FARMER FIELD SCHOOL GUIDE ON FARMER SEED PRODUCTION AND MARKETING

Module:
Analysis of the seed market and crop selection

SD = HS Sowing Diversity = Harvesting Security

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Module:
Analysis of the seed market and crop selection

This module is written by Connie Formson, Hilton Mbozi and Bert Visser.

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Introduction

In this module, facilitators play a crucial role in guiding Farmer Field Schools (FFS) to gather and analyze information. This information will be essential in helping FFS members make informed decisions about whether to focus on a specific seed crop that not only has business potential but also aligns with their broader social objectives. The module summarizes and presents the key insights from Chapter 4 of the Field Guide on Seed Production and Marketing. The content of this chapter is designed to equip FFS participants with a deeper understanding of the market dynamics related to their prospective seed crop(s). By doing so, it empowers them to make informed decisions that consider both economic viability and the fulfillment of their social objectives.

Chapter 4 of the Field Guide is also summarized in the Online Course on seed production and marketing. The guidelines presented in this module are intended to assist with the implementation of these concepts in various countries. As a result, country teams have the flexibility to modify and customize the module to suit the unique needs and conditions of their specific country context. This approach allows for a more tailored and effective application of the information provided in the Field Guide and the online course to meet the specific requirements and challenges of each country.

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Structure of the module

Where to Start!

At this stage in the implementation of the FFS on Seed Production and Marketing, the FFS will have gone through different modules to gain a better understanding of their local seed system to make informed decisions. In the diagnostic phase (Module 3) the FFS will have:

- Set a long-term *Vision* and developed a preliminary *Action Plan* outlining the steps they need to take to achieve their goals.
- Decided on *governance structures and ways of working*, also documented in their action plan, to guide their operations.
- *Decided which crop(s) or varieties to produce and market.* These choices are subject to confirmation through a more detailed process later, as mentioned in the "Initial Crop Selection Tool."

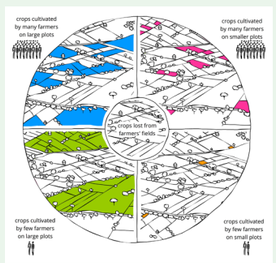
In Module 4, the FFS will further refine their plans based on the information collected in Module 3. Module 4 facilitates a:

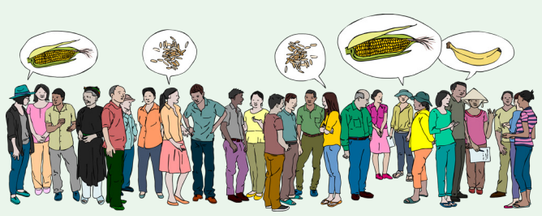
1. **Final Decision on Crops or Varieties:** In this module, FFS participants conduct a more detailed analysis of the information they have gathered. This analysis helps them make a final decision on which crop(s) or varieties they will focus on for commercial purposes. This decision is based on a comprehensive understanding of their local seed environment and market conditions.
2. **Business Plan preparation:** The information gathered in Module 4 will contribute to the preparation of a basic business plan as outlined in Module 5 of the Guide.

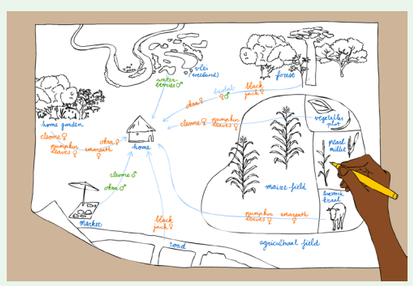
Module 3: A quick recap

Module 3 of the Guide provides the foundation on which Module 4 then builds. In Module 3, the FFS discuss the *characteristics of their local seed system* and potential seed production and marketing opportunities are explored. Based on this discussion, using the *Initial Crop Identification Tool*, one or more crops are identified as potentially suitable for commercialisation. This selection process is not final: throughout Modules 4 and 5 further examinations of these crops will help the FFS come to a final decision on which crop to work with.

Keep in mind that during previous work in the FFS on Participatory Plant Breeding (PPB) or local food plant varieties may have been improved or created. These varieties may not be captured in the Diversity Wheel analysis but could be highly marketable! To respond to SD=HS overarching goals, revisiting information from the diagnostic stages of the work of the PPB or Nutrition FFS can help guide decisions of the FFS on SPM.







Module 4 is implemented in 6 FFS sessions and is organized into 4 main sections:

1. **Seed value chain analysis:** In this section, participants analyze the entire value chain associated with the seed crop or variety they intend to grow. This involves identifying and understanding all the activities, services, and actors (individuals or entities) involved in the process of delivering their crop to the end user. This analysis helps participants gain insights into the various stages of production, distribution, and marketing within the value chain.
2. **Market research:** is a critical component during which participants learn how to collect and analyze market information related to their chosen crop or variety. This information includes market demand, pricing, competition, and consumer preferences. Effective market research helps participants make informed decisions about how to plan and organize their proposed business.
3. **Profitability analysis:** This section involves assessing the potential profitability of different crops. Participants learn to analyze various factors such as production costs, expected yields, market prices, and other financial considerations. The goal is to determine which crops are most likely to be profitable for their specific circumstances and resources.
4. **A final selection of crops and varieties:** Based on the information collected and analyzed in the previous sections, participants are guided through the process of selecting the specific crops and varieties that they will aim to commercialize. This step is crucial for making informed business decisions and maximizing the chances of success.

> ! *An FFS that has gone through initial seed crop or variety selection, has a **Vision** and **Action Plan** is now ready to start Module 4! In Module 4 the FFS determine whether crops and varieties they identified in previous FFS on PPB or local food plants are marketable. National legislation will determine the crops and varieties that FFS can commercialize (see module 5 of the Field Guide).*

The overview below (Figure 1) highlights the stage of the SPM process the FFS should be at when they implement Module 4. The diagram also provides the next steps in the FFS cycle.

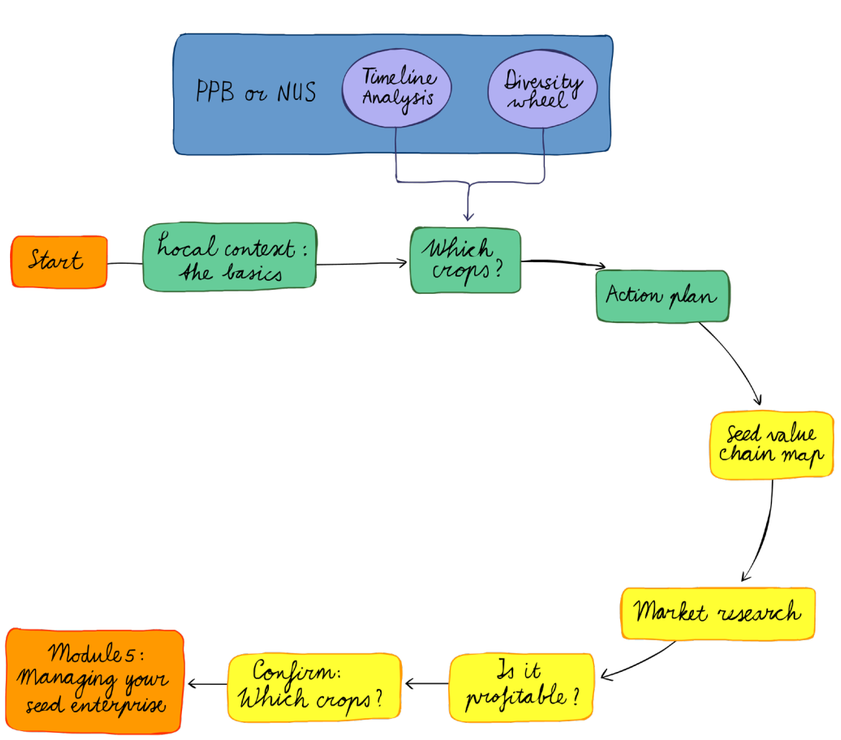


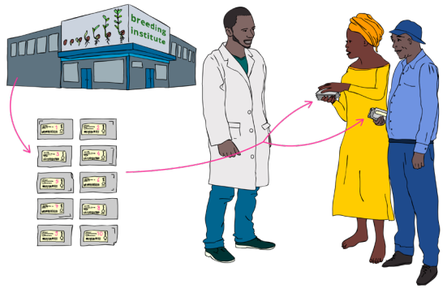
Figure 1: Flow diagram of the seed production and marketing FFS activities leading up to and taking place in Module 4

Running the FFS Sessions

Session 1: Making a Seed Value Chain Map as a "talking picture"

In this session the facilitator helps the FSS to develop a value chain map for their preferred crop or variety. The value chain map exercise produces a visual overview of the activities, actors, and linkages that the FFS will need to take into account to get their products from the farm to the consumer. The mapping exercise is summarized below:

Purpose	Participants identify and understand the full range of **activities, actors** and **linkages** needed to deliver their product from conception to the end. Essentially the path to take a crop from producer to consumer!
Recommended duration	4 hours
Needed materials	Flipchart, post-its of at least 3 different colours (and shapes if possible), masking tape, markers.
Preparatory work by Facilitator	Have on hand the drawings, photos, figures or shapes to visually depict specific value chain activities (see Figure 2 for examples). Make a choice on post-it colours to be used to represent the direct and indirect actors.



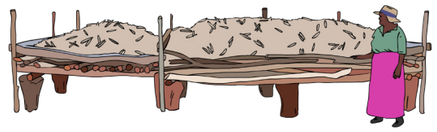
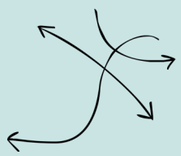


Figure 2: Drawings of the value chain activities from left to right, from inputs to production to final consumption

! These drawings can be photocopied and cut up for the value chain mapping process. Having visuals of the various value chain processes and actors will aid group work and discussions.

Table 1: An overview of the mapping process to support group work sessions.			
Steps	**Task**	**Guiding Questions**	
Stage 1	*Drawing the value chain map*		
1. Activities	Arrange value chain activities to provide an orientation on the map.	What activities are necessary from production to consumption?	
2. Actors	Write actors on post-its and place them on the map.	Who are the key actors involved in the value chain that the FFS will need to collaborate with? At what stage and for what purpose is collaboration important?	
3. Links	Draw different types of linkages between actors.	What links (channels and relationships) are important to understand how the value chain operates?	
4. Context	Write contextual factors on sticky notes and place them on the map. **Recall diagnostic analysis carried out!**	What factors outside the value chain are important to consider?	
Stage 2	*Analyze and interpret the value chain map and report back in plenary*		
5. Validation	After group level analysis, summarize, discuss and identify emerging findings in plenary.	Does the map represent participant's reality adequately?	

Setting the context in Plenary: What is a Value chain map and why is it useful for the FFS?

The facilitator explains what a value chain map is in the plenary session. The facilitator then clarifies that the goal of the map is to assist the FFS to examine the commercial viability of their chosen crop and/or variety. Through the mapping exercise FFS participants learn about the different stages seed goes through, before it can be sold e.g, from the breeders* , to farmer producers, processors, and finally to the marketplace. Participants also become familiar with the different actors involved in the production and marketing of their seed crop, including how the different institutions, businesses, farmers, government agencies, etc. relate to each other.

The information in this session is best understood when visually displayed. The facilitator can therefore introduce the Value Chain Mapping process as a 'talking picture' of how the FFS will produce and market their seed crop.

! **REMEMBER:** For each **crop** or **variety** a specific value chain applies!

Facilitators should have one or (preferably) more examples of a seed value chain map available to show FFS participants (an example is provided in Figure 2 below. **Preparation of the material needed for this session in advance is key!**

**) Community settings will differ. Some community may obtain their planting material from their community seed bank for example.*

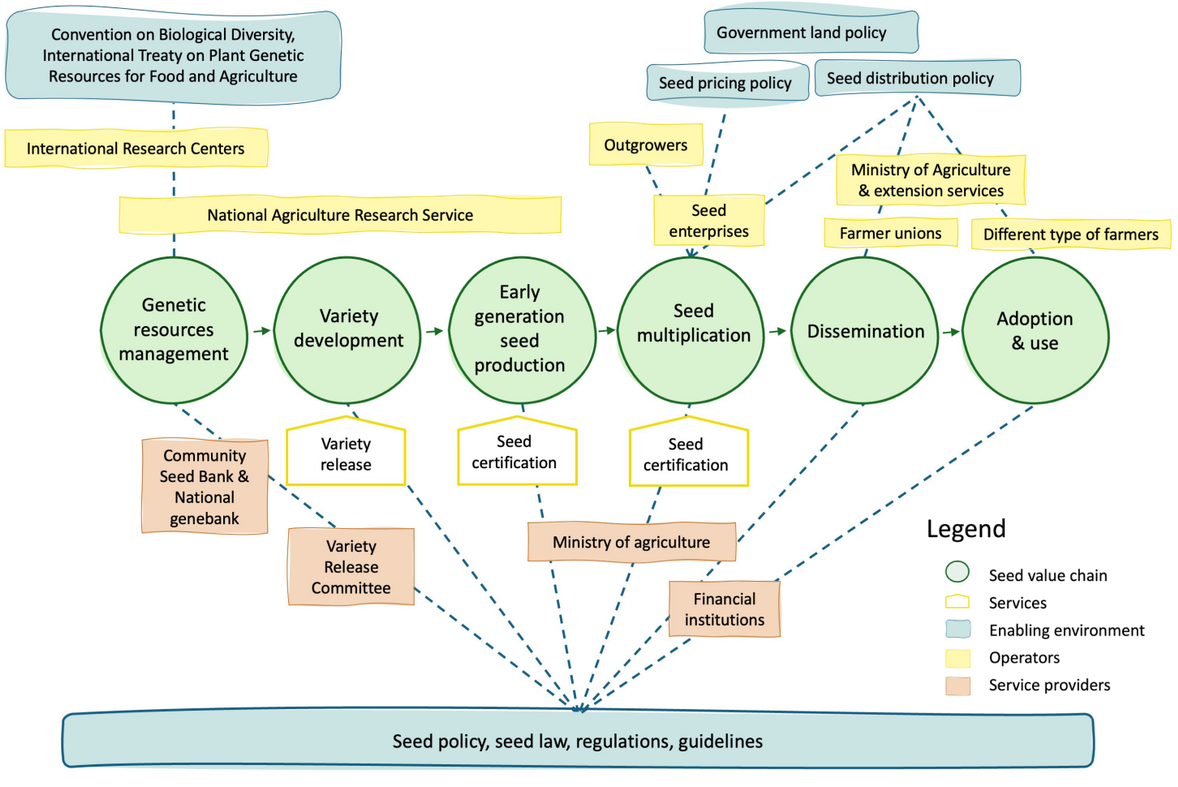


Figure 3: Value chain map, based on ISSD Technical Notes. Issue No. 3 Seed Value Chain Analysis (2013). Centre for Development Innovation Wageningen UR, Wageningen & Royal Tropical Institute, Amsterdam.

Organizing participants for group work

The facilitator divides participants into groups. If more than one crop or variety has been chosen by the FFS, the facilitator should allocate various groups to work on each crop or variety. More than one group can work on the same crop or variety. Participants in the sub-groups should come to agreement on which *village, town, district, or region* they want to market the crop they are examining. Each sub-group then writes down the name of the chosen crop and the village, town, etc. on a flipchart. This information is also used in the name of the seed value chain map for the group which will then be titled, for instance: *"Value chain map for sorghum in Mid Zambezi Valley, Zimbabwe"*.
The facilitator should use Table 1 above, and Annex 2 to ensure that group discussions respond to the following questions:

- Who will buy the seed produced?
- Where, to whom and by whom can the seed be marketed?
- Where can value addition take place in the production and marketing chain and what needs to be done to add value?
- Which service and input providers need to be involved or available for the value chain to work?
- What constraints might farmers experience when marketing their seed?
- Which seed regulations support or hinder commercial production and marketing of the selected crop?

Creating the Value Chain Map

Step 1: Establish the value chain activities

The participants list and write down the various value chain activities. On a single card of colored paper each activity is listed. The cards are then arranged in chronological order, put on a flipchart, and connected by arrows. The product, the seed crop, 'travels' along the value chain, passing through each stage one at a time.

! Remember: If participants are unable to write, the group may choose to use the drawings (in figure 2) as provided by the facilitator.

Step 2: Identify value chain actors

Now list the different institutions, organizations, and individuals that are active in the chosen seed value chain. Don't generalize; be specific and use names, such as, *"Aloma cassava cooperative"* rather than *"farmer cooperatives"*. Include actors that play a supporting role, such as government extension officers or NGO programs. **Don't write down the names on cards yet!** If any of these actors play more than one

distinct role in the seed value chain, make separate post-its for each distinct role, e.g.: *"Aloma cassava cooperative – farmers"*, *"Aloma cassava cooperative – transporters"* and *"Aloma cassava cooperative – input dealers"*.

The next step is to divide the actors from the previous step into direct and indirect actors. Direct actors are those who directly handle or add value to the seed or crop, such as seed bank managers, farmers, processors, traders. Indirect actors, such as input dealers and business advisory services, play more of a supporting role. **On one color of paper, list the direct actors, and on another, list the indirect ones.**

At this point, three (3) sets of cards will have been created, each with a unique color. The flipchart will already have the cards for the value chain activities taped to it. The additional two sets of cards, which correspond to the direct actors and indirect actors, need to be added to the flipchart. The group therefore starts by adding the cards for the *direct actors* to the flipchart. These should be positioned next to, above, or beneath the value chain activities to which they are related. The cards for the *indirect actors* should then be added to the flipchart in a similar manner, going from right to left. See Figure 4 below.

Figure 4: Value chain actors written down on sticky notes placed on a large sheet of paper.

Step 3: Depict different linkages among actors

After you add the actor cards, in step 2 above, draw arrows showing the connections between the different actors to show who works together. Figure 5 below shows how linkages are included in a value chain map.

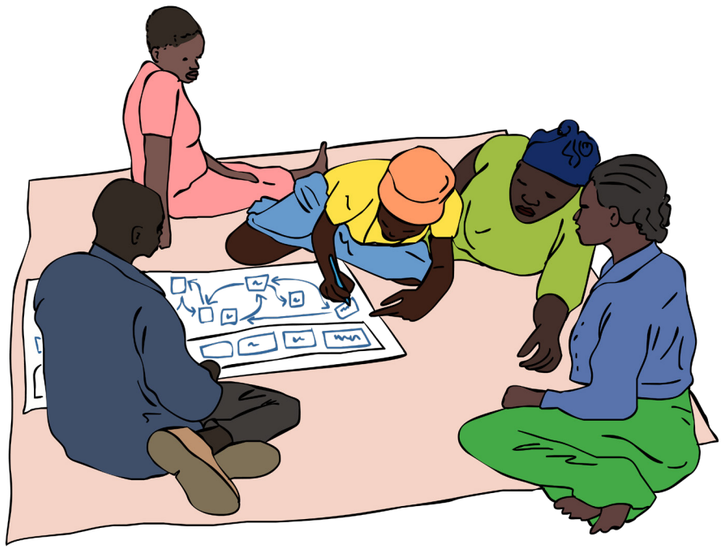


Figure 5: A value chain map with linkages included.

Step 4: Include contextual factors

Add any other elements that your group thinks are important. These elements should be placed on the map with a sticky note of a different color (see Figure 6 below).

Once all these steps have been completed, you shoud have finished Seed Value Chain Map!

! **Note for the facilitator:** Make it clear to participants that value chains differ. Any examples given shouldn't be taken as a fixed template to be copied. Participants should feel confident and motivated to put their own knowledge on paper.

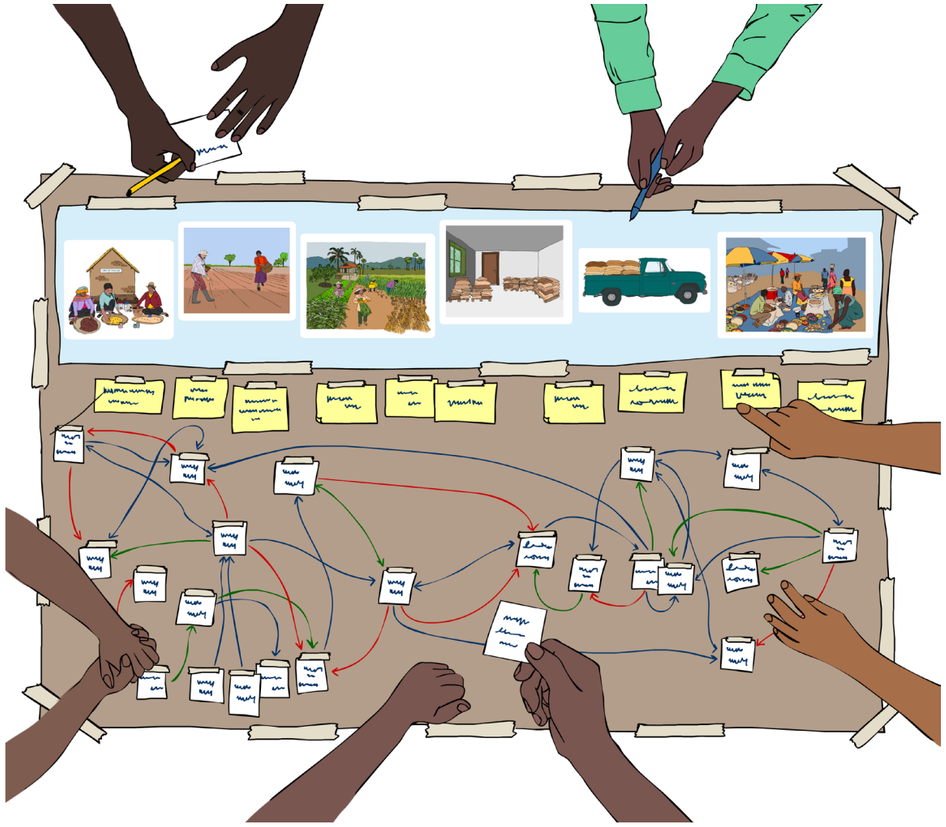


Figure 6: The value chain map with important contextual factors on yellow sticky notes.

Step 5: Analyze, interpret and present the Value Chain (VC) Map in plenary

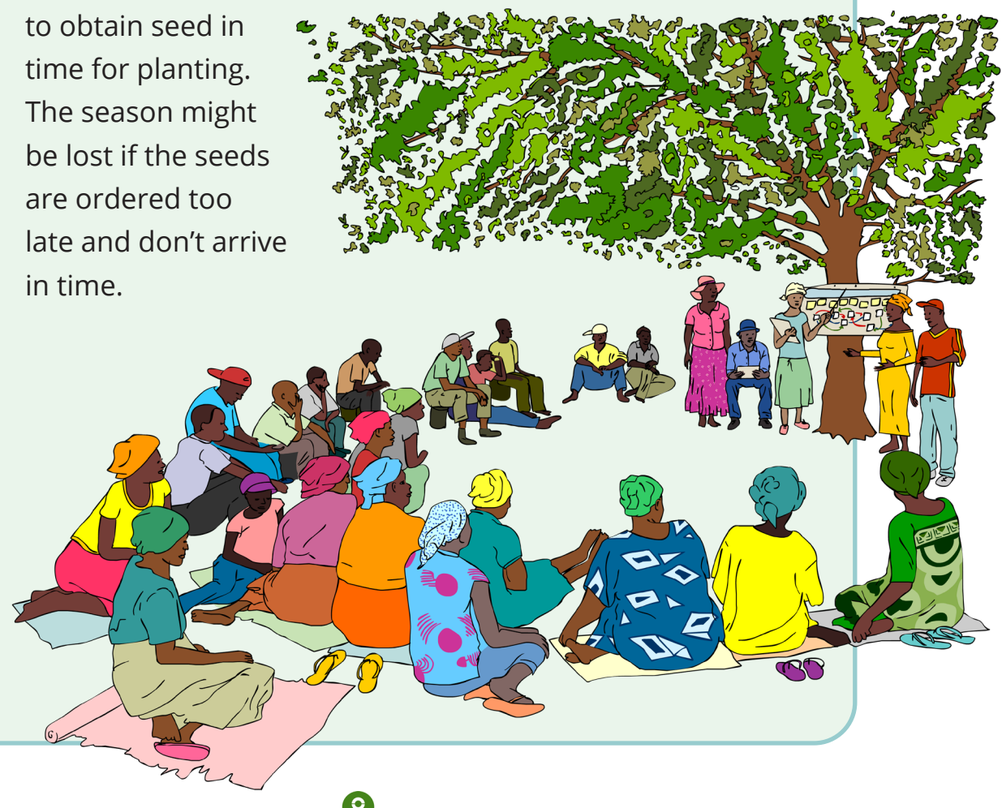
Value chain maps for each group should be presented and validated in plenary. Presentations should include a summary of the analysis of each map. During the session, FFS members should have a chance to add to the value chain map that is being presented.

The group should identify, analyze, and come to informed decisions about the strengths, weaknesses, opportunities, and threats/risks of the selected value chain based on the map that has been developed. The analysis will aid the team in selecting potential interview subjects for market research (see the section below). The group can use the information from the VC analysis to reassess their strategy as outlined in their Action Plan.

Note: At this point in the process, there may be a lot to discuss. The facilitator should ask the group if they want to continue creating the value chain map in a subsequent session if the session starts to drag on.

Facilitator note: It will be crucial to pay close attention to the following when reviewing each group's value chain map:

- the flow of input services, as many smallholder farmers have trouble getting access to foundation seed/planting material and other basic supplies.
- potential opportunities, risks, and bottlenecks for the FFS. For instance, farmers frequently encounter the issue of having to notify breeding institutes five or six months in advance in order to obtain seed in time for planting. The season might be lost if the seeds are ordered too late and don't arrive in time.



Know your market!

In the next 3 FFS sessions, the facilitator helps the FFS to learn more about the current and future local markets for their proposed seed crop. During the process the FFS gathers information that improves their knowledge of the fundamentals of markets. The FFS sessions are made up of:

- Session 2: Clarifying what market research is about.
- Session 3: The groups prepare for the market visit.
- Session 4: The groups visit a local market to collect information/ data. The groups examine and present their research from the market.

The steps to be carried out in the three sessions are outlined in Figure 7 below.

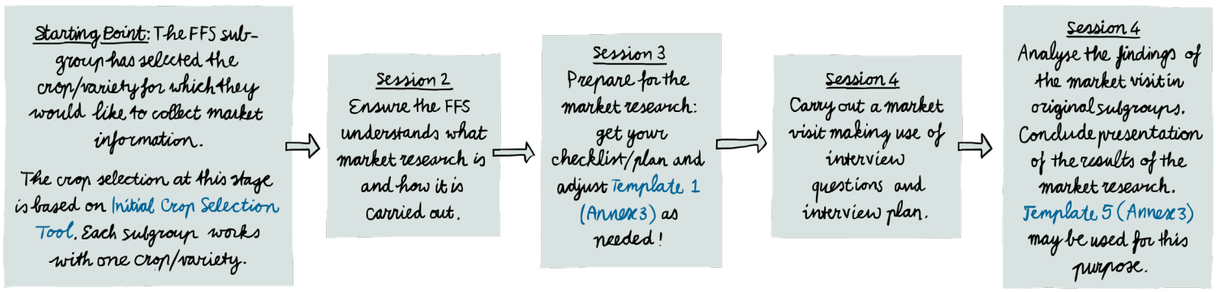


Figure 7: Steps towards understanding the basics of markets regarding your seed crop

Session 2: Start with the basics, what is market research?

Purpose	To determine the prospects for their product, the FFS conducts market research. During the market research the FFS gain a better understanding of the value chain they created earlier through interaction with actors identified.
Recommended duration	2-3 ½ hours
Needed materials	Flipcharts and markers

In this second session participants will become familiar with the concept of market research. During the session as they investigate potential markets for their proposed products, the group will become familiar with various information-gathering techniques.

Step 1: The session starts in plenary. The facilitator gets things going by asking the group what they believe market research is and what kinds of activities it entails. Responses are recorded on a flipchart as they are given. Questions asked by the facilitators to guide discussions are:

- Why is market research important?
- What types of market research do they know?
- What types of market research do they think they are able to do?
- When can they do it?
- What do they need to be able to do it? Which resources and skills?
- What crops are they interested in doing market research on?

! Facilitators should highlight that farmers can do research as well! They are perfectly able to do market research themselves, and don't need to rely on external persons to do it.

Figure 8: Carrying out market research in your local market

The facilitator works to help the group realize how crucial market research is in enabling them to gather accurate data on the potential market for their product. During the market research the group will gather information regarding:

- **What seed is in demand:** For which crops or varieties do farmers want seed?
- **Who wants to buy or sell:** Who is buying and selling what type of seed in the community?
- **What price is the seed sold:** For what price are farmers willing to buy seed?
- **Where to obtain:** From where and whom do farmers prefer to buy seed?
- **What quantity is needed**: How much seed can the FFS group produce each season?
- **What else is in high demand**: What other crops or varieties are in high demand or scarce supply?

Step 2: Next, still in plenary the facilitator explains the two basic methods of market research. In the discussions the facilitator goes over the different methods as well as the significance of accurately recording the data gathered.

- **Informal interviews:** This involves talking to buyers, sellers and other actors identified in the value chain mapping (session 1) to find out more about them in terms of their seed needs. This will be based on a list of questions prepare beforehand.
- **Observations:** This is visiting buyers, sellers and other actors, but without a list of questions. During observations pay attention to day-to-day encounters by actors and situations that take place in the marketplace. For example, you could observe what types of questions customers ask seed sellers. This gives a clue into what consumers find important.

If physical visits to markets are not feasible consider alternative options.

Step 3: Agree on who will conduct the market research. If there is a marketing committee in the FFS group, the members of this committee should be the ones participating.

Session 3: Planning for your market research

Purpose	To determine the prospects for their product, the FFS conducts market research. During market research the FFS gain a better understanding of the value chain they created earlier through interaction with actors identified.
Recommended duration	2-3 ½ hours
Needed materials	Flipcharts and markers

In the third FFS session participants will prepare for their upcoming market visit. During the session participants develop a detailed **Market Visit Plan** and make all necessary arrangements for the market visit. The **Market Visit Plan** may cover the following elements:

1. How to organize the team.
2. Decide what types of information to collect.
3. Decide where and when to visit.
4. Plan the number of interviews in each market.
5. Prepare interview questions.
6. Prepare an introduction.
7. Rehearsal of interviews.
8. Arrange the interviews.
9. Arrange transport.

Preparation for the market visit is carried out in sub-groups. As described in the steps below, the facilitator supports the session by contributing to group discussion. **Note:** Participants will re-convene in the same sub-groups they formed during session 1 of the FFS. This is important because the session will build on the group's previous work.

! **Note:** Remember that the group will have chosen a crop or variety to work with during session 1. They will be conducting market research on this crop or variety. For learning purposes, each group will concentrate on a single crop or variety. However, they will benefit from market analysis presentations (Session 4) of other groups', which will give them information about other crops.

Steps to guide the session

Step 1: Organize the market research team. Members of the market research team should be given clear roles. At least one member should be able to write, and another should be able to communicate well because they will be the one to report their findings back to the group in plenary. In addition to conducting informal interviews, the groups will also use observational techniques.

Step 2: Decide what types of information to collect. This will be determined by the seed product and the market to be visited. Group discussions will be guided the following topics:

- *Who do you want to get information from?* Various actors were identified when the value chain map was developed. Information can be obtained from these actors such as farmers, input suppliers, NGOs, seed producers, extension agents, researchers, small and large seed sellers, etc. Therefore, keep in mind the seed value chain map developed earlier; it will help you decide who to talk to first! Depending on who the actors are, Table 2 below offers some guidelines on how many people to observe or conduct interviews with. It may not always be possible to interview the recommended number of actors. The most crucial thing is that participants attempt, whenever possible, to interview each category.
- *What kind of information do you want to get?* What do you know already? Table 3 provides examples of the kind of information that can be collected from different actors.
- *What kind of information will be sensitive or difficult to get?*
- *How will you record this information?*
- *Why is it good to prepare a list of questions?*
- *Why is it good to have a different list of questions for each actor?*

Table 2: Guide on category and number of actors to interview drawing from the value chain map

Category	Number
Farmer buyers	20 per village (5 rich, 8 average, 7 poor)
Seed sellers	5-8
Seed producers	Depends on how many there are in the community
Schools	3-5
Development organizations	Depends on how many exist and are easily reached
Research institutes	Depends on how many exist and are easily reached

Table 3: Market research information to collect during market visit

Whom to talk to	Types of information to collect Purpose		Method
Farmers, farmer groups	• Seed demand • Varietal preferences • Varieties being grown	• Interest in new varieties • Issues of concern regarding seed quality • Price willing to pay	Informal interviews

Seed sellers (traders, shopkeepers, input suppliers)	• Price of seed sold • Varieties sold • Class of seed sold • Quantities of seed • Profit markup	• Problems selling seeds • Price willing to pay • Interest in placing bulk orders • Location	Informal interviews and observations
Other seed producers (your competition)	• Crops • Varieties and type of seed produced • Price of seed • Quantities produced	• Cost of production • Profit markup • Where seed is sold • Problems selling seed	Informal interviews and observations
Schools, NGOs, projects	• Interest in buying seed • Price willing to pay	• Varietal preferences • Interest in placing bulk orders	Informal interviews
Extension agents, researchers	• Seed laws and policies		Informal interviews

Step 3: Decide which market(s) and when to visit. First, decide which market to visit based on the crop selected. For learning purposes, focus on visiting the market nearest the village first. At a later stage when the group gains more experience, one or two other markets further away can be visited allowing the group to compare information. Second, agree on the best dates and times to visit the market.

What to consider when planning market visits

Timelines will vary depending on the number of crops and markets, and distance to the market.

Single crop

Day 1. Plan questions and practice interview techniques.

Day 2. Morning: visit market.

Afternoon: analyze information and present in plenary.

Several crops, several markets

Day 1. Decide which markets to visit, prepare a questionnaire or checklist.

Day 2. Visit markets.

Days 3-4. Analyze information.

Day 5. Present findings to group.

Step 4: Plan the number of interviews to carry out. Plan to interview several actors individually so you can compare their answers. Group members can pair up for the interviews, one person asks questions and the other takes notes.

Step 5: Prepare questions based on the types of information you want to collect. Agree on interview questions. Participants deliberate and come to agreement on interview questions. If required, adapt and customize the questionnaires in Annex 3 to meet the needs of your group.

Step 6: Prepare an introduction in which you explain why you are conducting the survey. The group should be well prepared and able to explain their presence to the person they are interviewing.

Step 7: Rehearse. Discuss the interview process with the team and practice acting in various roles of interviewer and interviewee. There should be participants in the role play who observe and gather information.

Step 8: Arrange interviews. If necessary, contact the people you want to interview beforehand to arrange a suitable time to meet.

Step 9: Arrange transport. Arrange transport and refreshments for the group to visit the market and return to the FFS site.

Step 10: The facilitator calls everyone together in plenary after steps 1 through 9 have been completed. In plenary each subgroup presents its findings from the role play and also discuss what the interviewer did well, what errors they made, and what to pay attention to as an observer. Based on the feedback received, changes can be made to their plans and lists of questions.

Session 4: Visiting the Market and Analyzing information collected

Purpose	Visit a nearby local market to speak with value chain actors. Participants also examine the data gathered to understand how their product might succeed in the marketplace.
Recommended duration	1 day Alternatively: Break this into 2 sessions of 2 half days
Needed materials	• Survey question sheets (enough for each stakeholder) • Large sheets of paper, colored marker pens, notepads, pens or pencils • Transport to and from market • Refreshments

For many farmers, the market visit is an eye-opener. Most farmers visit markets to sell or buy goods, but very few do so to gather information from traders in order to improve their farming operations or as entrepreneurs.

During the market visit the sub-groups will gather information based on the interview questions prepared earlier. The group should have a designated interviewer, note taker and observer (as per the group plan in session 3). The visit should happen early in the morning. However, the group should take local market hours into account.

Steps to guide the market visit

Step 1: Visit the market with your group. If necessary, contact market officials, to inform them about your plans. If the market is unfamiliar, walk through it to find out where your products are traded and who the team might interview.

Step 2: Conduct interviews. When you approach the person you want to interview, introduce yourselves, and explain the reason you want to speak with them. Follow the interview guide you developed, and make sure you collect all necessary information. Make sure to explore interesting subjects that you had not anticipated.

Step 3: Thank the interviewee for their time and information at the end of the interview. Before going to the next interview double check that your notes are in order.

! **Note for the facilitator.** If the market information required cannot be collected in the first market visit, a second visit should be organized. It is important that each sub-group has all the information they need for their analysis. If necessary, a maximum of three market visits may be organized.

Analysis and presentation of market information

The groups should get together as soon as possible after the market visit, preferably that same afternoon, to analyze the data while it is still fresh in their minds. A summary of the findings from the information analysis should be produced. This information can be presented in a format like Annex 3: Template 5 or any other format that presents the information gathered. After participating in this session, the groups will have a better understanding of how the market works and the opportunities available for their product.

Interview example		
	Response	Addition comments (self-reflection)
Place, date *		
Type of product (e.g., maize) and seed class *		
Interviewer(s) Name: FFS Group *		
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 total each day? Each week? Each year? *		
How often do you buy product X? *		
Who do you buy from? Why? *		
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? 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? (planting, mid season, harvest)		
Do prices vary for different varieties or class?		
The value chain		
What do you do with the product after you buy it? 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 crop or variety X?		
Other products		
What crops or varieties are in highest demand?		
What crops or varieties are very scarce?		
What new crops or varieties are being sold in this market?		
What would you advise farmers to grow to earn more money?		

Steps to guide the session: **Group market research discussion**

Step 1: Assemble the team that conducted the market survey, and possibly a few other group members to help with the analysis.

Step 2: Each group discusses the market survey experience. Find out what was new for them. What did they learn? What did they find most interesting? Most uncomfortable or difficult?

Step 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.

Step 4: Discuss the findings and analyze their implications for their proposed seed business.

Step 5: Summarize the information in a format of choice or use the template provided in Annex 3: Template 5, adapted to the crop(s) being analyzed.

Step 6: Decide who will present the information to the larger group in plenary. It may be best to divide up the task of presentation among several members of the survey team.

Step 7: Invite the representatives of each group to present their findings in plenary. During the presentations from groups facilitate a discussion of the findings reflecting on their implications for seed production and marketing plans. During the discussion, each subgroup reflects on:

- What did you learn?
- What did you find most interesting or surprising?
- What was most uncomfortable or difficult?
- How should what you learned impact the plans for seed production and marketing?

Session 5: Is my product profitable?

Purpose	Gain a basic understanding of the costs and benefits of producing and marketing seed
Recommended duration	3 hours
Needed materials	Flipcharts and markers

The goal of this session is for participants to gain a better understanding of the expenses associated with producing high-quality seed and the factors that affect their profits. The following two-step process will be used to help participants understand the costs and benefits of commercial seed production.

Step 1: What price should I sell my product?

The facilitator helps the FFS in this initial step to determine the minimum price and yield of the crops (varieties) that must be produced in order to be profitable. By the end of the session, the FFS should be able to answer the following questions:

- What is the *minimum price* to be charged for the seed?
- What is the *minimum yield* per ha for the seed crop?

The facilitator helps the group determine the **break-even price** in order to respond to these questions. The break-even price is the lowest acceptable price that covers the cost of production. The income received at this (lowest) price, will be equal to the cost of production, leaving no room for profit. Consequently at this price there will be *no profit*. The break-even price is calculated by dividing the total variable costs by the anticipated level of production per unit. The FFS will be able to calculate their break-even point based on budgeting information collected.

Formula for Break-even Price
=
Total Variable Costs per acre / yield per acre

Note: The facilitator highlights factors that affect product prices and how to keep production costs low but maintain quality.

Step 2: How profitable is my product?

It is crucial for the FFS to understand how much money will remain from the sale of seeds after all production, processing, storage, and marketing expenses have been covered. A relatively straightforward method for comparing the profitability of various product types is through gross margin analysis. The final income remaining after deducting all production expenses from sales income is known as the "Gross margin."

The facilitator goes over the following topics with the group before the exercise on figuring out the gross margin:

- **Differentiating between business and personal costs**. Farmers might not be able to distinguish between personal and business expenses, such as the cost of maintaining their homes. Farmer producers' time commitment may be seen as a business expense, especially if they have another source of income. Give participants some examples of different expenses they face and ask them to categorize them as personal or business expenses.
- **Source of money to start a business:** Startup costs must be covered by personal savings, cash from family or friends, or borrowing. These should be regarded as fixed costs.
- **Delay in making a profit:** Until a crop is successfully harvested and sold, they won't make any money from their operations.

The facilitator should make sure that participants are aware of their projected annual income and expenses from seed production. Discuss the likelihood of success and whether participants feel they have enough money to begin seed production for the market before wrapping up.

! **Note for the facilitator.** Profitability analysis, combined with the market research from previous sessions, will help the farmers to determine which crop to work with. Where a marketing committee has been established, its members should be taken through the profitability analysis using the **tools and exercises #8 in the Toolkit (See Annex 4).**

Organizing the session

Objective	Examine the financial viability of the prospective market crops for which market research has been done.
Time	90 minutes
Needed materials	Flipcharts and markers

Step 1: The secretary goes over what was said and decided during the previous meeting regarding crops with market potential.

Step 2: In order to compare the profitability of the various value chains they are interested in, the facilitator explains to the FFS that they will be calculating the level of income and profit of the different seed crops

chosen. The facilitator may need to go over and define certain terms that will be used in the gross margin analysis during the session.

- *Gross margin:* The estimated profits.
- *Total costs:* The amount you spend on producing the product.
- *Total revenue:* The total amount that you earn from selling all your products.
- *Yield/output:* The amount of a product you produce.
- *Price:* The amount for which you sell each product item.

Step 3: Ask the FFS to start calculations based on one of the seed crops it listed in the previous session. In sub-groups the FFS should:

- List all the activities the group would need to implement from the start to the end of the process.
- List all the inputs it would need to run one acre of the crop. These could include land, labor, tools, seeds, equipment, and advertisements.
- Estimate the cost of each input, using personal experience as a guide.
- Calculate the total costs of the inputs.
- Ask members to estimate the total output of the crop/variety, using their own experiences as a guide.
- Establish the projected market price per unit of the product (this information should come from market surveys or farmers' experiences).
- Calculate the expected returns by multiplying the output by the market price per unit.
- Subtract projected total costs from expected returns to calculate the gross margin.

Step 4: The results of each subgroup should be presented. They will produce somewhat different outcomes. What inputs were left out? Ask the group to agree on the costs listed until it has a gross margin

analysis that every group agrees on.

Step 5: Repeat for each potential crop. A worked out example is provided in Annex 4:1

GROSS MARGIN ANALYSIS FOR CLIMBING BEANS: INCOME / ACRE

Costs/acre	Shillings	Notes
Land preparation	40,000	Animals hired for ploughing.
Seeds	24,000	New Variety.
Planting	5,000	
Staking - Supports	60,000	240,000 for staking materials but will be used over 4 seasons.
Weeding x3	15,000	Used mainly family Labour Some costs not included.
Fertiliser	25,000	
Pesticides	6,000	
Labour for harvesting	18,000	
Packaging	1,000	
Transport to market	5,000	
Market fees	1,000	
TOTAL COSTS/ACRE	200,000	
Harvest Kgs	1,200	
Market price/kg	750	
INCOME	900,000	
GROSS MARGIN	700,000	

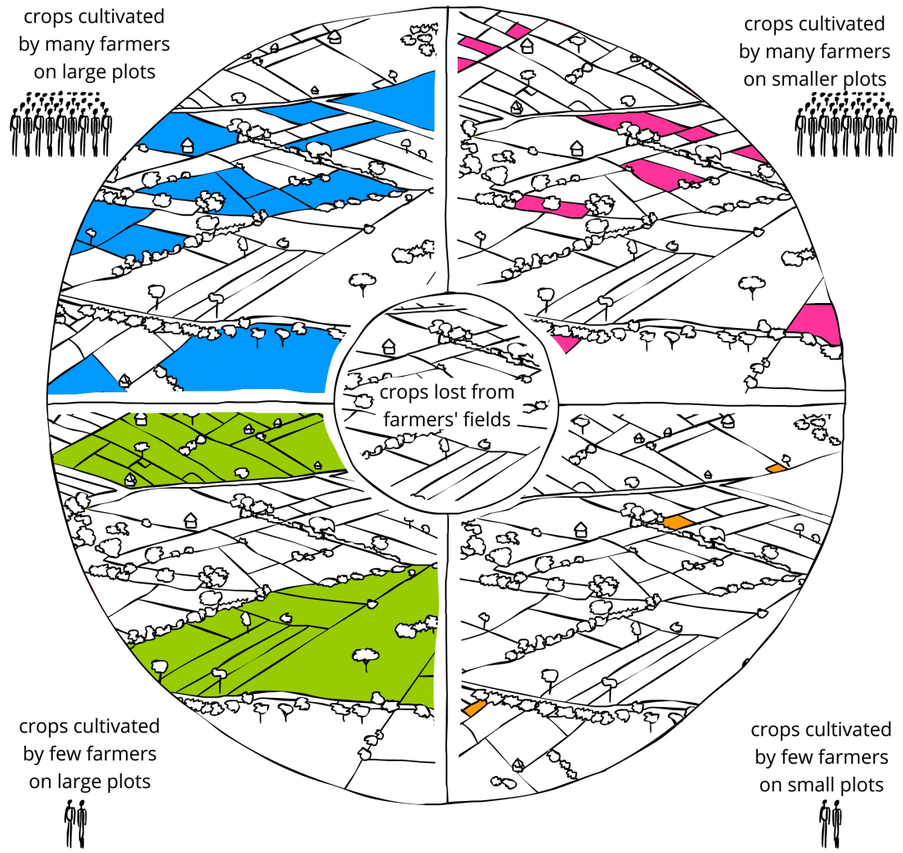
Figure 9: Gross margin for beans in Uganda

Session 6: Final Crop Selection

Purpose	Make a final decision on which crop or variety to commercialize based on the previous 5 sessions
Recommended duration	3 hours
Needed materials	Flipchart paper, marker pens Information gathered during the market survey
Tools	Crop selection tools (See #9 in the toolkit)

In this session, the FFS makes a final decision on which crops and varieties to produce commercially based on potential profitability. However, minor crops and varieties with low profit margins that are important for food and nutrition security should also be considered. The FFS may have chosen these crops or varieties because for example they are more resilient in the context of climate change or because of their high nutrient content. Minor crops with low profit margins are more likely to be successful with proper marketing that builds on community knowledge developed during the FFS on PPB or nutrition.

The FFS group may also reflect on the results of the diversity wheel exercise from Chapter 3.1, identifying crops and varieties the community showed interest in and for which there was insufficient seed. The group may consult existing community seed banks in the area to explore if enough seed for such crops and varieties is available to support commercial seed production.



The group should also revisit the pros and cons of producing seed of more than one crop. As discussed in the diagnostic phase (Chapter 3.1), advantages of producing more than one crop include:

- less risk stemming from seasonal weather problems;
- less risk if demand for a selected crop or variety diminishes;
- different crops can be grown in rotation in subsequent seasons.

Disadvantages of producing more than one crop include:

- higher labor requirement;
- more equipment and expertise.

It is recommended that producer sub-groups work with only one or two crops or varieties during the first FFS season(s) and to select varieties that will sell easily.

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Seed classes: Depending on the crop of choice and national regulations, FFS groups might produce certified seed, quality declared seed, or regular farmers' seed. They should consider if seed inspection or certification will be needed or desirable, and whether the requirements and costs can be met (see Chapter 6 of the Guide).

At this point in the FFS, the group will have gathered the key information to decide which crop(s) or varieties to commercialize. To facilitate the discussions on the final selection of crops and varieties, the FFS continues to work in sub-groups. Tables 4 and 5 below provide a convenient and systematic way to analyze the information collected in the previous sessions.

Steps to guide the session

Step 1: Participants complete the forms in group work sessions. Total scores of each crop or variety should be calculated. The various scores should be compared using the summary form in Table 5.

Step 2: After each group presents their results and conclusions, the facilitator leads a general discussion and highlights key observations during plenary discussions.

Table 4: Product scoring

The product selection scoring form below guides the FFS on their final selection. Working in sub-groups participants fill out one form per crop or variety for which the FFS carried out market research. For each criterion, the group circles the appropriate response. The FFS may select the best crops for commercialization based on the scoring and discussion of the results. Depending on the financial, socio-economic, and environmental needs, the FFS may decide to work with two crops.

Name of Crop or Variety		
Criteria	**Scale**	**Score**
Expected local demand	Large Moderate Limited	3 2 1
Expected demand regionally	Large Moderate Limited	3 2 1
Seasonal fluctuations in demand	Large Moderate Limited	3 2 1
Expected demand from different types of farmers	All types of farmers Rich farmers mainly Rich and average farmers mainly Average and poor farmers Poor farmers mainly	3 2 2 2 1
Expected demand from institutions that may pre-order or buy in bulk	High Moderate Low Not applicable	3 2 1 0
Competition	Low Moderate High	3 2 1
Margins/Profitability	High Moderate Low	3 2 1
Constraints to business entry (financial needs, seed regulation)	Slight Moderate Severe	3 2 1
Access to clean starter seed	Easy Moderate Difficult	3 2 1
Contribution to climate change adaptation or nutrition security	High Moderate Low	3 2 1
Total score (out of a maximum possible score of 30)		/30

Table 5: Summary Form product selection

The product scores based on Table 4 above can be easily compared using Table 5 below. The variety with the highest score is not always the best option when there are multiple varieties to choose from. Any varieties that receive a score of less than 15 are typically not expected to be profitable. It will be easier to understand the various strengths and weaknesses of the top-scoring varieties if you compare them using the form below.

Criteria	**Crop/ Variety 1**	**Crop/ Variety 2**	**Crop/ Variety 3**
Expected local demand			
Expected demand regionally			
Seasonal fluctuations in demand			
Expected demand from different types of farmers			
Expected demand from institutions that may pre-order or buy in bulk			
Competition			
Profitability			
Constraints to business entry (financial needs, seed regulation)			
Access to clean starter seed			
Contribution to climate change adaptation or nutrition security			
Decision			

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Annex 1: Initial Crop Identification Tool (Guide Toolkit 4)

How to use the crop identification tool

Participants will have identified a few crops through the diagnosis stage that may be suitable for commercial seed production. Ask them to go through each of the five questions in the table separately for each crop, with the following guidance:

STEP 1. Read the questions on the left hand side of the page. For each question, choose one of the answers in the three columns which best describes what you know about the crop. Mark your answer with a tick.

STEP 2. When you have completed all the questions, use the last row to record the number of ticks you made in that column. Now you are ready to read your score.

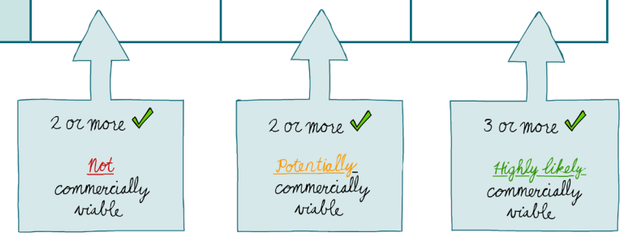
STEP 3. If you have two or more ticks in column 1, it means the crop you are considering may not be suitable for commercial seed production because there is little demand for seed. If you have two or more ticks in column 2, it is possible that the crop you are considering may be suitable. You need to get more information about demand for seed of that crop. If you have three or more ticks in column 3, it means that the crop you are considering is probably very suitable commercial seed production.

STEP 4. Repeat steps 1, 2 and 3 for each crop under consideration.

Note: Participants should not do market research on crops which have two or more ticks in columns 1 and 2.

Table 1: Crop identification table

Questions	Column 1	Column 2	Column 3
Do farmers buy seed?	Rarely	Sometimes	Often
Why do farmers buy seed?	Mainly to get new varieties	Mainly to replace seed lost during a bad season	Because they are unable to save seed or use their own seed, or have insufficient seed
What do farmers think about the quality of their own seed?	Very satisfied	Somewhat satisfied	Not satisfied
What do farmers think about the quality of seed they buy from shops?	Very satisfied	Somewhat satisfied	Not satisfied
What do farmers think about the quality of seed they buy from the market?	Very satisfied	Somewhat satisfied	Not satisfied
What do farmers think about the quality of seed they buy from other farmers?	Very satisfied	Somewhat satisfied	Not satisfied
Does the crop suffer from diseases found inside the seed?	Rarely or never	Sometimes	Often
Is the crop grown for cash?	The crop is mainly or only grown for food	The crop is grown for both food and cash	The crop is mainly or only grown for cash
Total number of ticks per column			



Annex 2: Concepts to guide group work

A Value Chain is characterized by:

- **a product and/ or its by-products**:
  e.g. honey in its different forms, beeswax, etc.
- **a market**:
  all potential users, buyers/consumers of a product
- **functions (stages) and/or technical operations**:
  these are activities that take place, done or implemented as the product whose stakeholders are being analysed progresses in value; e.g production, transport, processing, packing, storing, trading for food distribution or the industry
- **direct stakeholders/actors**:
  these are the one that implement direct functions that contribute to the progressing value of the product. In other words, they add value to the product e.g they treat, handle or possess the product at a given moment of the chain. They are producers, collectors, wholesalers, retailers, transporters. Direct stakeholders really "possess" the product. If they only provide a service of transporting for example, then they are indirect stakeholders/actors.
- **indirect stakeholders/actors (or support stakeholders/actors)**:
  play a supporting role and do not intervene directly in the processes of producing, processing, transport or trading, but they give services that ensure easy, proper implementation of the direct functions by providing/ giving support services. Supporting indirect actors could include among others credit providers, extension service providers, researchers, business advisory service providers, traders/brokers, storage service, NGOs, restaurateurs, cooks, etc.
- **forms of relationships and of exchange between direct stakeholders/actors**:
  contracting, agreements, formal and informal contracts between these different operators allowing the exchange of the product against money or in kind.

- **a specific geographic area**:
  corresponding generally to the production and trading area of the product, inside and outside the community or beyond.

Annex 3: Templates for market research FFS sessions

The following templates may be adapted for use by the FFS as needed.

Template 1: SAMPLE QUESTIONNAIRE FOR A MARKET SURVEY

Interview Example		
	Response	Addition comments (self-reflection)
Place, date *		
Type of product (e.g., maize) and seed class *		
Interviewer(s) Name FFS Group *		
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 total each day? Each week? Each year? *		
How often do you buy product X? *		
Who do you buy from? Why? *		
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? 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? (planting, mid season, harvest)		
Do prices vary for different varieties or class?		
The value chain		
What do you do with the product after you buy it? Do you sell it, process, package it, etc?		
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 crop or variety X?		
Other products		
What crops or varieties are in highest demand?		

What crops or varieties are very scarce?		
What new crops or varieties are being sold in this market?		
What would you advise farmers to grow to earn more money?		

Template 2: INFORMATION ON MARKET DEMAND

Fill in separate tables for each crop. Take into account which variety you plan to produce and which competing varieties are offered in the market.

Demand for seed of crop:

	High	Medium	Low	Comments
Expected level of demand for seed from farmers in general				
Expected level of demand from different types of farmers: • Rich • Average • Poor • Very poor				
Expected demand from schools				
Expected demand from development organizations				

Template 3: INFORMATION ON DEMAND FOR EXISTING VARIETIES

Variety name	Average amount bought in a season by farmers	Likely demand from farmers in target area (high, medium, low)	Is seed easily available? (yes, no)

Amount sold in a month by traders interviewed	Amount bought in a season by development organizations	Estimated demand in target area

Template 4: INFORMATION ON DEMAND FOR EXISTING VARIETIES

Major varieties sold	**Sources which sell each variety**		**Price at planting time**	
			Grain	Seeds

Price in the middle of the season		**Price at harvest time**	
Grain	Seeds	Grain	Seeds

Template 5: FORM FOR SUMMARIZING FINDINGS OF MARKET SURVEY

Product			
Market name and location			
Date			
FFS survey members			
Is this a new product?	Existing (Farmers produce this product)		
Is this a new market?	Existing (Farmers already sell here)		
WHAT FARMERS DO NOW			
Where do the farmers sell? (Tick all that apply	Farm gate	Local market	District market
What is the current marketing chain? (Tick all that apply)	Farmer	Collector	Local trader
What is the price of product?	Main season		Off season
How much product does the group sell?	Amount per farmer per season		
WHAT FARMERS HOPE TO DO IN THE FUTURE			
What is the target market?	Farm gate	Local market	District market
How much product does the group plan to sell?	Amount per farmer per season		Total

	New (Farmers do not produce this product)			
	New (Farmers do not yet sell here)			
Processor	National market	Super- market	Export market	Other
Traveling trader	Processor	Whole-saler	Retailer	Consumer
		Now		
	Total amount for group per season			
Processor	National market	Super- market	Export market	Other
amount for group per season		Price per unit		

What is the demand for this product?	**Current demand**		
	High	Medium	Low
How much will the buyer buy?	Smallest amount the buyer will buy		
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?			

*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. During the market visit, find out if traders are interested in collective sales.

	Future demand			
	Rising	Stable	Falling	
	Amount for which the buyer will give a premium*			

Annex 4: Profitability analysis Example and Template

1: Gross Margin for Groundnuts: Worked-out example

Below is an example of a gross margin analysis –groundnuts in the Ugandan context. It includes a risk analysis, which the facilitator can discuss with the group. The costs are variable costs only – that is, the costs it will need to pay every season; start-up costs may be extra and should also be identified in the process. Discuss with the group: which is most profitable?

Groundnut – assumptions

- *Yield: 375 kg*
- *Market price: 2500 Ushs/kg*
- *Returns = 375 x 2500 = 937,500 Ushs*

Groundnut – costs of production

Input	Description	Quantity	Unit Cost	Total Cost
Land preparation	1st ploughing	1 acre	30,000	30,000
	2nd ploughing	1 acre	20,000	20,000
Foundation seed	Sere nut 4	1 bag	45,000	45,000
Labor	Planting	10 person days	--	--
	1st weeding	10 person days	--	--
	2nd weeding	5 person days	--	--
	Harvesting	15 person days	--	--
Fertilizer	S.S.P.	125 kg	1,000	125,000
Spraying	Dimethoate	1 liter	12,000	12,000
Packaging	Bags	25 large (15 kg) bags	1,000	25,000
Transport	Vehicle hire	25 large (15 kg) bags	3,000	75,000
Market	Dues	25 large (15 kg) bags	1,000	25,000
TOTAL VARIABLE COSTS				**357,000**

Groundnut – profitability analysis

Gross margin analysis	Risk analysis
	10% yield decrease 375 kg – (10% of 375 kg) = 337.5 kg (337.5 kg x 2,500 Ushs) – 357,000 = 486,750 Ushs
Expected Yield = 375 kg Price per Kg = 2500 Ushs Expected revenue = (375 kg x 2500 Ushs) = 937,500 Ushs Total production cost = 357,000 Ushs **Profit = revenue – total production cost = 580,000 Ushs**	**10% price decrease** = 2,500 – (10% of 2,500) = 2,250 Ushs (375 kg x 2,250 Ushs) – 357,000 = 486,750 Ushs **10% production cost increase** 357,000 Ushs + (10% of 357,000) = 392,700 Ushs (375 kg x 2,500 Ushs) – 392,700 = 544,800 Ushs **10% decrease in revenue and 10% increase in production costs** 843,750 Ushs – 392,700 Ushs = **451,050 Ushs profit**

2: Blank Template for profitability assessment/ analysis

Sample Template to be completed by FFS groups. More lines can be included as needed to include more crops that the farmer is working with.

Business Profitability: ..... [Currency] **Duration: .....**				
Income	*Weigh (kg)*	*Price (currency)/kg*)	*Total (currency)*	*Notes*
[Name of crop]				
Total income				
Fixed cost	*Weigh (kg)*	*Price (currency)/kg)*	*Total (currency)*	*Notes*
Seeds				
Fertilizer				
Labour				
Harvesting				
Total fixes cost				

Variable cost	*Weigh (kg)*	*Price (currency)/kg)*	*Total (currency)*	*Notes*
Seeds				
Fertilizer				
Labour				
Harvesting				
Total variable cost				
Profit (gross margin)				

Sowing Diversity = Harvesting Security

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