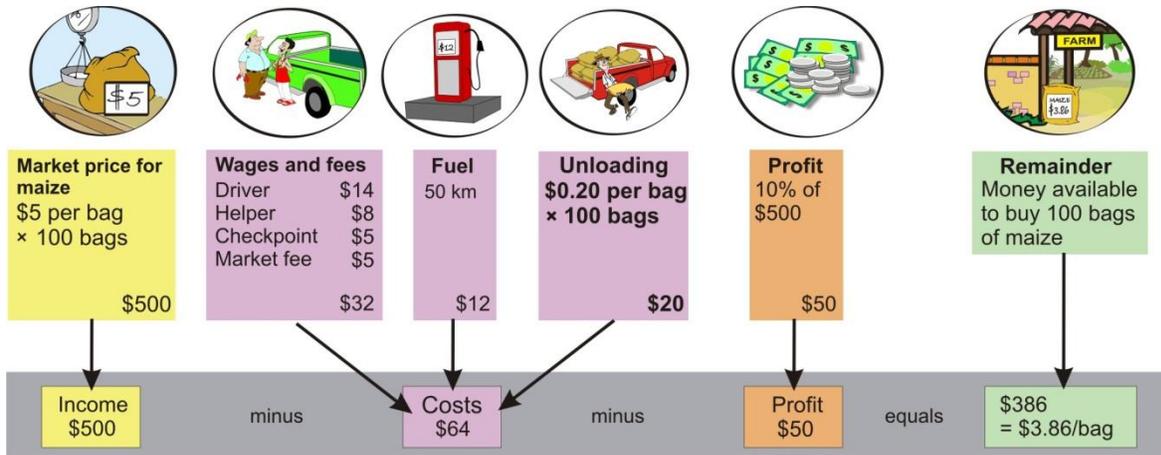


Figure 52. How a trader calculates prices

Higher costs

Now let us look at what happens if the trader's costs go up. For example, what if the trader has to fetch the onions from somewhere twice as far away from 100 km away, not 50 km? That will double the fuel costs, but all other costs will stay the same (Figure 53). We have highlighted the parts of the diagram that have changed.

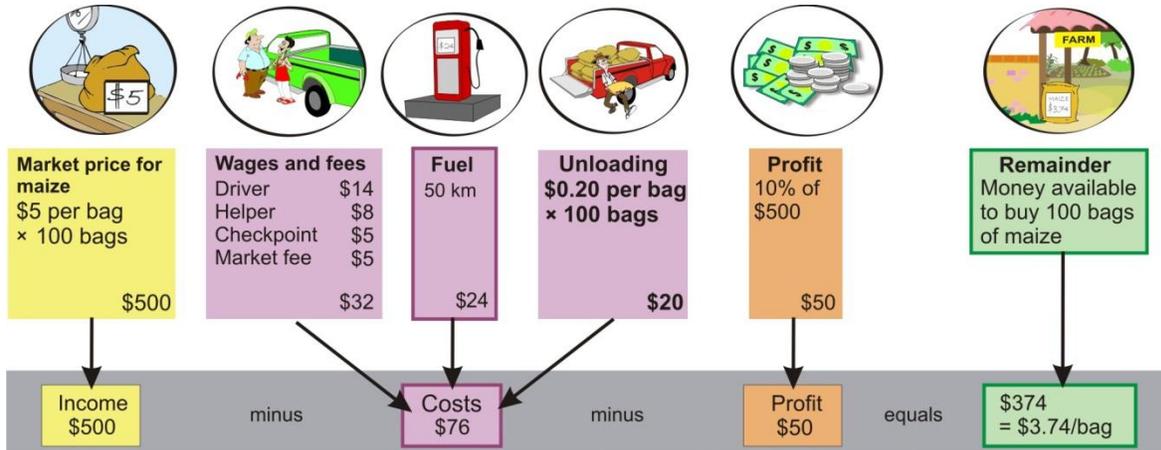


Figure 53. How a trader calculates prices: longer distance

As you can see, the trader will offer a maximum of **\$3.74** instead of \$3.86 a bag.

Smaller purchase volumes

Now let us consider what happens if the trader can buy only half a truckload: 50 bags instead of 100 (Figure 54). In this case, the unloading costs go down, but the other costs stay the same. And the trader can sell only half the amount. The trader's profit – 10% of the total sale – goes down – but there is still only enough money left for him to offer **\$3.42** a bag.

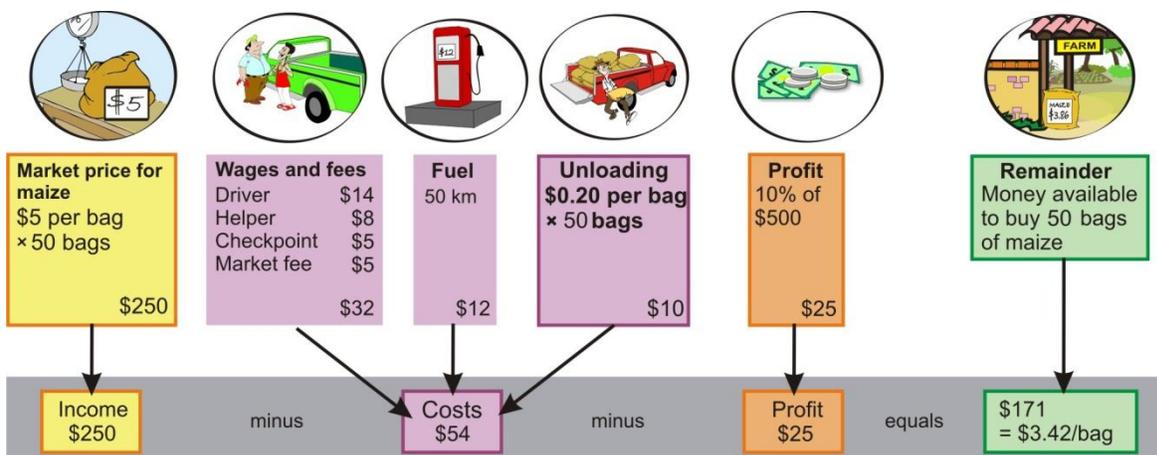


Figure 54. How a trader calculates prices: smaller volume

Everyone gets a bad deal: the farmers (who might have earned \$3.86 if they had 100 bags to sell), the trader (whose profit is halved), and the customers (who can buy only half the amount of maize).

Buyer's markets and seller's markets

All of these examples assume that the price (\$5.00 per bag) is set by the buyers in the market where the trader sells the product. This is called a **buyer's market**.

But that is not always the case. Sometimes there is high demand for a product, and the supply is scarce. That means the seller has more influence over the price. This is called a **seller's market**.

In a seller's market, the trader has to accept the price that farmers will sell at – for example, **\$4.00** a bag. The trader works **the other way around**: he adds on his costs and a profit margin, and ends up with a price he is willing to sell at in the market. In our example, this works out at **\$5.10** a bag (Figure 55).

The wholesalers who buy from the trader in the market will in turn pass on the additional costs to their customers, resulting in higher prices for consumers.

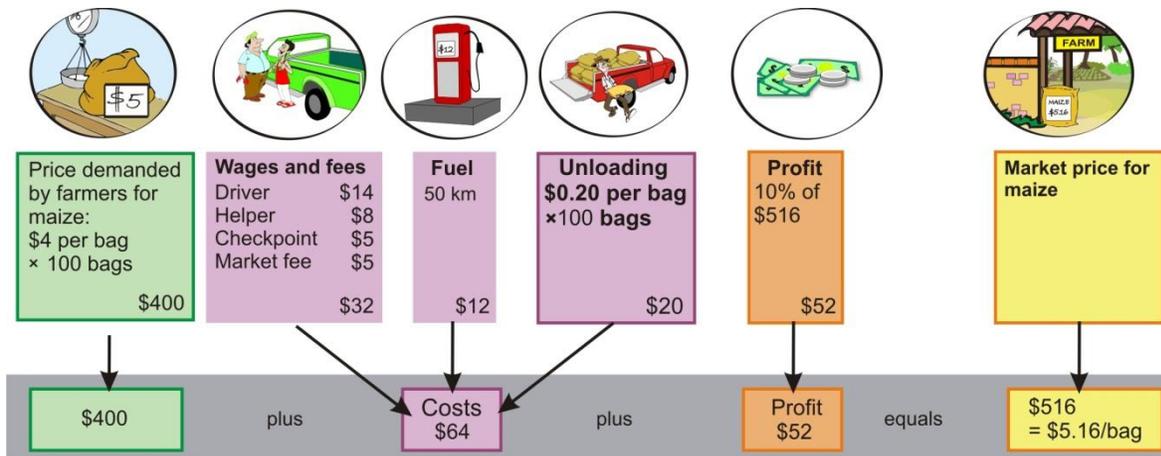


Figure 55. How a trader calculates prices: seller's market

Summarizing how traders calculate prices

Table 76 shows the same examples to make them easy to compare.

Table 76. How a trader calculates the purchase price

		Buyer's market			Seller's market
		100 bags		50 bags	100 bags
		50 km away	100 km away	50 km away	50 km away
Market price for a bag of onions		\$5.00	\$5.00	\$5.00	\$5.16
Total income from truckload		\$500	\$500	\$250	\$516
Costs					
Driver		\$14	\$14	\$14	\$14
Helper		\$8	\$8	\$8	\$8
Checkpoint fees		\$5	\$5	\$5	\$5
Market fees		\$5	\$5	\$5	\$5
Fuel for 50 km		\$12	\$24	\$12	\$12
Unloading	Bags × \$0.20	\$20	\$20	\$10	\$20
Total costs		\$64	\$76	\$54	\$64
Profit	10% of income from truckload	\$50	\$50	\$25	\$51
Money available to buy onions	Income – costs – profit	\$386	\$374	\$171	\$400
Price offered per bag	Money available ÷ number of bags	\$3.86	\$3.74	\$3.42	\$4.00

Helping farmers understand prices

You can help farmers understand prices so they can decide when to sell, where to sell, what to sell, and how much to sell at what price. You can help them get the following types of information:

Historical price data: Some agencies collect regular price data for a product at specific markets, these data sets show how the price for a product has risen and fallen over the last few years.

Figure 56 shows an example of historical price data for maize in the market of Masala, over five years. It shows that the prices start falling in April, when the harvest starts, and are lowest in July. They rise to a peak in January–March. This is helpful information for farmers who are thinking about storing produce – or planting early to take advantage of the high prices early in the year. It is also useful for microfinance institutions who may be interested in making loans to farmers who want to store their produce.

Figure 56 shows that prices rose from 2006 to 2009; so farmers were getting more money per kilogram of maize. But in 2010 prices fell slightly. You could explore the reasons for these trends and discuss whether they are likely to continue. Understanding market prices and learning how to use this information in negotiating sales prices is a useful way for farmers to get the best available price.

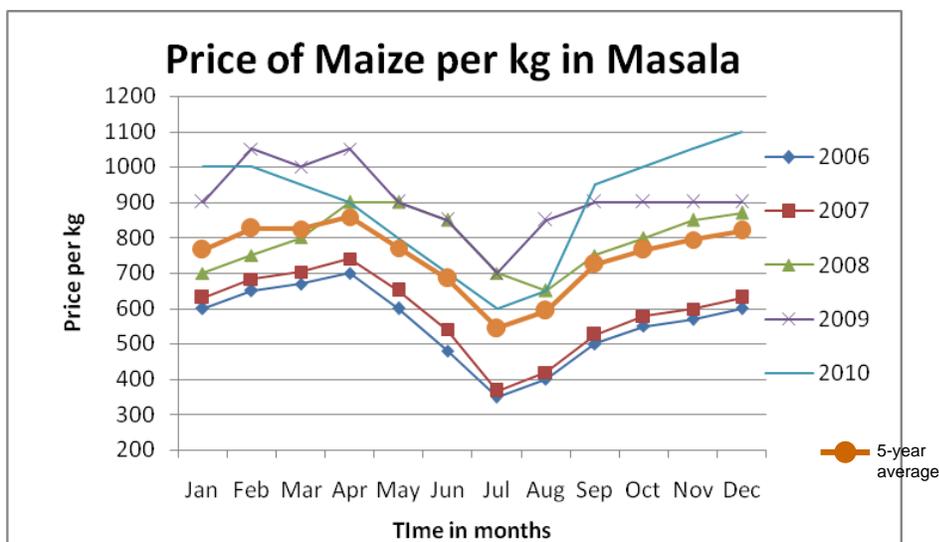


Figure 56. Changes in maize prices over five years

Some countries have national market information services which provide information on price trends, and weekly or even daily prices. Mobile phones are now often used to share market information and many services offer price updates by SMS. Find out about such services and show farmers how to use them.

The traders' costs. By working with some traders, you can learn how they set their prices and you can explain the methods they use to the farmers. The strategies that traders use will change over time, with changes in market demand and supply, so keep any information you have about prices current!

Comparing traders' prices with production and marketing costs

Comparing the farmers' production and marketing costs with the traders' prices is important when negotiating with traders.

In Step 3, Lesson 10, the farmers calculated how much it cost them to produce and market the product. Invite them to compare this with the price they can expect the traders to offer.

- **If the expected trader's price is lower than the farmers' costs:** The farmers can expect to make a loss. They should check whether their cost calculations are correct, and whether they can reduce their costs further. They should also discuss how to persuade the traders to pay more for the product – for example, by sorting and grading (to increase the quality), by offering a larger volume, or by storing the product until the price rises.
- **If the expected trader's price is higher than farmers' costs:** The farmers can expect to make a profit. Get ready to celebrate! But they should still work out how they can reduce their costs, and how to increase the price (for example, by offering larger amounts or better quality).

Conclusion

Farmers can use information on prices and costs to work out the price they can expect to be offered by traders. They will know when there is a buyer's market (probably when supplies are low and prices are highest). They will also know when they will have less room to negotiate prices (at the peak time of the harvest). The larger the volume of produce that farmers have to offer, the more strongly they can negotiate for higher prices. However, all products have clear price boundaries and so farmers need to understand market limitations.

Quiz for Lesson 18. How do traders decide on prices?

61. “Ibrahim the trader is trying to cheat us! He came in his pickup today and offered ten cents a bag less than Jojo.”

- A. Correct – Ibrahim and Jojo both sell at the same market, so there is no reason that they should offer different prices.
- B. Not correct – Jojo has a big truck: he can buy more than Ibrahim, so has lower costs. That means that Jojo can offer higher prices.

Correct answer: B. If he fills up his truck, Jojo has lower costs per bag – so is able to offer a higher price.

62. “Now Jojo is playing games! Last week he paid \$5 a bag; now he is offering only \$4.50.”

- A. You are right – Jojo is trying to force the farmers to lower their prices.
- B. You may be mistaken. The price in the market has changed, and Jojo will not make any money if he keeps paying \$5.

Correct answer: B. The price that traders are willing to pay usually depends on the price that they can sell at.

63. “Let’s work out how much Jojo should be offering us... What is his expected price?”

- A bag of onions fetches \$5 in the market.
- Paying for the driver, helper, checkpoints, market fees and fuel will cost him \$44.
- Unloading costs \$0.20 a bag.
- He expects 10% profit on a load.
- We have 75 bags to sell.

(You will need a pencil and paper or a calculator.)

- A. \$3.86 a bag
- B. \$3.65 a bag
- C. \$3.71 a bag
- D. \$2.73 a bag

Correct answer: C. Here is Jojo’s calculation:

• Expected income: 75 bags × \$5:	\$375
• Wages, fees and fuel:	\$44
• Unloading: 75 bags × \$0.20:	\$15
• Total costs:	\$59
• Profit: \$375 × 10%:	\$37.50
• Income – costs – profit:	\$278.50
• Price per bag: \$278.50 ÷ 75 bags:	\$3.71

Field exercise 18a. Farmer and trader pricing

Objective

After this exercise the participants will be able to explain how traders set their prices.

Equipment needed

Flip chart, market pens, calculator

Expected outputs

Farmers have a better understanding about how traders set their prices and what farmers can do to either improve their price negotiating position or work on ways of helping to reduce farmer costs.

Timing

2 hours

Preparation

None

Suggested procedure

Tell the following story. Use Table 77 to explain the numbers.

In the village of Bengul, there was a group of farmers who produced chickens. They sold their chickens to Mr Khan, a chicken trader, for 220 rupees each. Mr Khan took them to the market, where he sold them for 400 rupees.

One day, one of the farmers, Ahmed, went to the market. He found that farmers there were selling their chickens to the traders for 350 and sometimes 380 rupees. He went back to the village and told the other farmers about this.

When Mr Khan next came to the village, Ahmed asked him why he paid them so little for their chickens. They wanted a better price. The trader smiled. "You are right," he said. "The problem is that every time I come to Bengul you sell me only 12 or 15 birds. At that amount I cannot pay you more. If you want a better price you need to sell me a lot more chickens."

The farmers thought about this. Ahmed then asked, "What would you give us if we produce 40 chickens every week?"

Mr Khan said "I would give you 250 rupees".

Ahmed was surprised. "I want to earn more. I want 350 rupees for my chickens. They are the best chickens in the valley!"

Mr Khan smiled again. "Very good, Ahmed. I can pay you 330 rupees for your chickens, but only if you supply me with 100 birds on every visit. If you can do that I will come every week."

"Let me tell you a little about my business," Mr Khan continued. "If we count the cost of fuel, the vehicle and my driver, my trip here costs me 1,800 rupees: the same if I buy 12 chickens from you or 100. Then I have to pay 20 rupees per chicken in taxes and market fees."

“If I only have 12 birds, I still have to pay for the transport and driver. So I can offer you only 150 rupees a bird. But I can buy 100 chickens from you, I can pay you more for them and still earn money. I have written some figures down for you to see the prices. Have a look at them, and call me if you decide to grow more chickens.”

Ahmed studied the figures and spoke with his neighbors. The farmers knew this was a big jump in their production. But they worked out a plan and borrowed money for the chicks, feed and medicine. Now they produce 100 chickens every week for Mr Khan.

Mr Khan is very pleased with his chickens, and the farmers work hard together. Both the farmers and Mr Khan are pleased they are earning more from their chickens.

Mr Khan explained that prices of chickens in the market change during the year, so the farmers must monitor the market prices. They will have to accept lower prices at some times of the year, and can perhaps ask for a little more when prices are high.

Table 77. Why Mr Khan wants to buy more chickens

(Figures in rupees)

	A	 12	 40	 100
Number of chickens Mr Khan buys	A	12	40	100
Price Mr Khan pays per chicken	B	150	278	326
Cost of chickens	$C = A \times B$	1,800	11,120	32,600
Tax, market fees (20 per chicken)	D	240	800	2,000
Fuel, driver, vehicle	E	1,850	1,850	1,850
Mr Khan's total costs	$F = C + D + E$	3,890	13,770	36,450
Mr Khan's total income (400 per chicken)	$G = A \times 400$	4,800	16,000	40,000
Mr Khan's profit	$H = G - F$	910	2,230	3,550

Discussion

Choose a product that farmers sell and work out the costs from the market back to the farm.

Work out the costs if you have 10, 100 or 200 units of that product.

Also work out the costs if the market price changes.

Step 6. Reviewing agroenterprise performance



Reginald and Bibi, who are members of the Mshika farmers' group, have harvested their 2 acres of maize and brought them in from the fields. The whole family helped thresh the maize and spread the grain on mats. The children took turns to shoo away the chickens while the maize grain dried in the sun. Then Reginald and Bibi shoveled the maize into bags and brought it to the collection point in the village. All the members of the farmer group were there waiting to give their bags of maize to the secretary. The group secretary counted the number of bags they brought in, checked the quality of the grain and weighed each bag. Some bags were rejected due to poor quality, and farmers complained, the rejected bags were emptied, and two young men, removed the trash, put the grain through a mesh and then re-bagged the grain. At the end of the day, there were 270 bags ready for the trader.

On the morning of the next day, the trader arrived with a truck, and the group of farmers loaded it high with bags of maize. The trader paid the secretary in cash, and then in the afternoon, the secretary paid out the farmers. Now Reginald and Bibi have a fistful of money to take home.

The couple are happy: they have finally got some money to show for all their months of work. But have they made enough to cover their costs? How much profit have they made? Did they make as much as they expected?

This Step shows you how to work whether farmers made a profit and then to assess if it was a good or a bad year. It contains two Lessons:

- Lesson 19 looks at calculating costs, income and profit.
- Lesson 20 turns to reviewing the season's activities together with the farmers, documenting what has happened and what the group has learned, and planning the next season.

At the end of this Step you will have

- Reworked the profitability analysis using actual amounts of produce that were sold, actual material and labor costs and actual sales prices
- Reworked sales amounts with the farmers in the group to determine their levels of profit
- Evaluated the effects of loans of profits
- Discussed ideas with farmers about the usefulness of the profitability analysis

Lesson 19. Calculating costs, income and profits

In this lesson

After this lesson you will be able to:

- Calculate the actual costs of materials, labor and services, and loans incurred by an individual farmer to produce a particular product.
- Calculate the farmer's income and profit from that product.
- Calculate the costs, income and profit for a farmers' group.
- Advise farmers what to do in case of a loss or a profit.
- Suggest ways farmers can cut their losses or increase their profits.

At the end of the season...

In Step 3 (Lesson 10), we learned how to calculate the expected costs and income for a particular product. This was done because at the start of the production season, we do not know the actual costs, so we made an estimate, based on our knowledge and last season's prices.

At the end of the season, after the produce has been sold, we can now repeat the profitability calculations, but this time we can use actual numbers rather than estimates. The actual numbers come from two sources:

- **Costs:** information recorded by the farmers in their notebooks throughout the season (see Lesson 16).
- **Income:** information from the group secretary on sales.

You can calculate this information using pencil and paper, a calculator or a spreadsheet. Or you can use the profitability calculator, part of CRS's FARMBOOK software.

Using standard measures

As we mentioned in the first calculation, it is essential that you use standard measures (like kilograms and hectares) in your workings, so the numbers can be compared across farmers, districts and across countries. If you use local units (such as tins, or basins or local units of land area), make sure to give the conversion factors to standard units. The FARMBOOK software asks you to define these units and does the conversion automatically for you.

You can calculate the costs and income in the local currency, but give the current conversion rate to US dollars. The FARMBOOK software will ask you for the current currency conversion rate, then does the conversion automatically.

The farmers will have recorded two types of costs: materials and labor. Let us start with the materials costs.

Area calculations

When you are making production cost and profitability calculations with farmers, use the full area of production that they planted. For example if the farmer planted 0.5 acres, or 2.5 acres, be sure to ask for all the costs related to that area. At the end of calculation, you can then calculate unit area costs, such as costs per acre. Do not ask farmers to make unit area calculations as this will cause confusion.

Also, it is always good to check the area that the farmer claims he has planted. Many farmers over estimate the area that they plant. In some cases you may be able to measure the area planted, which will give you much better costs information.

Consumable materials costs

Throughout the season, Bibi carefully recorded the cost of everything she and Reginald bought for their maize crop, using the form in Table 71. That made it easy for her to keep track of the costs and to add them up at the end of the season. Table 78 shows her calculations.

Table 78. Actual consumable materials costs for Reginald and Bibi's maize crop

Product type	Maize	Currency		US Dollar	
Land area	2 acres	Convert to USD Currency per \$		<i>Not applicable in this case</i>	
Date	Materials	Units	Quantity	Price per unit	Cost
		Eg, kg, bags	A	B	A × B
Pre-production					
3 rd May	Hybrid seed	2 kg packets	8	5	40
Total pre-production costs					40
Production					
5 th May	Fertilizer	50 kg bags	2	45	90
Total production costs					90
Post-harvest					
4 th July	Storage bags	100 kg Bags	30	1	30
Total post-harvest costs					30
Marketing costs					
10 July	Transport to sales point	bags	20	0.5	10
10 th July	Mobile phone	Air time	5	5	10
Total marketing costs					20
Total consumable materials costs for area planted (2 acres)					180
Total consumable materials costs per unit acre (=2 x 0.5)					90
Total materials costs per hectare (=unit acre x 2.471)					222

The field agent calculated her costs for the area planted and then calculated her unit acres costs, so that he could compare the costs for Bibi's plot with other farmers. If you make this calculation in a local currency and local land area, you should convert these values to standard units of US dollars per hectare, so that your information can be compared more widely.

Cost of durable material items

Bibi and Reginald bought a new plow at the start of the season. This was a major expense, but they expect it to last them a long time – perhaps 10 years. So Bibi has divided the cost by 10 to represent the cost for just this year. She will have to remember to include another one-tenth of the cost in her accounts next year, and the year after, for 10 years in all. Table 79 shows her calculations.

Table 79. Cost of durable items for Reginald and Bibi’s maize crop

Product type	Maize	Currency			
Land area	2 acres (0.81 hectares)	Currency per \$			
Item	Units Eg hoes, buildings	Quantity A	Price per unit B	Years used C	Cost per year A × B / C
Pre-production					
This year	Plow	1	100	10	10
Totals Pre-production					10
Production					
Last year	Hoes	2	6	4	3
Last year	Machetes	2	9	3	6
Totals Production					9
Post-harvest					
	Baskets	5	1	5	1
Totals Post-harvest					1
Marketing					
	Drying sheet	1	20	4	5
	Rent Store space	1	300	20	15
	Mobile phone	1	25	5	5
Totals Marketing					25
Total cost of durable items per year for area planted (2 acres)					45
Total cost of durable items per acre = 40/2 = 20					22.5
Total cost of durable items per year per hectare					56
					=22.5 x 2.471

Total material costs

To calculate the total material costs, Bibi had to add the consumable material costs to the durable material costs as shown in Table 79.

Table 80. Total materials costs for Reginald and Bibi’s maize crop

Product type	Maize	Currency	
Land area	2 acres (0.81 hectares)	Currency per \$	
Total consumable material costs			180
Total durable material costs			45
Total material costs for area planted (2 acres)			225

Labor costs

Bibi kept track of the couple's labor costs. For each activity she carefully recorded the number of person-days of family labor needed, as well as the number of person-days of workers that the couple hired.

In the "Cost/day" column, she wrote the wage for hiring a worker for one day. But what to do about the cost of family labor? She and her husband did not pay themselves a wage if they worked in their own fields! But she wanted to know the value of the time they had put in, so she wrote in the same wage as for daily laborers.

Table 81 shows her calculations.

Table 81. Actual labor costs in Reginald and Bibi's maize crop

Product type		Maize		Currency		Dollars		
Land area		2 acres						
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								
	1 st Plowing	2	2	4	4	8	8	16
	2 nd Plowing	2	2	4	4	8	8	16
Total pre-production costs						16	16	32
Production								
	Planting	2	5	2	2	4	10	14
	Apply Fertilizer		4		2		8	8
	1 st Weeding	3	6	2	2	6	12	18
	2 nd Weeding	3	6	2	2	6	12	18
Total production costs						16	42	58
Post-harvest costs								
	Harvesting	4	3	2	2	8	6	14
	Drying and sorting		9	2	2	0	18	18
Total post-harvest costs						8	24	32
Marketing costs								
	Transport and sales		9		2		18	18
Total marketing costs						0	18	18
Total labor costs for area planted (2 acres)						40	100	140
Total labor costs / acre						20	50	70
Total labor costs per hectare USD						49	124	173

Reginald and Bib wanted to know their labor costs per hectare so they could compare with other farmers. So they calculated their costs first into unit acres. This was done by the following calculation (2 acres ÷ 2 = 1 acre). Then to calculate the costs into hectares they multiplied their 1 acre costs by 2.471 to get the figures shown in **Table 79**.

Cost of loans

If the farmers took out a loan, they have to pay interest on it. This is a cost, so has to be included in the calculation of the total costs. You may remember that we calculated this back in **Lesson 11**, planning on a loan rate of 5% per month.

When Bibi and Reginald looked at their loan costs they found the reality was much higher than they had planned for. Instead of 5% loans, they had to pay 10% per month to support their maize enterprise. The total cost for their maize enterprise was \$282. However, they had \$30 in savings and decided to borrow \$200. The cost of the loan is the total amount of interest to be repaid, plus any fees or other expenses. In Table 82, the cost of the loan is US\$ 80, that is for borrowing 200 at 10% for four months. The total amount to be repaid is US\$ 280.

Table 82. Calculating the cost of a loan

Amount of loan	A		200
Interest rate per month	B	10% per month	
Number of months	C	4 months	20 x 4
Cost of loan	$D = B \times C$		80
Amount to be repaid	A + D		280

Total costs

It's now easy for Bibi to calculate the couple's total costs (Table 83).

Table 83. Total costs of Reginald and Bibi's maize crop

Product type	Maize	Currency	
Land area	2 acres (0.81 hectares)	conversion	
Costs		Total area 2 acres	US\$ per hectare
Consumable materials	A	180	222
Durable items per year	B	45	56
Total materials	$C = A + B$	225	278
Hired labor costs	D	40	49
Family labor costs	E	100	124
Total labor costs	$D + E$	140	173
Loan costs	F	80	99
Total costs (excluding family labor)	$C + D + F$	345	426
Total costs (including family labor)	$C + D + E + F$	445	550

Income

Bibi now calculates the income she and Reginald have earned from their maize.

The couple harvested 30 bags of maize from their 2 acre plot, it was a good year! They kept 10 bags for their own consumption. They sold the rest to their Farmer group. They had planned to sell the bags at an average value of \$28 / bag. However, this was a good year for maize and with bumper harvests, the price of maize had fallen. Bibi and Reginald were only able to sell their bags for an average price of USD \$23 / bag.

Table 84. Reginald and Bibi's income from maize

Product type	Maize	Currency	
Land area	2 acres (0.81 hectares)	Currency per \$	US\$
			US\$
No. of bags for sale	A	20	
Price per bag	B	US\$	23
Total income 2 acres	C = A * B		460
Income US\$ per hectare	C / 2 x 2.471		US\$568

Cash Profit (gross margin)

Now she has calculated their costs and income, it is easy for Bibi to work out their profit. She uses the gross margin analysis we covered in Lesson 10.

Table 85. Reginald and Bibi's profit from maize

Product type	Maize	Currency	USD	
Land area	2 acres (0.81 hectares)	Currency per \$	1	
			Excluding family labor	Including family labor
Total income	A	460	460	460
Total costs (including loan costs)	B	345	445	445
Profit (gross margin)	C = A – B	115	15	15
Profit (gross margin) per acre plot in US\$	C / 2	57.5	7.5	7.5
Profit (gross margin) per hectare in US\$	C x 2.471	142	19	19

The result of their work? Bibi and Reginald are fairly pleased. They made less than they planned for but they made a cash profit of US\$ 115 from their 2 acres and they kept 10 bags of maize with a market value of \$230. Based on their investment of approximately \$345, they secured their food security through bags of maize and had a cash surplus of \$115.

However, when they included the cost of their own work, they only made US\$ 7.5. They discussed the figures and decided to continue with growing maize again next year. The field agent is also relieved, he calculated that the couple made \$58/ acre and this converted to a value of \$142/ ha.

Comparing costs

The field agent spoke to Reginald and Bibi about their results. This was the first time that the field agent and the farmers had kept figures to see how well their maize enterprise was doing. The field agent worked with Reginald and Bibi to compare what they had planned and what they actually sold. These figures are shown in **Table 84**.

Table 86. Reginald and Bibi's profit from maize

Product type	Maize	Currency USD	Currency USD	
Land area	2 acres (0.81 hectares)	Conversion - none	Conversion - none	
		Total area 2 acres)	Total area 2 acres)	
Costs		Pre-season estimated costs	Post-season actual costs	Difference (US\$)
Consumable materials	A	170	180	10
Durable items per year	B	40	45	5
Total materials	C = A + B	210	225	15
Hired labor costs	D	32	40	8
Family labor costs	E	92	100	8
Total labor costs	D + E	124	140	16
Loan costs	F	40	80	40
Total costs (only hired labor)	C + D + F	282	345	63
Total costs (including family labor)	C + D + E + F	374	445	55
Price per bag	# bags	28	23	
Held income (10 bags)	10	280	230	
Cash Income	20	560	460	-100
Total value		\$840	\$690	-150
Profit (only hired labor)		278	115	-163
Profit (including family labor)		186	15	-171
Profit per acre - (only hired labor)		\$139	\$57.50	-81.5
Profit per acre - (including family labor)		\$93	7.5	-85.5

*The pre-season loan = \$280 x 5%

Key differences in the costs of the Pre-season estimate and the Post-season actual figures show that actual material costs were higher than estimated costs. Actual Labor costs were higher than estimated labor costs. In this particular year, the sales prices were lower than expected based on previous price data. This meant that the income was approximately 20% less than expected and profits were 40% less than the estimates.

The data also shows that when farmers only included the cost of hired labor, they made a cash profit. However, when the cost of the family labor was included, there was a dramatic fall in income.

The most redeeming part of this analysis is that because maize is a staple food, the farmers were able to retain the value of their crops in grain. Unlike crops that are grown specifically for income, or crops that are perishable, storable crops such as maize, beans, sorghum, rice etc., can be harvested and stored for many months, providing essential food for the family.

Comparing profitability between different crops

The information in Table 84, shows the profitability of maize on a unit area, i.e., maize profits per acre. This calculation can be used to compare with other crops such as cassava, sorghum, or with other crops such as tomato and coffee. When farmers and field agents have information for several crops, unit area

comparisons, can be used to show farmers how they can use their land most effectively to optimize their profits, see more on this type of analysis in Lesson 20.

Checking the figures for individuals

If you have asked a small number of farmers to keep records (as we suggested in Lesson 16), check each set of records carefully. If all the farmers in the group are keeping records, you probably will not have enough time to check them all individually. But you can ask groups of farmers to check each other's records. Give them some guidance to make sure that they have recorded all the costs properly, have calculated their income correctly, and know how to work out their profit.

Calculating costs, income and profit for the farmers' group

You can now calculate the costs, income and profits for all members of the farmers' group. There are several ways to do this:

- **From records kept by all farmers.** If all the farmers have kept records of their costs and income, you can help them calculate them in the way described above.
- **By estimating from the farmers who kept records.** If only a few farmers have kept records, you can use their figures for costs and income per hectare to estimate the costs and incomes of the other farmers in the group. You only need to know the area planted by the farmers of the crop, to calculate his or her costs and income.
- **From records kept by the group.** The farmers' group will have records of the amount of product each farmer delivered, and the amounts sold. You can use these figures to calculate the costs, income and profit for the members and for the group as a whole.

Table 87 shows the calculations for the rest of the farmers in Reginald and Bibi's group.

Table 87. Actual costs, income and gross margin per farmer in a group

Assumption all farmers keep 10 bags of maize for food security

Name of farmer	Area planted	Bags sold	Income Sales price per bag \$23	Savings	Costs					Profit
					Consumable	Durable	Labor ex Family	Loan costs 10% x 4 months	Total	
Reginald Mengi	2	20	460	30	180	45	40	80	345	115
Jim Tembo	3	40	920	30	270	67.5	60	120	517.5	402.5
Julius Kassanga	3	35	805	50	270	67.5	60	120	517.5	287.5
E. Kezilahabi	2	25	575	20	180	45	40	80	345	230
Salma Kikwete	4	55	1265	50	360	90	80	160	690	575
Leonard Shayo	2	25	575	30	180	45	40	80	345	230
Flaviana Matata	4	60	1380	150	360	90	80	160	690	690
Marcus Chengula	3	35	805	30	270	67.5	60	120	517.5	287.5
Livelong Nyerere	1	5	115	50	90	22.5	20	40	172.5	-57.5
Totals	24	300	6900	440	2160	540	480	960	4140	2760

The information from the group costs, shows that all farmers made a cash profit from their maize enterprise except Livelong Nyerere who made a cash loss, because he only had one acre and after keeping 10 bags for the family was only able to sell five bags in the market.

Comparing targets and actual costs, income and profit

It is important to compare the actual costs, income and profit with the estimates that the farmers made at the start of the season. That enables them to check how well they have done, and to plan better for the next season.

Table 88 shows the estimates the group made at the start of the season. You will note that the estimates were more optimistic than then reality! This is very normal.

Table 88. Estimated costs, income and gross margin per farmer in a group

Product type			Maize		Currency		USD\$			
Land area			24		Currency per \$		1			
Expected sales price per bag			28							
Name of farmer	Area planted	Bags sold	Income	Savings	Costs					Profit
					Consumable	Durable	Labor	Loan costs	Total Costs	
Reginald Mengi	2	20	560	30	170	40	32	80	322	238
Jim Tembo	3	35	980	30	255	40	48	120	463	517
Julius Kassanga	3	35	980	50	255	40	48	120	463	517
E. Kezilahabi	2	20	560	20	170	40	32	80	322	238
Salma Kikwete	4	50	1400	50	340	40	64	160	604	796
Leonard Shayo	2	20	560	30	170	40	32	80	322	238
Flaviana Matata	4	50	1400	150	340	40	64	160	604	796
Marcus Chengula	3	35	980	30	255	40	48	120	463	517
Livelong Nyerere	1	5	140	50	85	40	16	40	181	-41
Totals	24	270	7560	440	2040	360	384	960	3744	3816

When the group compared the estimates they had made at the start of the season (Table 88) with the actual figures they collected at the end of the season (Table 87), they realized the difference in results, as shown in Table 89.

Table 89. Difference in estimated and actual costs, income and gross margin

Product type			Maize		Currency		USD\$			
Farmer Group	Area planted	bags sold	Income	Savings	Costs					Profit
					Durable mat	Consumable mat	Labor	Loan costs	Total	
Per acre values				US \$						
Estimated totals	24	270	7560	440	2040	360	384	960	3744	3816
Actual totals	24	300	6900	440	2160	540	480	960	4140	2760
Differences	0	30	-660	0	120	180	96	0	396	-1056

- They produced 30 more bags for sale **volume** (300 bags) than they had planned (270 bags).
- Their **costs (4,140)** were higher than expected (**3,744**), a larger part of the higher costs were due to increased price of fertilizer and the much higher costs of a loan.
- The **sales price (\$23 per bag)** was lower than they had hoped (\$28 per bag).
- The higher volume did not quite make up for the lower price, giving them a lower **income (\$6,900)** than expected (**\$7,560**).

- Due to the higher costs and lower revenue than expected, their **profit (2,760)** was US\$ 1,056 lower than they had estimated (**\$3,816**).
- All farmers made less profit than hoped, but all made a cash profit and had 10 bags of maize for their food security. Only one farmer made a cash loss in this case because of the low land area.

Reasons for a loss

Farmers may find they have made a loss rather than a profit.

- **Are the calculations correct?** Check the figures and calculations carefully. Maybe the farmers have overestimated the costs, or made a mistake in the calculations.
- **Was there an obvious cause** – such as a drought or a severe disease that cut production? Or was there a bumper harvest that led to a sudden fall in prices? Discuss what the farmers can do to avoid such problems in future.
- **Is there still a loss if you ignore family labor?** The calculation may show a loss if family labor is included, but a small profit if it is ignored. That may or may not be a problem, depending on whether the family members can find other sources of income instead of working on their farm.
- **What caused the loss?** Why do the farmers think they lost money? Were costs too high? Was the income lower than expected – for example if yields or prices were lower than hoped? Encourage the farmers to think about these questions and how to make the enterprise more profitable next time.

Celebrating a profit

The farmers may find they have made a profit. Time to celebrate? But wait, not quite so fast...

- **Are the calculations correct?** Check the figures and calculations carefully. Maybe the farmers have underestimated the costs, or made a mistake in the calculations.
- **Was there an obvious cause** – such as a particularly good yield because of unusually good rains? Discuss what the farmers can do to ensure they can get similar yields next year (e.g., by harvesting water and using it to irrigate their fields).
- **How can the farmers best invest the profit?** It is tempting to spend money on a big celebration, or to buy a longed-for television or motorbike. But is that the best way to spend the money? How will it help the family make a profit next year? Each farmer should carefully consider the investment needs for the enterprise and the costs of living until the next harvest, then see how much money is left over to spend.

Cutting losses and increasing profits

There are two ways to reduce losses or increase profits:

- **By cutting costs.** Help the farmers think of how they can cut their costs. Maybe they can invest in equipment that will cut the amount of work required? Or use a different technique that allows them to avoid spending money (such as using integrated pest management rather than spraying expensive pesticides).

- **By increasing income.** Help them think of ways they might increase their income. For example, they might harvest earlier, so benefiting from higher prices. They could increase the area planted, or switch to a higher-yielding variety. Or they could select a different target market that pays more for the product.

Quiz for Lesson 19. Calculating costs, income and profits

64. "Reginald, help me with the accounts! How much did we spend on production and marketing?" Reginald gives Bibi a pile of handwritten notes and receipts:

Seed \$15, Fertilizer \$25, Weeding \$65, Hoes \$50, Harvesting \$50.

What is their cost of consumable materials?

- A. \$205
- B. \$115
- C. \$50
- D. \$40.

Correct answer: D. Consumable items are seed (\$15) and fertilizer (\$25).

65. "Those hoes should last us at least five years. How much should I include for them in this year's costs under durable items?"

Seed \$15, Fertilizer \$25, Weeding \$65, Hoes \$50, Harvesting \$50.

- A. \$250
- B. \$50
- C. \$10.

Correct answer: C. Divide the cost of the hoes (\$50) by the number of years (5).

66. "Reginald, turn the television off! How much did we spend on hired labor?"

Seed \$15, Fertilizer \$25, Weeding \$65, Hoes \$50, Harvesting \$50.

- A. \$205
- B. \$115
- C. \$50
- D. \$40.

Correct answer: B. Bibi and Reginald hired workers to help with the weeding (\$65) and harvesting (\$50).

67. "Reginald, stop watching the football! How much did the loan cost us?"

Loan principal \$100, Interest 2% per month, Loan period 6 months.

- A. \$12
- B. \$100
- C. \$112.

Correct answer: A. 2% of \$100 is \$2. Multiply by 6 months to find the loan cost of \$12.

68. "Reginald, I know it's the football final, but this is important too! How much were our total costs?"

Seed \$15, Fertilizer \$25, Weeding \$65, Hoes \$50, Harvesting \$50, Loan \$12.

- A. \$217
- B. \$177
- C. \$167.

Correct answer: B. Remember to divide the cost of the hoes by 5 as they will last 5 years: $\$50/5 = \10 .

So $\$15 + 25 + 65 + 10 + 50 + 12 = \177 .

69. "Yes, I'm sorry you missed the goal. Now help me work out our profit."

Total costs \$177, Bags sold 50, Price per bag \$6.

- A. \$477
- B. \$300
- C. \$123

Correct answer: C. Here is Bibi's calculation (Reginald had gone back to the television): Income = $50 \times \$6 = \300 . Profit = $\$300 - \$177 = \$123$.

Field exercise 19a. Calculating costs, income and profits

This exercise will help a farmer group to calculate their costs of production, the income from the sale of their products and the profit that they have made.

Objective

After this exercise the participants will be able to calculate the costs, income and profit from an enterprise.

Equipment needed

Multiple copies of the empty costing template (or you can write this information on a flipchart)

Paper, pencils and a calculator, a computer with a spreadsheet will assist calculations

Expected outputs

A record of farmers costs of materials, labor, loans, income and profit at the group level.

Time

Two sessions of 3 hours.

The first session will work out the costs of production from up to three farmers. Try to get a sample of farmers that best represent the group.

The second session will collect information on areas of production and sales prices for farmers, which will be used to calculate profits for each of the members.

As you gain experience, you may be able to do both sessions in 3 hours.

Preparation

Before working on the costs of production with farmers, the field agent should visit a local input supply merchant and have a list of costs for generally used materials for the target crop. This will include things like, costs of seeds by type, costs of fertilizer by type, costs of agro-chemicals commonly used for target crop. Then basic costs of equipment such as a power tiller, plow, hoe, machete, string, bags, knives, etc., that most farmers will use. It is also useful to get an idea of the costs of certain services, such as plowing teams per day, tractor lease, weeding teams daily rates. This information is collected so that you can challenge the farmers if they give very high or very low prices.

Suggested procedure

The farmers should do the profit analysis on the crop they have grown together and sold as part of the project work. If they have not yet done this, choose a crop that they all grew last season and fully understand in terms of how to produce and sell the crop and have a working knowledge of the costs and incomes involved.

The first session should be done with the field agent and up to three farmers to obtain the costs of production and get information on unit sales prices. The profitability results for all the farmers will be assessed in the second session. Having two meetings avoids people waiting around whilst the detailed interviews are being performed.

Session 1. Costs of production for individual farmers

Ask the field agent to write down all costs for the production from each of the farmers in turn, and put this information into the sheets as outlined below:

- The consumable material costs
- The durable material costs
- The family and hired labor costs
- Costs of loans
- Total costs
- Income from the sales of the product
- The profit (gross margin)

On each form write the farmer's name, the name of the farmers' group, the date, product and area on which the calculation is made (using standard units).

Table 90. Consumable materials costs for target crop

Farmer name		Farmer group:		Date:	
Product type		Currency			
Land area		Currency per \$			
Date	Materials	Units	Quantity	Price per nit	Cost
		Eg, kg, bags	A	B	A × B
Pre-production					
Total pre-production costs					
Total production costs					
Post-harvest					
Total post-harvest costs					
Marketing costs					
Total marketing costs					
Total consumable materials costs for area planted (X acres)					
Total consumable materials costs per unit acre ()					

Cost of durable material items

Table 91. Cost of durable items

FARMER Name		Farmer group:		Date:	
Product type		Currency			
Land area		Currency per \$			
Item	Units	Quantity	Price per unit	Years used	Cost per year
	Eg hoes, buildings	A	B	C	$A \times B / C$
Total cost of durable items per year for area planted					
Total cost of durable items per acre					

Labor costs

In the next table write down all of the labor costs. Separate costs for family and hired labor costs.

Table 92. Labor costs

Farmer name		Farmer group:				Date:		
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								
Total pre-production costs								
Production								
Total production costs								
Post-harvest costs								
Total post-harvest costs								
Marketing costs								
Total marketing costs								
Total labor costs for area planted (X acres)								
Total labor costs / acre								

Cost of loans

If the farmers took out a loan, they have to pay interest on it. This is a cost.

Table 93. Calculating the cost of a loan

Farmer name		Farmer group:	Date:
Amount of loan	A		
Interest rate per month	B	% per month	
Number of months	C	# months	
Cost of loan	$D = B \times C$		
Amount to be repaid	A + D		

Total costs

Using the information from the previous tables, you can now fill in the summary table below

Table 94. Total costs of product

Farmer name		Farmer group:	Date:
Product type			Currency
Land area			
Costs			Total area Unit area
Consumable materials	A		
Durable items per year	B		
Total materials	$C = A + B$		
Hired labor costs	D		
Family labor costs	E		
Total labor costs	$D + E$		
Loan costs	F		
Total costs (excluding family labor)	$C + D + F$		
Total costs (including family labor)	$C + D + E + F$		

Income

Now calculate the income earned from the sales of the target product.

Table 95. Income from target product

Farmer name		Farmer group:	Date:
Product =		Production area =	units
Income through sales	No of units sold	Price per unit	Total
Sales units x market sales price			
Sales units x market sales price			
Total sales			

Calculating profit

Use this template to calculate the costs and income.

Table 96. Profit (gross margin) from target product

FARMER Name		Farmer group:	Date:
Product type		Currency	
Land area		Currency per \$	
		Including family labor	Excluding family labor
Total income	A		
Total costs	B		
Profit (gross margin)	C = A – B		
Profit (gross margin) from x unit area e.g. acre / ha plot			

Calculating average costs and profits per unit area

Table 97. Average costs per unit area

Product type		Currency	
Farmer 1 name		Farmer group:	Date:
		Including family labor	Excluding family labor
Total income per unit area (e.g. per acre / ha)	A		
Total costs per unit area (e.g. per acre / ha)	B		
Profit (gross margin) per unit area (e.g. per acre / ha)	C = A – B		
Farmer 2 name		Farmer group:	Date:
		Including family labor	Excluding family labor
Total income per unit area (e.g. per acre / ha)	A		
Total costs per unit area (e.g. per acre / ha)	B		
Profit (gross margin) per unit area (e.g. per acre / ha)	C = A – B		
Farmer 3 name		Farmer group:	Date:
		Including family labor	Excluding family labor
Total income per unit area (e.g. per acre / ha)	A		
Total costs per unit area (e.g. per acre / ha)	B		
Profit (gross margin) per unit area (e.g. per acre / ha)	C = A – B		
Average costs		Farmer group:	Date:
		Including family labor	Excluding family labor
Average income per unit area (e.g. per acre / ha)	$\Sigma A1+A2+A3/3$		
Average costs per unit area (e.g. per acre / ha)	$\Sigma A1+A2+A3/3$		
Average profit per unit area (e.g. per acre / ha)	C = A – B		

Session 2. Checking the figures for individuals

In the second session you can use the average figures, calculated in session 1 to help farmers who did not keep records to work out their profit. In some cases, you will have asked a small number of farmers to keep records (as we suggested in Lesson 16), you can use their costs directly in the next calculation.

Check each set of records carefully. If all the farmers in the group are keeping records, you probably cannot check them all individually.

In the next table, you can fill in the names of all the farmers with details of the area planted, bags sold and prices achieved. If farmers sold their produce on different dates at different prices, ask them to write down the incomes which you can use to calculate average income.

Procedure: for calculating individual costs, profits, and group production and income

Ask all the farmers to call out their names so that you can enter them into Form 9. Then ask each one in turn, to fill in the columns. For farmers with no records use the average costing data from the information in Session 1, to fill in the blanks in Form 9, overleaf.

Table 98. Actual costs, income and gross margin per farmer in a group

FARMER Group Name										
Product type					Currency					
Land area					Currency per \$					
Name of farmers in group	Area planted	Bags harvested	Bags sold	Average price / bag	Costs					Gross margin Tsh
					Income	Materials costs	Labor costs ex Family	Loan	Total	
Total Group numbers										

Comparing targets and actual costs, income and profit

You can now use your actual figures from this form to compare with the estimated figures that you calculated in \$\$\$Field lesson 13.

Discussion

Did you make a profit?

Is this profitability information of value to you?

Did you make as much profit as you expected at the start of the season?

What will you do next season to improve upon this season’s result?

Lesson 20. Review, documentation and planning the next season

In this lesson

After this lesson you will be able to:

- Describe how to help farmers analyze the previous season's results.
- Compare the performance of several farmers' groups.
- Plan your guidance for the farmers for the next season.

Farmers' records

Individual farmers. As far as possible, individual farmers should be responsible for keeping their own records. That will help them gain the skills they need to manage their businesses in a professional manner.

Encourage them to keep records, and where necessary guide them how to do so. Just as important, help them analyze the information they have gathered so they can make decisions based on it. It may be good to start with just a few farmers in the first season, and encourage them to help their friends and neighbors to keep their own records in the next season.

Group records. To be commercial farmers, it is vital that the farmers' group keep good records of targets, actual production and sales, and details of financial transactions. Keeping these records is the responsibility of the group's elected agents.

Help the agents to collect this data and maintain these records. Also help them to analyze the group's performance, report the results to the members, and use the information to make decisions during the season and for the following season.

Learning from the first season

The farmers have produced, sold, and calculated their profits. It is time to discuss with them what they have learned. Help them review both the quantitative and qualitative aspects:

Quantitative measures

- Did the group meet the targets in terms of production
- Did the group meet their price targets?
- Did the group manage to meet their cost targets?
- Did they make the income and profits they had expected?
- Did they repay their loans?
- Was it profitable to take a loan?

Qualitative measures

- Was the approach a success? What went right? What do they want to do again next season?
- What went wrong? What would they do differently next season?
- What did we learn from the first season? Are the farmers doing better in groups?

You can use Table 99 to record the farmers' comments.

Table 99. End-of-season review form

	What went well?	What did not go so well?
Farmer organization		
Gathering information		
Business plan		
Pre-production		
Production		
Post-harvest		
Collective marketing		
Profit analysis		
Was the product a good selection?		
Things to change		
General comments		

Farmers often find it particularly useful to learn from the experience of other farmers. Consider arranging joint meetings or cross-visits between groups so they can exchange ideas.

Reviewing performance

In addition to evaluating the performance of a crop or livestock agroenterprise, the farmers should also review the performance of their group members, particularly the marketing team, lead farmers and or committee members.

Performance monitoring is a sensitive issue, but it should be discussed constructively. You should be sensitive to problems in group dynamics and find ways to suggest where changes may help.

Elections are one way to ease changes in positions and enable other members of the group to take on new responsibilities. They can be a non-confrontational way for a group to change people who are not performing in key roles.

Discussing with your team

This is also good time to discuss your results with your colleagues, other field agents and supervisor.

- **Comparing groups.** Are some groups doing better than others? Why? How did the farmers your colleagues have been advising do? What can you learn from them? and what can you share from your own experiences? What difficulties have you encountered, and how can you overcome these?
- **Reviewing the agroenterprise approach.** How successful has the agroenterprise approach been? Did it help farmers to produce and sell for a profit? Did they learn new skills? Did the information gathering and processing help you to assist farmers? Does the approach reduce the time and costs of serving farmers or increase it? Does it result in more and better impact at the farm level? What difficulties and challenges have you and your colleagues faced in implementing the approach?

You can use the profitability calculator in the FARMBOOK software to compare the productivity and profitability across farmer groups and products.

Documenting and reporting

Various people will need written reports about the season's activities and results. The government, donors, NGOs, financial institutions and private-sector investors need formal reports filled with data. Find out what format is required for the report. If you have kept good records for the group, you should be able to prepare the report in the correct format easily.

Anecdotes – for example about how a particular family has succeeded – add human interest to a report and can be used in other ways too – such as to help other farmers understand and accept the agroenterprise approach. Take photographs or make some short video's as well of key points in the production and marketing cycle so you can use them in reports and in your future work with farmers.

Do not be afraid to report failures. Failures are inevitable when testing new ideas. Failure will happen in any business venture. By documenting and analyzing failures, we can learn from them and avoid repeating them.

Planning the next season

The farmers have reviewed the previous season or production cycle. Now it is time to plan for the next season using the experience they have gained. You should help them do this well before the start of the next season so they have time to explore markets, purchase inputs and apply for any loans they may need.

- **Same product and market?** If they plan to target the same product and market, they probably will not need to gather a lot of new information. They can use the information and contacts they already have. But farmers should still check whether any major changes have taken place, for example in prices or market demand. Perhaps they can renew agreements or contracts with suppliers and buyers, and negotiate loan arrangements with financial institutions on similar terms to the previous season.
- **Different product or market?** If the farmers decide to switch (or add) products or target a different market, they will probably need to do more work to gather and analyze information. You may need to help them do this. See Lesson 5, Lesson 7 and Lesson 8 for more.
- **Seeking improvements.** It is always possible to make improvements, even in the most successful business. Encourage the farmers to look for ways to cut costs, increase their output, obtain better prices, or invest money in a more effective way.
- **Profitability analysis.** Help the farmers repeat the profitability analysis (Lesson 10) to estimate their costs, income and profit from the next season's enterprise.
- **Business plan.** The group should revise its business plan if necessary (see Step 4). If they are sticking to the same product and market, few changes may be needed. If they are changing products or markets, they will need to make more substantial revisions.
- **Investing in the enterprise.** Encourage the farmers to re-invest part of their profits in profitable ventures. They may do this as individuals (for example, by buying seed, fertilizer or equipment for their farms), or as a group (building a warehouse to store grain). The higher the farmer savings to cover the costs of materials and labor, the more the farmer will keep in profit at the end of the year.

Taking a back seat

The farmers have had a season's experience, so they will start off with a much higher level of knowledge and understanding than when you began working with them. That means they should need less direct training and guidance this time.

So take more of a back seat. Try to make sure they do as much of the planning, record keeping and analysis as possible. Be clear that you have many other farmers to serve, so while you will be pleased to provide support and advice, they have to run the agroenterprise themselves next season.

Quiz for Lesson 20. Review, documentation and planning the next season

70. Each group is unique. There is no point in comparing them.

- A. Correct. Little is to be gained from comparing across groups.
- B. Not correct. Both farmers and field agents can learn by comparing groups, so it is important to gather data in a standard format to allow comparisons.

Correct answer: A. It is worthwhile compare the performance of groups to understand why some may be working well and others not so well.

71. Who are the main users of data on costs, income and profitability?

- A. The farmers themselves.
- B. The officers of the farmers' group.
- C. The field agent.
- D. The field agent's organization.

Correct answer: A. The others are all important, but secondary, users.

72. The farmers made a loss, and they are frustrated by the agroenterprise process. What should you do?

- A. Abandon work with the group: they clearly do not have the motivation to continue.
- B. Discuss the problems with the group and explore ways to overcome them in the next season.
- C. Try to persuade them that they should do the same thing next season.

Correct answer: B. If people are not successful at first, it can be hard to help them continue. Open, honest discussion is the best option.

Step 7. Scaling up



Figure 57. Working with different groups and field agents to scale up

The last Step leads you through three activities that you need to complete before the next season. These are:

- **Scaling up.** This means finding ways to extend the agroenterprise approach to more farmers. We outline some ideas in Lesson 21.

At the end of this Step you will have:

- Reviewed the previous season's experiences with the farmers' group and your colleagues.
- Helped the farmers plan for the next season or production cycle.
- Explored ways to achieve a greater impact by scaling up the agroenterprise approach.

Lesson 21. Scaling up

In this lesson

After this lesson you will be able to:

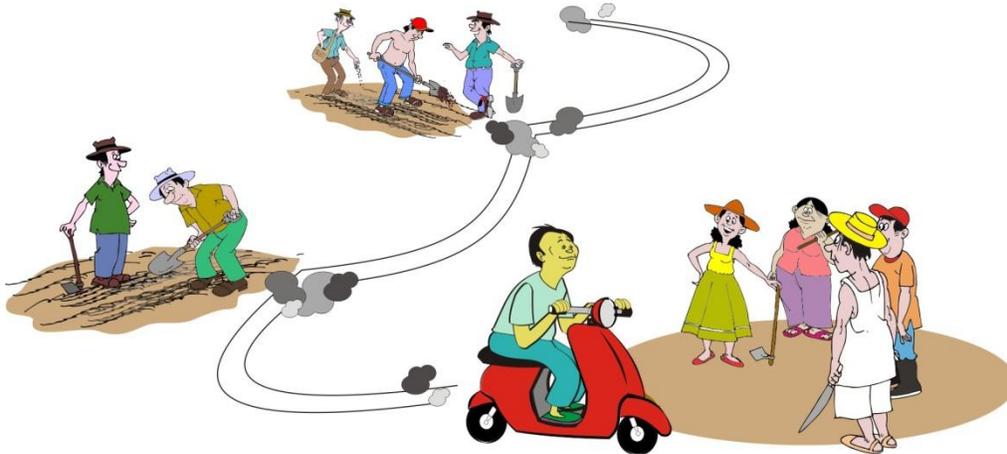
- Work out how many farmers' groups a field agent can manage.
- Describe options for further training field agents.
- Describe second-order farmers' associations and farmer cooperatives.
- Help farmers prepare a plan for scaling up their enterprise.
- Describe other ways of helping develop and spread new ideas about production and marketing.

A huge demand for advice on marketing

There is a huge demand among farmers for help with marketing. So we need to find ways to serve more groups in more places. This Lesson looks at some ways to do this:

- Managing more groups
- Training other facilitators
- Working with second-order associations and cooperatives
- Working with buyers
- Promoting innovation
- Communication and the media.

How many groups can a field agent manage?



There is no fixed number of farmers' groups that a field agent can support. It depends on the type and detail of training provided, the location, the situation of the groups, market options, and the capacity of the field agent.

If you are working in an area where the farmers are poor but markets are functioning reasonably well, a well-trained field agent can start working with 5–10 farmer groups of 20–30 farmers each, in the first production cycle.

If the process is successful and there is demand from other farmer groups, the field agent can add five to ten or more groups each production cycle. The timeframe for the production cycle may be a season, a year, or several years, depending on the product.

Figure 58 shows how a plan to add new groups might be organized.

- In **year 1** the field agent provides 10 farmers' groups with intensive training.
- In **year 2** the field agent coaches these same groups, visiting them every month and at marketing time. This allows the field agent time to start new groups.
- In **year 3**, the field agent comes to the first year group only when requested, coaches the groups who started in year 2 and begins to work with a new set of farmer groups.

In a 5-year project, the field agent would support 20 groups through the three phases.

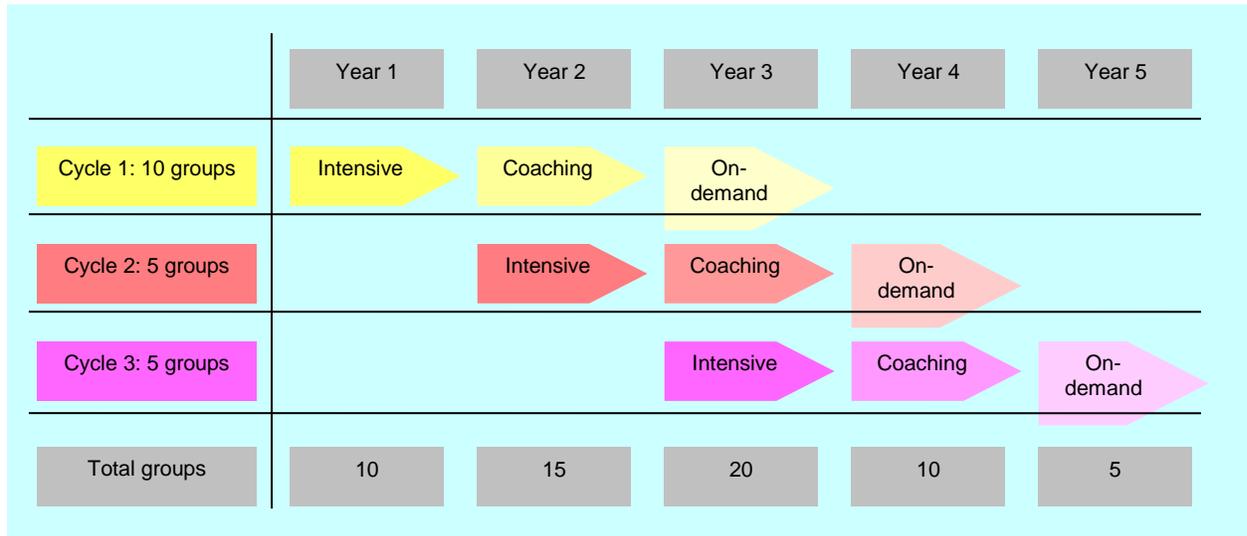


Figure 58. Outline for rolling training plan for one field agent for a 5-year project

Training other facilitators



Another way to spread the agroenterprise approach is to train people to facilitate other groups of farmers to set up their own agroenterprises. These facilitators might include:

- **Staff of partner organizations.** Various NGOs, community organizations, faith-based organizations and extension agencies promote agricultural development. They often focus on increasing production or community organizing. Training them in agroenterprise skills would enable their staff to expand their services and increase their impact.
- **Community field agents.** Entrepreneurial farmers, especially young people, may be interested in taking on the role of being a private-sector field agent. They may be able to work part-time or full-time to help groups improve their marketing. Some projects and organizations support part or all of the salaries of such agents. Elsewhere, they may be able to charge farmers' groups a fee for the services they provide.
- The most successful private field agents often start working in savings-and-loans groups before expanding to agroenterprises. A field agent who learns the 5 skills as part of a project can go onto becoming a private sector field agent. A field agent may also train local community members to become private sector service providers.

Designing training courses

A field agent requires a range of skills, not just in agroenterprises. This course is one of a set of courses covering the following skills:

- Building a training scheme for skills development
- Organizing and managing groups
- Managing finances through internal savings and lending
- Linking farmers to markets and developing agroenterprise (this course)
- Managing natural resources for sustainable production
- Being innovative by accessing and applying new technology.

You can use these materials to design courses for the staff of partner organizations and community field agents.

Second-order associations

Collaboration among farmers' groups can help scale up the collective marketing of farm products. Such collaboration may take the form of a second-order marketing association or a cooperative (see Lesson 17).

A second-order association is an informal association of farmers' groups that arranges the marketing of its members' products, and perhaps purchases inputs in bulk. Each group has two representatives on the association's trading committee. The trading committee in turn appoints two of its members to negotiate with potential buyers.

The two representatives from each group relay information and decisions between their groups and the association (Figure 59).

The association enables the farmers to buy from and sell to larger traders, and to get better prices.



Figure 59. From first-order marketing groups to a second-order association

Farmer cooperatives

Cooperatives are more formal organizations that typically have full-time staff and offer their members more services:

- Access to new technologies such as (seed, fertilizer, agro-chemicals, irrigation)
- Access to veterinary services
- Access to basic inputs at lower market costs, based on bulk purchase
- Extension service support for production
- Financial support for loans and profitability analysis
- Storage and crop conditioning facilities
- Market information (spot prices and market trend data)
- Market support (finding buyers and making collective marketing arrangements)
- Providing access to loans, insurance and warehouse receipt options
- Support for certification.

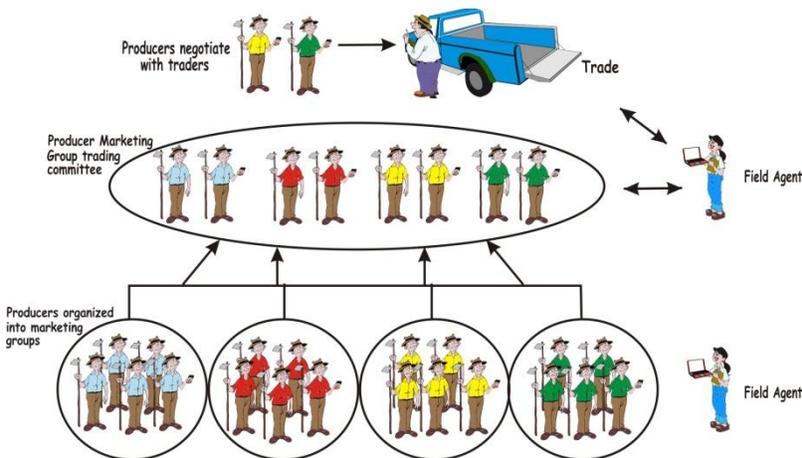
Some cooperatives also provide social services:

- Access to medical clinics
- Adult education
- Basic infrastructural projects (water, sanitation, market access roads, transport).

These services may also be open to non-members, but members get preferential rates.

To join a cooperative, a farmer usually pays a one-time or annual membership fee, and is also asked to buy shares.

Cooperative management



Several cooperatives may be organized into unions:

- Farmers' groups (20–30 members)
- Cooperatives (10–30 farmer groups)
- Cooperative unions (4–5 cooperatives).

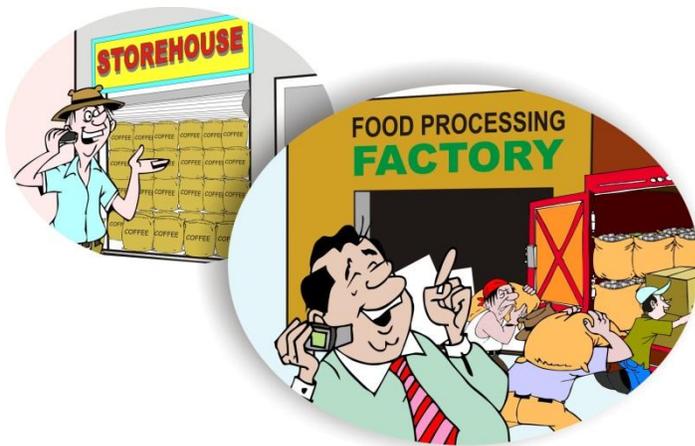
Because they serve so many farmers and are a place where farmers can learn and get information, cooperatives can be a very useful way to scale up the agroenterprise approach.

Where they are well managed, cooperatives generally improve the lot of their members. Millions of farmers support and are empowered by the cooperative movement.

But in some countries mismanagement of cooperatives has left many with a bad reputation. Some cooperatives are imposed by the Government. They are sometimes controlled by elites or politicians. Where farmer's groups have been manipulated for political purposes, many are corrupt or inefficient.

So farmers may be suspicious of cooperatives, and in some areas, it may be challenging to promote them. Make sure that any organization that claims to support farmers is both honest and provides services that promote the farmers' position. All such organizations should be audited regularly to check their performance and cost-effectiveness.

Working with formal buyers



Local traders and other more formal buyers typically purchase from a large number of farmers. Negotiating with lots of individuals is time-consuming and not very efficient. As we have seen, many buyers welcome the opportunity to negotiate to buy larger amounts from groups of farmers. They are often prepared to pay a higher price for the convenience of buying in bulk.

Once you have helped the farmers get organized into a group, it is helpful to work with the buyers.

- Are they interested in buying more?
- Would they like to buy other products as well?
- Would they pay a better price for better quality?
- Can they pay more quickly for reliable supplies?

Try to facilitate agreements between farmers and buyers to build trading relationships. Encourage the farmers' groups to monitor buyer trends, needs and preferences.

Once they have seen the advantages of working with groups, the buyers may be interested in helping their other suppliers get organized and to sell to them in bulk.

Encourage the farmers' groups and buyers to keep in close contact throughout the growing season. Mobile phones make this easy.

Promoting innovation



Farmers can often improve their incomes by identifying new trends and market opportunities and finding ways of supplying these new demands. They can also become more competitive by reducing their production costs or boosting their productivity.

This probably requires new production techniques or better ways of organizing. And that means innovation.

Innovations typically start with one person seeing a new way of doing something. This idea is tested on a small scale, perhaps with a small group of farmers. If it is successful, the group as a whole can adopt the new approach and integrate it into their next business plan.

Where do new ideas come from? The farmers themselves are an important source. You should also work with researchers and the private sector to identify new things that might work. The internet is also a good source. See the CRS course on Innovations for more ideas on how to promote innovations.

Comparing costs between crops

In Lesson 19 we learnt how to compare estimated and actual costs for an individual farmer and for a farmer group. One of the other things that a field agent can do with farmers is to compare the profit or (returns to land and labor), from different types of crops. For example, a field can take the costs of production, (materials, labor and loans) and the income based on sales, for maize and compare that on the same unit area for another crop such as cassava, rice or coffee.

Table 100. Cost comparison form

Costs based on same unit area, i.e., 1 acre	Crop A (e.g. maize)	Crop B (e.g. beans)	Differences
Consumable materials			
Durable materials			
Hired labor			
Family labor			
Loan costs			
Revenue (income)			
Profit (gross margin)			

Communication and the media



Farmers listen to the radio and may be able to watch television. Increasing numbers have mobile phones, and there may be internet cafés nearby. If these information services are available, use them to promote agroenterprise development.

For example, you could:

- Contribute to a radio drama about marketing
- Be interviewed on a talk show, or become a regular guest talking about agriculture and prices in the market
- Prepare and distribute printed production and marketing guides.
- Contribute to information materials produced by the government or NGOs.
- Explore ways to get information, such as prices, to farmers via their mobile phones.

Conclusion

Scaling up successful interventions depends on effective planning, rigorous implementation and regular documentation. You are a vital part of the development process. Use your skills and your connections to try new ideas and develop new ways of achieving positive results in farmers lives.

We hope that the information in this course will help you to work with farmers and enable them to become better agricultural entrepreneurs.

Quiz for Lesson 21. Scaling up

73. What is the best approach for planning work with farmers' groups?

- A. Start work with all the groups at the same time. The weaker ones will drop out, allowing you to focus on the stronger ones who have a chance of success.
- B. Work with one group at a time. Make sure they can manage their production and marketing well before moving on to another group.
- C. Stagger the work: begin by working intensively with several groups, then in the next season reduce your involvement with them, so freeing you to start with another set of groups.

Correct answer: C.

74. What is the best method for scaling up the agroenterprise approach?

- A. There is no one best method. It depends on the particular situation.
- B. Encouraging groups to federate into second-order associations or cooperatives.
- C. Training partners and farmers in agroenterprise skills.
- D. Working with traders and other buyers.
- E. Using the mass media to reach large numbers of farmers.

Correct answer: A.

75. Match the scaling up method with the correct channel

Method	Channel
A Interview on a talk show	1 Working with buyers
B Testing a new production technique	2 Innovation
C Exploring interest in buying larger volumes	3 Radio
D Helping several groups to collaborate on marketing	4 Second-order associations

Correct answer: A3, B2, C1, D4

Field exercise 21a. Your scaling up plan

Objective

After this exercise the participants will be able to:

- Set new production and sales targets
- Develop a plan to organize themselves to supply target markets.

Equipment needed

Flip chart, market pens, calculator

Expected outputs

Farmers begin to organize a new plan to season, with higher targets, or more lucrative markets and more farmers involved in production and sales, to target buyers.

Timing

180 minutes

Preparation

None

Suggested procedure

The field agent will need to lead the discussion with farmers on how they might scale up. There are many options. The first thing a field agent can do is help the farmers to consider what they can do within their group and also what this group could do with other existing groups. Finally the group can work with the field agent to set up new groups.

The field agent should lead the farmers through a series of question, to work out the basic ideas that the farmers will use for scaling up their production. The farmers group will need to review their performance and also work on their market plans to evaluate scaling options

1. **Review market strategy:** This review will require revisiting markets to find out whether buyers will take more produce and if so, what increase in production do the buyers want?
2. **Fixing the new target:** Based on the previous season's production, sales and with new information from buyers, the farmers can set a new target.
3. **Identifying the appropriate scaling method:** What should the farmers do to scale, how can the field agent help? And what do farmers want to do?

When talking to the farmers consider the following questions:-

- Does the field agent know other farmer groups, growing the same product, who could join with this group?
- Can the farmers increase production within their group? (yes / no)

- How will the farmers increase their production and sales? (more technology, more land, more members)
- Can the farmers work with other existing groups? (available / not available)
- Do the farmers need to form new groups? (yes / no)
- Who will facilitate the new group members? (project / farmers / other)

Examples of more detailed questions

Does the field agent know about other farmer groups in this market?

- Field agents work with other farmer groups, and should tell the farmers if there are other like minded groups in the project, or outside the project who might be interested to join forces to work on new marketing targets. If the answer to this is yes, the field agent should work to link up like minded farmer groups.
- If there are other groups or not, the target farmers group needs to do some homework before any meetings should take place...

Issues related to increasing production from existing group

- Did the sales in the previous season indicate that farmers could sell more produce to identified buyers at a profit?
- Can the farmers reach their new production target from the group members?
- Would the increase in production come from improved technology, more land, or new members in the group?
- Can the farmers invest in new technology to achieve new targets?

Issues related to increasing production from increasing size of existing group?

- Are there other farmers who want to join the group?
- Can the first group help new farmer to develop an enterprise plan?
- Is it best for the new farmers to join the existing group or form an associated group?

Do the farmers need to work with other existing groups?

- Is there a cooperative or other association that the first group can join?
- Can the group associate with other project groups, that are nearby to increase their abilities to scale their input purchases and for selling their produce?

Who will facilitate the new group members?

- Can the project field agent help to support the new members or groups?
- Can the project field agent help to train a local private sector field agent?
- Will any of the existing group members take on the local service provider role?

Mapping the scaling plan

Using a sheet of paper and marker pens, ask the farmers to draw a picture or diagram of how they plan to scale up their production. In the example below, the farmers have expanded their first group and joined with two new groups.

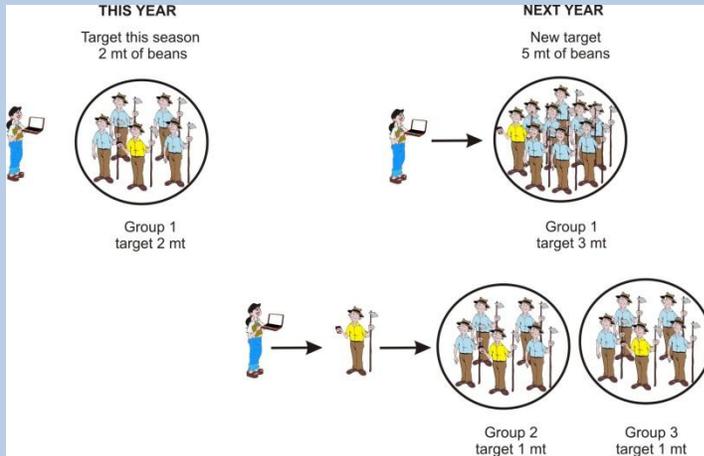


Figure 60. Scaling plans

Task for the group

Work with the field agent to draw up a scaling plan for the next year. Indicating the following issues.

- Clarify increased demand for product. If not available do a rapid market survey.
- Identify buyers and confirm volume they will buy.
- Map out the basic scaling process.
- Confirm with field agent if there are existing groups to link with.
- If more members are needed recruit them and record their names and locations
- Identify who will provide field agent support or communication to members.
- Select a person in the first group who will work with other groups.
- Start the process of market analysis and business development for the next season.
- Implementation plans will now include more than one group.
- Record each of these activities and inform all group members about decisions for scaling up.

Annex 1. Mshika Farmers' Group

The information in this case study will enable you to prepare a business plan for the maize enterprise of the Mshika farmers' group, Hai District, Northern Zone, Tanzania. The business plan can either be developed by hand or by entering the data into Farmbook, an on-line agro-business planning and monitoring tool. This case study is designed to provide a hands-on introduction to the Farmbook tool and should be used in conjunction with the Farmbook Training Presentation powerpoint. It is linked to the business plan presented in Lessons 10 and 19 of the 7 Steps of Marketing Manual.

Your Tasks are as follows:

Read through the text in the case study (this will help you to orient yourself with the information)

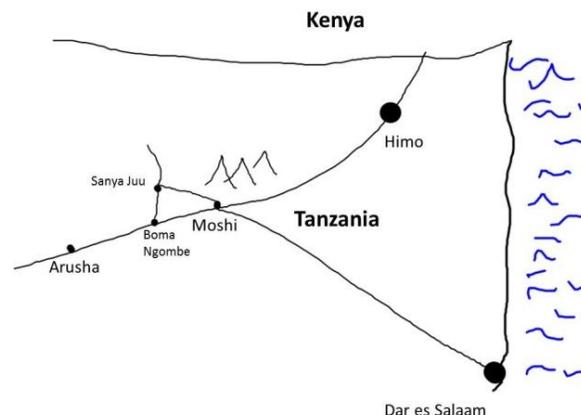
Follow the data given in this example and fill in the corresponding sections of Farmbook

1. Register the farmers in their households
2. Register farmers into a farmer's group. USE YOUR NAME as Farmer Group Name
3. Use the information in the case study to build the narrative section of the business plan.
4. Enter the narrative and production data into the business plan
5. Review financial data and enter the costs of production for farmers based on farm size.
6. Baseline this data
7. Go to Sales Register enter the quantity of bags sold according to sales information in the study
8. Review reports
9. Synchronize data

Mshika Farmers' Group in Sanya Juu

The village of Sanya Juu is located 21 km North of Boma Ngombe the headquarters of Hai District, in West Kilimanjaro, Tanzania. Boma Ngombe, is the local trading centre along on the main Arusha to Dar-es-Salaam highway. Boma Ngombe is situated 55 km from Arusha to the West and 20 km from Moshi, to the East. It lies at an altitude of 1300 meters. According to the field agent's GPS, the location of Sanya Juu has a longitude of 3.183333 and the latitude is 37.06667. Sanya Juu is productive farming area, with good market access to the main northern towns and cities in Tanzania and is close enough to have market linkages to demand from the Kenyan market.

Map of Sanya Juu



The farmers' groups

In 2007, the farmers of Sanya Juu decided to form the Mshika farmer group to improve their food security. World Fusion helped them with basic farming ideas and inputs. The farmers originally organized themselves to learn about how to manage pests and diseases of their major food crops, maize and beans. The farmers made some improvements, but the group did not meet every week and progress was slow.

Table 101. Members of the Mshika farmers' group

#	Salutation	Farmer Name	Marital Status	Telephone Numbers	Household role	Farmer yes / no	Land-holdings	Gender	DOB dd/mm/yy yy	ID documents
1	Mr	Reginald Mengi	Married	27 394 9656	Head	yes	3	Male	4/6/1950	None
2	Mr	Jim Tembo	Married	27 853 6923	Head	yes	4	Male	22/5/1955	Tz 254402203
3	Mr	Julius Kassanga	Married	27 287 8927	Head	yes	5	Male	17/5/1970	None
4	Mrs	Euphrase Kezilahabi	Married	27 889 3323	Cousin	yes	3	Male	14/1/1980	None
5	Mrs	Salma Kikwete	Married	27 853 7832	Head	yes	7	Female	3/3/1982	None
6	Mr	Leonard Shayo	Married	27 888 2352	Head	yes	4	Male	2/10/1970	Tz 29992339
7	Mrs	Flaviana Matata	Married	27 999 2783	Head	yes	16	Female	25/9/1952	Tz 25384842
8	Mr	Marcus Chengula	Married	27 079 2132	Head	yes	4	Male	9/3/1968	None
9	Mr	Livelong Nyerere	Married	27 866 5000	Head	yes	1	Female	7/3/1953	Tz 29983339

Farmer marketing groups

In mid-2011, the Department for Agriculture and Livestock Development Organization, (DALDO) initiated a new activity with the farmers groups, focusing efforts on helping them to improve their market opportunities for cash crops and livestock products. The first activity was a participatory diagnosis facilitated by Agnes Mamba.

Agnes told the farmers that improving productivity was important, but the farmers must also be better organized and learn how to market their produce. She offered to support farmers that were interested in working on their marketing skills. However, she made it clear; to be successful the farmers would need to show real determination.

The farmers met and decided to step up their game. Agnes came again and this time she led the group through a visioning exercise, working with the farmers to find out more about what they have been doing and what they want to do in the future. When Agnes pressed the farmers about what they wanted to achieve, they identified three main tenants to their vision:

- To produce more consistent and higher yields to ensure their food security, and
- To raise incomes to improve housing and to pay for the education of their children.

As well as an overarching goal: To improve food security through higher productivity and higher incomes for the farmer's group.

Following the advice of Agnes, the farmers decided to re-organize their group and prepare a new constitution. They decided to call themselves the Mshika Farmer's Group and made plans to work with Agnes to shift from a production group to a marketing group. Agnes asked them to start a savings group in order to save money to invest in their enterprise. She guided the farmers to organize themselves into a savings group to help to self-finance their investment. This required the farmers to register the group with the NGO, World Fusion. The

group was registered under the name Mshika and provided the business identifier 10109189925. The group entered Jim Tembo's number 27 853 6923 as the primary contact number for the group and the date of formation. They also included the positions of the newly elected group leadership:

- Jim Tembo as the Chairman of the group,
- Salma Kikwete as the Secretary,
- Flaviana Matata as Treasure,
- Livelong Nyerere as the lead farmer and
- Marcus Chengula as the market agent.

Role of the marketing team

Agnes worked with Marcus to set up a team of 3 members to form an "enterprise committee". This team was responsible for gathering market information for the group. The work included regular market visits and asking traders about price trends and purchasing conditions. At the market visits, Agnes guided them on how to approach traders, what questions to ask and how to record the information collected. They made visits to the local market in Sanya Juu, Boma Ngombe, Arusha and Himo town.

The marketing team gathered information on maize, beans, sunflower, hot pepper, pawpaw, mushroom, pigs and local chickens, based on market demand. In order of net profit, the best options were: pawpaw, maize, mushroom, sunflower, local chicken and beans. Pigs were uneconomic. This information was reported back to the entire group of farmers who used the following criteria to select the most attractive option for developing as an enterprise:

- market demand
- quick return and income generation,
- knowledge of how to produce the crop,
- profitability and
- dual purpose for food and income generation

Based on these criteria the group selected maize as their initial enterprise. They chose maize, because demand for maize is high in the local and regional markets, they have contacts with some interested buyers and they know how to grow maize. It is also their food crop, so the farmers can consume what they cannot sell.

The next step in developing their maize enterprise was to undertake a more detailed rapid market chain analysis, so that the group would have enough information to prepare a business plan to guide them in production targets and marketing. The information that they have collected by talking to the different actors is summarized below. Use this information in preparing your business plan and profitability analysis.

Maize production

The farmers have land for commercial production at distances of up to 5 km from their homes. They also have plots close to their houses but these are small and mainly used by the women for vegetable production. Maize is their main food and cash crop. They normally grow maize, but most farmers use local seed and rarely use fertilizer.

However, things have changed; Agnes suggested that the farmers visit the Selian research station, 20 kms away, to ask for help to improve their maize production. The researchers advised that if the farmers wanted to grow maize for sale that they should use a technology package that included new varieties, fertilizer and improved agronomic practices. The researcher also provided the following recommendations:

- Improved seed of their new varieties, (TAN 250 a hybrid maize, OPTAN 200 an open pollinated variety;

- Appropriate use of fertilizer, one or two 50 kg bags of NPK,
- Improved agronomy such as preparing the land on time, sowing on time, hand weeding the fields at least twice in the first 3-4 weeks of crop growth, or spraying the crops to remove weeds, drying grain immediately after harvest, and storing dry grain in clean bags, in a well-ventilated store to maintain quality.
- The researcher told them that there are input supply shops in Boma Ngombe, which sells OPV seed and Hybrid seeds.
- Fertilizer is available in Arusha, at \$30-\$40/ 50 kg bag, but it costs about US\$ 3 to ship a bag of fertilizer back to Sanya Juu.

After their visit to the Agricultural Research Station, the farmers discussed the options with Agnes. Traditionally the farmers have kept seed from year to year, but they noticed that their yields declined in subsequent years, particularly with the hybrid maize seed. Some many farmers were using open pollinated varieties (OPV) because that seed can be used for 2-3 years.

To avoid yield declines and boost their production, the farmer made a plan that all the members would buy new hybrid seed from Bombe Ngombe market. At the market they researched the prices of seed, see Table 101. The input supplier informed them they would need 8 kg of seed per acre.

Table 102. Costs of Maize Seed

	Cost 2 kg bag
Local seed	1
OPV	3
Hybrid seed	5

The farmers were also told by the researchers, that if they planted new hybrid maize seed, or the open pollinated varieties, they would only get good results if they used fertiliser. When they went to the input dealer, the manager told the farmers what he thinks that most farmers get in terms of yield when they combine different types of seed with fertilizer. The input manager said that because most farmers do not use hybrid seed or fertilizer, their yields were very low and that the only way to get higher yields was to invest in improved maize production.

Table 103. Production of Maize depends upon seed type and use of fertilizer

Preseason figures	# 100 kg maize bags with No fertilizer/ acre	# maize bags with 50 kg fertilizer/ acre	# bags produced with 100 kg fertilizer / acre
Production local	5	8	10
Production OPV	8	13	17
Production hybrid	11	15	22

The farmers discussed the ideas and decided that they would all stick to one plan, to all grow Hybrid TAN 250 seed, and use fertilizer at a rate of one bag of NPK fertilizer per acre. The Secretary took notes of the first planning meeting to provide the following pre-season production plan.

This information included the current savings that the farmers held, and their contribution towards the costs of inputs for the production. The farmers would have to borrow the additional funds needed To cover the cost of inputs.

the group. The figures for Reginald Mengi are provided below. Reginald has a **two acre plot** and therefore all the costs are provided for that size plot. Agnes gathered data on costs of materials and labor. Material costs were defined as consumable, i.e., they were used in one season and durable, which means that they last for several years. Labor costs were defined as hired labor and family labor.

Table 107. Farmer sample preseason material costs – two acre maize plot

Consumable Materials	Units	Quantity	Price per unit	Cost dollars
	Eg, kg, bags	A	B	A × B
Pre-Production				
Hybrid seed	2 kg Packets	8	5	40
Production				
Fertilizer	50 kg Bags	2	40	80
Postharvest				
Storage bags	Bags	30	1.0	30
Marketing				
Transport to market	100 kg Bags	20	0.5	10
Market Fees	100 kg Bags	20	0.5	10
				170

Durable materials	Units	Quantity	Price per unit	Years used	Cost per year
		A	B	C	A × B / C
Pre-Production					
Plow	Item	1	100	10	10.00
Production					
Hoes	Item	2	6	4.0	3.00
Machetes	Item	2	9.0	3.0	6.00
Postharvest					
Baskets	Item	5	1.0	5.0	1.00
Marketing					
Storehouse rent	Building	1	300	20	15.00
Mobile phone	Item	1	25	5	5.00
Total cost of durable items per year					40.00

Total material costs	210
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Labor costs

Table 108. Farmer sample labor costs for two acres of maize: Farmers' figures.

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								
	Plowing	2	2	4	4	8	8	16
	2nd plowing	2	2	4	4	8	8	16
Total pre-production costs						16	16	32
Production								
	Planting	0	5	2	2	0	10	10
	Weeding	2	6	2	2	4	12	16
	2nd weeding	2	6	2	2	4	12	16
Total production costs						8	34	42
Post-harvest costs								
	Harvesting	4	3	2	2	8	6	14
	Drying, sorting		9	2	2	0	18	18
Total post-harvest costs						8	24	32
Marketing costs								
	Transport		9		2	0	18	18
Total marketing costs						0	18	18
						Hired	Family	Total
Total labor costs						32	92	124

Table 109. Total material and labor costs

Material costs				210
Labor costs (excluding family)				32
Total costs				242

Credit and loans: The farmers use a range of methods to borrow for their investments in crop and livestock production. Some get financial support from their savings, families, or local input supply merchant. Input suppliers, typically provide free inputs at the start of the season, or accept a small down payment but deduct this cost from the farmer when they buy the grain at harvest time. Very few farmers are able to get credit from formal sources.

However, in Sanya Juu, there are some financial options. The Small Enterprise Development Association loans money at 15% over six months. Kenneth Goodman, the local money lender charges somewhere between 5 and 10% interest per month, for a loan of up to \$250. He normally lends for 3-4 months.

The farmers indicated that they planned to take out loans of approximately \$140 per acre and expected to pay 5% per month. The expected loan amounts and expenses are listed below:

Table 110. Farmer loan cost estimates.

Loan Repayment Costs		Rates	One acre farm	Two acre farm	Three acre farm
Amount of loan	A		100	200	300
Interest rate per month	B	5%	5%	5%	5%
Number of months	C	4 months	4	4	4
Cost of loan	$A \times B \times C =$ D		20	40	60
Amount to be repaid	D+A		120	240	360

Farmers will also use their savings as a contribution towards input costs.

The basic savings of the Mshika group members are shown in the farm group information and will contribute to individual farmer decisions regarding credit. For example, Reginald used his savings of \$30 as part payment for the seed and fertilizer. The total costs of the maize enterprise is estimated at \$240 for a two acre plot.

The farmers debated the price they would get for their maize next season, but based on last year's prices, they thought the price would be about the same. They calculated their projected income to be based on a bag price of around \$28 for a 100 kg bag.

Table 111. Planned sales of maize from two acres of maize: Farmers' pre-season figures.

Income	Unit	No. of units	Price per unit (\$)	Income US\$
Sale of maize	100 kg bags	20	28	560
Total income		20		560

When the farmers calculated what they expected to gain as profit, they made the following calculations, Table 109. Once they worked out the costs for Reginald, they used this to make calculations for the rest of the farmers, See Table 10.

Table 112. Gross margin: Farmers' pre-season figures.

	Costs US\$
Material costs	210
Labor costs (excluding family)	32
Loan costs	40
Total costs	282
Income	560
Gross margin	278

Table 113. Estimated Farmer Financial analysis Pre-season figures.

Product type	Maize	Currency	USD\$							
Land area	24	Currency per \$	1							
Expected sales price per bag	28									
		Costs								
Name of farmer	Area planted	Bags sold	Income	Savings	Consumable	Durable	Labor	Loan costs	Total Costs	Profit
Reginald Mengi	2	20	560	30	170	40	32	40	282	278
Jim Tembo	3	35	980	30	255	40	48	60	403	577
Julius Kassanga	3	35	980	50	255	40	48	60	403	577
E. Kezilahabi	2	20	560	20	170	40	32	40	282	278
Salma Kikwete	4	50	1400	50	340	40	64	80	524	876
Leonard Shayo	2	20	560	30	170	40	32	40	282	278
Flaviana Matata	4	50	1400	150	340	40	64	80	524	876
Marcus Chengula	3	35	980	30	255	40	48	60	403	577
Livelong Nyerere	1	5	140	50	85	40	16	20	161	-21
Totals	24	270	7560	440	2040	360	384	480	3264	4296

Actual costings

When Bibi and Reginald looked at their loan costs they found the reality was much higher than they had planned for. Instead of 5% loans, they had to pay 10% per month to support their maize enterprise. The total cost for their maize enterprise was \$282. However, they had \$30 in savings and decided to borrow \$200, piecing together other business options and some loans he had made to neighbors to cover the difference.

Table 114. Cost of loan for two acres of maize: Farmers' figures.

			US \$
Loan Repayment costs			hired labor
Amount of loan	A		200
Interest rate per month	B	10% per month	10%
Number of months	C	4 months	4
Cost of loan	A = B × C		80.0
Amount to be repaid	D1 + G2		280

Enterprise Implementation: Based on the farmer’s calculations, they planted their crops, fertilized the maize and weeded the crop. At harvest, the maize was collected and transported to farmers’ homes where it is was dried and hulled. The grain was then packed and stored ready for market.

Food security: As maize is the staple food for the farmers in this area, households planned to keep 10 bags of maize for home consumption. Some farmers kept another 20 kg of seed per acre for next year’s seed.

Recording actual expenses: Throughout the season, the farmers carefully recorded the cost of everything they bought for their maize crop. This made it easy to keep track of the costs and to add them up at the end of the season. Bib kept careful track of the expenses for their two acre plot using the form below.

Table 115. Actual costs of materials for two acres of maize: Farmers’ figures.

Actual Material Costs					
Date	Materials	Units	Quantity	Price per unit	Cost dollars
		Eg, kg, bags	A	B	A × B
Pre-Production					
	Hybrid seed	2 kg Packets	8	5.0	40
Production					
	Fertilizer	50 kg Bags	2	45.0	90
Postharvest					
	Storage bags	Bags	30	1.0	30
Marketing					
	Transport to market	100 kg Bags	20	0.5	10
	Mobile air time	air time cards	2	5	10
					180

Actual Durable Costs					
	Units	Quantity	Price per unit	Years used	Cost per year
		A	B	C	A × B / C
Pre-Production					
Plow	Item	1	100	10	10.00
Production					
Hoes	Item	2	6	4.0	3.00
Machetes	Item	2	9.0	3.0	6.00
Postharvest					
Baskets	Item	5	1.0	5.0	1.00
Marketing					
Tarpaline	1 sheet	1	20	4	5.00
Storehouse rent	Building	1	300	20	15.00
Mobile phone	Item	1	25	5	5.00
Total cost of durable items per year					45.00

Table 116. Total estimated Actual costs of materials for two acres of maize: Farmers' figures.

Consumable materials				180
Durable materials				45
Total material costs				225

Marketing: This was a good season for maize and most farmers produced as much if not more than they planned. They were very happy about the production season. But it was not only the Mshika farmers who had done well and with so much maize on the markets, prices had fallen.

In the Sanya Juu, there were a number of small traders that purchased Maize at \$19 per bag. The farmers have no confidence in these traders who they consider are cheating them.

Buyers: Marcus Chengula, the marketing agent visited the markets again and found that in Bombe Ngoma, the larger traders are Tonga Kasesi, Mashou Obama, Dafrasa Museveni, and Mamangina Babangida. In Boma Ngombe traders pay \$24 per bag. If the farmers wanted to get these higher prices, they had to sell 7-10 metric tonnes at one time..

Table 117. Prices paid by Maize traders and Farmer Group.

Location	Traders	US\$ / 100 kg bag	US\$ / mt
Dar es Salaam	Export Traders ltd	28	280
Bomba Ngoma	Mrs Kasesi	24	240
Farmer Group	Buying price	23	230

Selling as a group

Despite the lower prices, the farmers decided to sell their maize to the group, and then to the Mrs Kasesi, who was offering \$24 / bag. The farmers were aware that Mrs Kasesi is a miller and has higher standards than the local traders, which are reflected in Kasesi's sales conditions. She will reject products that fall below her quality parameters (uniform seed size with no mixture of varieties, clean, less than 5% impurities, 12% moisture). She also needs to be assured of delivery in order to meet her contract agreements.

The farmers agreed to sell to the farmer group at a price of \$23, and then they would work out a second payment if they were able to sell to Mrs Kasesi at \$24. The figures for sales of the farmers are given in Table 111. This shows that only two farmers sold outside of the group, (side selling), the rest sold to the Group for \$23 per bag. The Group then sold this consignment collectively to Mrs Kasesi for the agreed price of \$24 per bag. The Group made a profit and the farmers decided to put this into a bank account, to help with investments in the next year.

Table 118. Group Financial Analysis Actual costs and sales prices

Name of farmer	Area planted	Bags sold	Income Sales price per bag \$23	Savings	Costs					Profit
					Consumable	Durable	Labor ex Family	Loan costs 10% x 4 months	Total	
Reginald Mengi	2	20	460	30	180	45	32	80	337	123
Jim Tembo	3	35	805	30	270	45	48	120	483	322
Julius Kassanga	3	35	805	50	270	45	48	120	483	322
E. Kezilahabi	2	20	460	20	180	45	32	80	337	123
Salma Kikwete	4	50	1150	50	360	45	64	160	629	521
Leonard Shayo	2	20	460	30	180	45	32	80	337	123
Flaviana Matata	4	50	1150	150	360	45	64	160	629	521
Marcus Chengula	3	35	805	30	270	45	48	120	483	322
Livelong Nyerere	1	5	115	50	90	45	16	40	191	-76
Totals	24	270	6210	440	2160	405	384	960	3909	2301

Table 119. Sales register

Farmer	Bags	Sales event 1					Sales event 2					Totals	Variance	Revenue
		Units	Price	Date	Mkt type	Revenue \$	Units	Price	Date	Mkt type	Revenue \$			
Reginald Mengi	20	20	23		1	460		23				20	0	460
Jim Tembo	40	10	23		1	230	30	23		1	690	40	0	920
Julius Kassanga	35	20	23		1	460	15	23		1	345	35		805
E. Kezilahabi	25	25	23		1	575		23		1	-	25		575
Salma Kikwete	55	20	23		1	460	35	23		1	805	55		1,265
Leonard Shayo	25	10	23		1	230	15	23		1	345	25		575
Flaviana Matata	60	30	23		2	690	30	23		1	690	60		1,380
Marcus Chengula	35	10	25		2	250	25	23		1	575	35	0	825
Livelong Nyerere	5	5	23		1	115				1	-	5	0	115
Totals	300											300	0	6,920

Group Sales	Units	Price	Date	Mkts	\$
Sale 1	260	24		4	6,240
Sale 2					
Group Sales					6,240
					\$
Group costs					5,980
Group profit					260
	Units	Price	Date	Mkts	\$
Individual sales	40				250
Total Revenue	300				6,490

	Market Types
1	Farmer Group
2	Processing
3	Rural assembly
4	Wholesale

Annex 2. Implementation plan for an agroenterprise plan

Area of intervention	Activities	Persons/institutions responsible	Timeframe	Costs
Marketing				
Business organization				
Production				
Post-harvest handling/ processing				
Monitoring				

Annex 3. Conversion tables

Area

1 hectare = 2.471 acres

1 acre = 0.4047 hectares

1 manzana = 0.7 hectares

1 jerib = 0.2 hectares

1 timad = 0.25 hectares (note in some cases less fertile, a timad area increases to 0.4 hectares)

Weights

1 kilogram = 2.2046 pounds

1 kilogram = .0011 short tons

1 kilogram = .0010 metric tons

1 kilogram = .00098 long tons

1 short ton = 2,000 pounds

1 short ton = 907.18 kilograms

1 short ton = .9072 metric tons

1 short ton = .8929 long tons

1 long ton = 2,240 pounds

1 long ton = 1,016.05 kilograms

1 long ton = 1.0160 metric tons

1 metric ton = 2,204.6 pounds

1 metric ton = 1,000 kilograms

Yields

1 Tonne (metric ton) Equals:

Wheat: bushels per acre x 0.6725 = quintals per hectare

Rye, Corn: bushels per acre x 0.6277 = quintals per hectare

Barley Grain: bushels per acre x 0.5380 = quintals per hectare

Oats: bushels per acre x 0.3587 = quintals per hectare

1 cubic meter of water = 2204.622 lbs. 1,000 kilograms

22.046 hundredweight

10 quintals

36.7437 bushels of Wheat or Soybeans

39.3679 bushels of Corn, Sorghum or Rye

45.9296 bushels of Barley Grain

68.8944 bushels of Oats

Distance

To convert kilometers into miles, multiply by .6214.

To convert miles into kilometers, divide by .6214.

Hectometer = 100 meters = 1,093.67 yards

Decameter = 10 meters = 32.81 feet

Meter = 1 meter = 39.37 inches

Decimeter = 1/10 meter = 3.94 inches

Centimeter = 1/100 meter = .394 inches

Millimeter = 1/1,000 meter = .0394 inches

Annex 4. Input costing sheet (one per crop)

Item	Cost	Location
PRODUCT:		
Pre-production		
Plough		
Hoe		
String		
Bags		
Production		
Fertilizer		
Seeds		
Pesticide		
Herbicide		
Marketing		

Postharvest		
Other		

Annex 5. Resources

Reference material

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- Seville, Don and Buxton, Abby (2012). Under What Conditions Are Value Chains Effective Tools for Pro Poor Development? http://www.linkingworlds.org/images/stories/PDF/ValueChains_Paper_WEB.pdf
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Useful webpages

- Agriculture for basic needs.** (Agricultura para necesidades básicas). Development project based on the 5 skills sets with success stories, handbooks and other materials in Spanish. www.a4n.com.sv
- Alianzas de aprendizaje para el desarrollo empresarial rural en América Latina.** A learning and knowledge space on rural enterprise development for Spanish-speaking countries. www.alianzasdeaprendizaje.org

microLINKS. A knowledge-sharing family of applications and tools designed to improve the impact of USAID microenterprise programs and activities. The latest information on microenterprise: best practices; proven approaches from USAID missions, partners, and practitioners; a library of documents, reports, and tools; and an environment that supports and enriches communities of practice.

<http://microlinks.kdid.org/>

CRS Agricultural Program publications <http://www.crsprogramquality.org/publications/tag/agriculture>

Regoverning Markets, Smallscale producers in modern agri-food markets. Rapid changes are taking place in national and regional agrifood markets in developing countries, with implications for the ability of agriculture to contribute to economic growth, poverty reduction and sustainable rural development. This project explores best practice in connecting small-scale producers with dynamic markets, and to bring these findings into the wider policy arena.

<http://www.regoverningmarkets.org/>

Sustainable Food Lab. The mission of the Sustainable Food Lab is to accelerate the shift of sustainable food from niche to mainstream. We define a sustainable food and agriculture system as one in which the fertility of our soil is maintained and improved; the availability and quality of water are protected and enhanced; our biodiversity is protected; farmers, farm workers, and all other actors in value chains have livable incomes; the food we eat is affordable and promotes our health; sustainable businesses can thrive; and the flow of energy and the discharge of waste, including greenhouse gas emissions, are within the capacity of the earth to absorb forever.

<http://www.sustainablefoodlab.org/>

Linking Worlds. This website is a resource for practitioners and researchers who are taking on the challenges of linking smallholder producers to modern markets. It facilitates the sharing of experiences and “new business models” through research papers, case studies, tools, impact studies, and descriptions of active “action-learning” projects – thereby helping companies and NGOs become more effective at realizing both development and commercial benefits. <http://www.linkingworlds.org/>

Modernizing Extension and Advisory Services. Extension systems in Africa, Asia, the Middle East, Eastern Europe, and Central America need to undergo significant change if they are to effectively serve the food security and economic development needs of resource-poor men and women farmers. New approaches must draw on full breadth of resources in public, private and civil society organizations and utilized available advanced information and communications technologies. MEAS is a Center of Excellence that seeks to promote and support such endeavors.

<http://www.meas-extension.org/home>

Value chain Development Royal Tropical Institute (KIT) Netherlands. The Value Chains for Development portal provides access to selected free, full-text electronic documents on pro-poor value chains.

<http://portals.kit.nl/kitportals/value-chain-development>

Resource institutions

Food and Agriculture Organization of the United Nations (FAO). The Rural Infrastructure and Agro-Industries Division supports the development of entrepreneurship in agricultural support services. FAO member countries are assisted with appropriate policies, strategies and methodologies for strengthening agricultural support systems and the delivery of services as well as technologies for production and post-production activities. FAO has a dedicated web site on “Linking Farmers to Markets.”

www.fao.org/ag/ags/index_en.html

www.fao.org/ag/Ags/subjects/en/agmarket/linkages/

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Michigan State University. The mission of the Department of Agricultural, Food, and Resource Economics is to create, preserve, and disseminate knowledge through research, teaching, and outreach. The Department applies knowledge to help individuals lead more productive lives, and to assist in the development and improvement of firms, organizations, communities, and public institutions.

<http://aec.msu.edu/about.htm>

The International Institute for Environment and Development (IIED). IIED is a global leader in sustainable development. Our mission is to build a fairer, more sustainable world, using evidence, action and influence in partnership with others. As an independent international research organisation, we are specialists in linking local to global. In Africa, Asia, the Caribbean, Central and South America, the Middle East and the Pacific, we work with some of the world's most vulnerable people to ensure they have a say in the policy arenas that most closely affect them — from village councils to international conventions.

<http://www.iied.org/general/about-iied/about-iied>