Smallholder Horticulture Empowerment and Promotion (SHEP)

SHEP Handbook for Extension Staff

March 2018

A Practical Guide to the Implementation of the SHEP Approach

Japan International Cooperation Agency

JICA

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Foreword

Towards the Normalization of SHEP for Agricultural Extension Services

SHEP originally emerged through trial and error in the process of technical cooperation between Kenya and Japan for improving Kenya's agricultural extension services. The cooperation started in 2006 and the SHEP Approach was developed as an innovative method of agricultural extension services backed by the disciplines of economics and psychology. SHEP is an approach in agricultural extension that facilitates small-scale farmers to conduct market-oriented agriculture. The above-mentioned agricultural extension project in Kenya that utilized this method doubled the farming income of 2,500 targeted farmers in just two years.

In the opening speech of the 5th Tokyo International Conference on African Development in 2013, Japanese Prime Minister Shinzo Abe expressed his desire to change African Agriculture from "Grow and Sell" to "Grow to Sell". Building off of this, the Japan International Cooperation Agency (JICA) has been working with the Kenyan government to spread the knowledge of SHEP to agricultural extension officials and extension staff in other African countries. Currently, over twenty African countries are implementing the SHEP Approach.

Why has SHEP spread throughout Africa in such a short period of time? I believe there are three reasons for this. First is the simplicity of SHEP's slogan; "transform from 'Grow and Sell' to 'Grow to Sell'". Anyone who has experience of engaging in agricultural extension would favor this simple message as it can effectively advocate for the importance of looking at the market for making profit. The second reason is that the SHEP Approach has in-built mechanisms that raise farmers' and agricultural extension staff's motivation toward their jobs. "No Fun, No SHEP" is a motto among the SHEP implementers, and in fact, there are many farmers and extension staff who report that they are enjoying working on their activities. The third reason is the effectiveness of "South-South Cooperation," or cooperation between Kenya and other African countries. The SHEP knowledge, first created in Kenya, can be easily used and applied in other African countries, making "South-South Cooperation" easy to implement. Meanwhile, JICA has been hosting international SHEP workshops and providing venues for relevant parties to create knowledge on agricultural extension. We invite everyone to actively participate in these events.

This is a step-by-step practical handbook on how to implement agricultural extension services that utilize SHEP. We hope that the approach presented in this book will become the norm to those engaged in agricultural extension service, and that the day may come when farmers throughout the world can be heard saying, "Grow to sell? Of course, obviously!" With that aim in mind, we continue to work with you to support small-scale farmers.

March 2018

Kenichi Shishido
Director General
Rural Development Department
Japan International Cooperation Agency (JICA)

Dear Readers

If you are in a position to support farmers through extension services, consider the following two questions.

1. Would you recommend to farmers a way of farming that is blind to market conditions?
2. Would you implement an extension program/project that does not take farmer motivation into consideration?

The answer, I think, is no. If agriculture is your livelihood, the connection between the products (grains, vegetables, fruits and livestock) you grow, and market where you sell those products is extremely important. If the farmer can grow the products demanded by the market, at the quality demanded by the market, at the time demanded by the market, then at the very least that farmer will make profits. On the other hand, if the farmer decides on and grow their products without looking at market needs, then that farmer cannot expect to be able to sell their products on the market at their desired price. It is thought that among the small-scale farmers of developing countries, there are farmers who plant their seeds and raise their crops without adequately understand market information, and that these farmers continue to conduct farming in this way.

Moreover, the core of extension services can be said to lie in two-way communication with farmers. In many cases, however, the extension services paid much attention to agricultural techniques themselves rather than to farmers. It is of paramount importance for the extension services to put farmers at the center as they are the primary actor of farming. Without convincing the farmers of the usefulness of the techniques the extension staff try to promote, it is unlikely that the techniques will spread and be utilized by farmers on a continual basis. No increase in productivity or improvement in quality can be expected without farmers' commitment.

The SHEP approach is one of agricultural extension approaches. Its characteristics include pursuing farming as a business—especially promoting the sharing of market information among farmers and stakeholders of the market, thereby mitigating the information gap—and designing a series of activities with consideration for farmers' motivation. The SHEP approach is one about implementing the natural and obvious steps for agricultural extension. It is not special in the slightest.

This approach, first developed in Kenya, has by now been implemented in over twenty countries. Farmers who have received support through this approach are proud in and enjoy their farming. These farmers have remodeled their houses, bought cars, sent their children to higher education, become able to eat balanced food—they have experienced real improvements in their livelihoods.

This handbook is based on practical experience applying the SHEP approach to extension activities. It was made with a mind to provide those engaged in extension work with something that they can implement immediately. However, this handbook may be lacking in parts in detailed descriptions of techniques and methods. We hope that this resource will be put to practice as appropriate for each practical setting, with creative additions and adaptations included. So get to it! The farmers of the world are waiting for you!

Jiro Aikawa

JICA Senior Advisor/ SHEP Adviser

Appreciation / Acknowledgement

This “SHEP Handbook for Extension Staff” has been developed greatly owing to the contribution of Kenyan staff from the Ministry of Agriculture deployed in the Project Coordination Unit of the Smallholder Horticulture Empowerment and Promotion Project for Local and Up Scaling (SHEP PLUS) and the previous phases of the project (SHEP and SHEP UP). The staff not only contributed to the development of the SHEP Approach but they have continuously improved it. In addition, the Project Coordination Unit has trained over two hundred (200) staff from twenty-two (22) African Countries who are now implementing the SHEP Approach. We appreciate their efforts together with the participating Kenyan farmers, stakeholders and support by the top management of the ministry.

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The publication of this document, “SHEP Handbook for Extension Staff”, was made possible by the joint initiative of JICA and SHEP implementing countries. In particular, detailed information was collected by a series of study visits paid to countries including Lesotho, Malawi, South Africa, and Zimbabwe for the period between April and October 2017. After the manuscript was prepared by the JICA Team, it was reviewed by the editorial team comprised of representatives from the above-listed countries. The final version of the handbook which reflected the comments by the editorial team was prepared and then published by the JICA Team. Below is the list of the members of the editorial team and JICA Team who are the main contributors of the handbook.

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PART 1. CONCEPT

“Part 1. CONCEPT” explains the main concept of the SHEP Approach together with its background, advantages and actual effects and impact on the ground.

1. Concept of SHEP Approach

1.1. Two Key Pillars of SHEP Approach

The Two Pillars as the backbone of SHEP

The SHEP Approach aims at empowering smallholder farmers in their endeavor to pursue market-oriented agriculture of horticultural crops. It tries to build farmers' capacity to undertake farming as a business in a sustainable manner through imparting necessary marketing and production skills to them. In the process, SHEP attaches a special emphasis on supporting farmers' autonomous motivation as it is an essential ingredient for achieving farmers' self-reliance and sustainable outcome that SHEP envisions. The diagram below depicts these two pillars SHEP is based upon, which address both issues of "promoting farming as a business" and "empowering and motivating farmers". Both pillars, which are the backbone of SHEP, are supported by academic discourse and research: the former by **an economic theory called "Markets with asymmetric information"** and the latter by **a psychological theory called "Self-Determination Theory".**

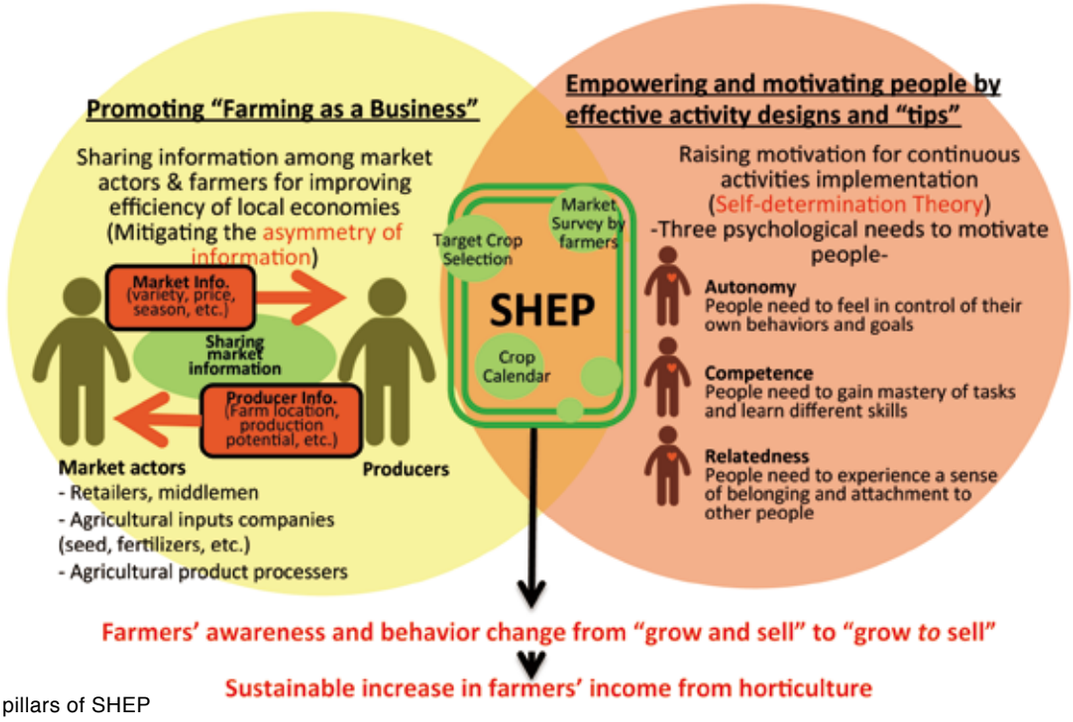


Figure 1 Two pillars of SHEP

The Economic Theory: "Markets with Asymmetric Information"

The circle on the left illustrates SHEP's main strategy for materializing market-oriented, as opposed to production-oriented, agriculture. SHEP believes asymmetric information, i.e. imbalanced information, between smallholder farmers and market actors such as vegetable buyers, agricultural input sellers, financial institutions and so forth is one of the strongest factors of inefficient local economy, which smallholder farmers often suffer from. The economic theory called "markets with asymmetric information" proposed by the 2001 Nobel laureates in economics, namely, George Akerlof, Michael Spence, and Joseph E. Stiglitz, aptly explains this situation. The theory argues that **overcoming information asymmetry is the key to amend an imbalance of power in transactions and to vitalize efficient local economy.** Based on this understanding, SHEP helps farmers to fill the information gap between them and their business partners through means such as teaching farmers how to conduct market surveys as well as helping them to establish business linkages with market actors (Column1).

Column1 Mitigating information asymmetry by SHEP

PROBLEMS caused by asymmetric information

- Trade, i.e. buying and selling of horticultural crops, is not established because buyers cannot find producers and vice versa, crops are not meeting the market requirements, and crops are undersupplied at certain times, etc.
- Prices can be distorted because famers need to agree to unfairly low asking prices due to their ignorance of market prices.
- Transactions are not continuous or unstable because buyers as well as producers cannot establish business networks they can trust.
- Transaction costs, such as searching and bargaining costs, are large because without stable business relationships both buyers and producers need to find their business partners each time.

SOLUTIONS through means such as SHEP's farmer-initiated market surveys and stakeholder forum

- Farmers establish business linkages with market stakeholders.
- Farmers obtain information on market demands (preferred crops, varieties, quantity, quality, peak demand period, etc.).

Photo: Malawi

RESULTS after mitigation of asymmetric information

- Farmers widen their business networks and have more options to choose from for their business partners.
- Farmers and market stakeholders understand each other's situations and work on establishing a win-win situation.
- Farmers discover various opportunities to penetrate the horticultural market.
- Farmers and market stakeholders build trust for continuous business trading.

The Psychological Theory: "Self-Determination Theory"

American psychologists, Edward Deci and Richard Ryan, proposed three psychological needs that motivate people in their theory on human motivation called "Self-Determination Theory". According to the theory, **people feel motivated when their needs for autonomy, competence or relatedness are supported.** In the case of SHEP, a series of activities are designed so that they can unlock farmers' motivation toward market-oriented agriculture, taking into consideration these three psychological needs (Column 2). For instance, farmers are guided to conduct market surveys on their own so that they can feel in control of their own action, which leads to supporting their need for autonomy. By carrying out market surveys successfully, the farmers also feel that they have gained mastery (skills and knowledge) of this particular task and learned new skills, which is a competence support. Finally, SHEP asks those farmer representatives who have conducted the market surveys to go back to their farmer group and share the results of the surveys with their fellow farmers. Through that process, the farmers feel a sense of belonging and attachment to the group members, which in turn, contributes to supporting their psychological need for relatedness.

Column 2 Three psychological needs for raising motivation

AUTONOMY

The need for autonomy is the desire to act on one's own initiative – or rather, the desire to not be controlled by others. People do not want to be the pawn in a chess game, but the chess player.
In order to support farmers' need for autonomy, extension staff are advised to be careful of the language and should never order or command farmers to do a task. They also need to communicate to the farmers the rationale for engaging in each of the SHEP activities, provide choices in terms of what task to do and how to do it, and listen to their opinions on how to do the task. Accepting farmers' feelings of discontent and criticism toward the task is also important since the farmers will feel their viewpoints are regarded as meaningful, which, in turn, promotes the feeling that they are acting on their own initiative.

COMPETENCE

Competence is the ability to interact effectively with one's environment. We feel competent in cases such as when we are able to achieve a task as planned in advance, when we feel that our abilities are improving and when our curiosity is satisfied.
Extension staff can support farmers' need for competence by designing tasks of each of the SHEP activities so that they are at the right level of difficulty for farmers, enabling farmers to accurately evaluate their own achievements, and providing a clear structure of why, when, what and how much the farmers need to do various SHEP activities in order to attain a specific objective which is set for each SHEP training assignment.

RELATEDNESS

Relatedness is the desire to have good relationships with others. The relationship between the person giving the task and the person receiving the task has a big effect on the latter's motivation towards the task. As an extension staff, being trusted by the farmers undertaking SHEP activities is the most important thing for relatedness support. In order to build trust with the farmers, extension staff are advised to listen attentively to what the farmers have to say in their SHEP engagement and to be both physically and psychologically available for the farmers so that they can rely on them.

Fulfilling Two Requirements for Sustainability

SHEP's strength lies in the fact that all of its activities are designed to fulfill both requirements maintained in the above-explained economic and psychological theories at the same time. In other words, SHEP tries to mitigate the asymmetry of information in the market while it also supports farmers' psychological needs for autonomy, competence or relatedness. Because of this dual-purpose intervention, the target farmers will be able to manage their farming business on their own initiative even without the help from the government once they have completed the SHEP training course. SHEP's vision is, after all, to train farmers to become self-reliant so that they can continue developing their farming business and improve their livelihoods without creating dependency syndrome.

1.2. SHEP's Four Essential Steps

Four Essential Steps

With reference to the Self-Determination Theory, SHEP offers a series of capacity development trainings to the target farmers in such a way that the farmers' motivation is raised through supporting their three psychological needs. For instance, SHEP gives farmers various trainings in an optimal order. This order is called "SHEP's Four Essential Steps" as depicted below.

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

Figure 2 Four essential steps

[Step1. Share goal with farmers] First and foremost, SHEP regards sharing its goal and vision with the beneficiary farmers as the crucial first step because it is the farmers themselves, after all, who make the most effort to materialize economically viable farming business throughout the training course. Farmers need to be convinced of, and agree with, the goal SHEP tries to achieve. Organizing a **Sensitization Workshop** is a specific way to share this goal with the target farmers (Refer to "1.1. Sensitization Workshop" in PART 2 in this Handbook).

[Step2. Farmers' awareness is raised] The second step is concerned with raising farmers' awareness in the area of opportunities and potential of horticultural farming. This step is extremely important since without this awareness the farmers have less chance to be motivated in making a commitment to change their farming practices for the better. This step mainly involves exposing the farmers to business and market realities. Activities for Step 2 include **Participatory Baseline Survey, Stakeholder Forum** (as an optional activity) and **Market Survey** conducted by farmers themselves (Refer to "2.1. Participatory Baseline Survey", "2.2. Stakeholder Forum (Optional Activity)", and "2.3. Market Survey" in PART 2 in this Handbook). Please note that the Stakeholder Forum is considered as an optional activity; in other words, an activity which is to be conducted provided sufficient financial and human resources are secured and conducting this activity is confirmed as appropriate and effective given local socio-economic situations of the target areas.

[Step3. Farmers make decisions] With the awareness and new knowledge the farmers gained in the second step, they then make decisions to make a change. This is the third step. This process involves farmers **selecting target crops** and making a plan called **Crop Calendar** so that they will be able to strategically supply their target crops to the specific markets of their choice with the right timing (refer to "3.1. Target Crop Selection and 3.2. Crop Calendar Making" in PART 2 in this Handbook).

[Step4. Farmers acquire skills] As the last step, the SHEP implementers provide technical solutions to the farmers, i.e. give In-field Trainings for the crops the farmers selected, so that they can produce the crops as they have planned (refer to "4.1. In-field Trainings" in PART 2 in this Handbook).

[Follow-up and Monitoring] After finishing the four steps, follow-up and monitoring is conducted to ensure that farmers are applying the knowledge they gained to their daily farming business (refer to "5 Follow-up and Monitoring (including Participatory Endline Survey)" in this Handbook).

Interlinkage Between Motivation and Skills Development

Why does the SHEP Approach take the rather time-consuming four steps instead of jumping to the 4th step, In-field Trainings? It is because SHEP believes that farmers need to first be motivated in order for them learn and acquire new skills. SHEP considers that the series of training activities should take into consideration the interlinkage between farmers' motivation and skills development. As shown in the diagram below, if the farmers are not motivated, it will be difficult for them to learn something new. On the other hand, if they can feel their skills are improving, their self-confidence will be strengthened and they become motivated to take further action.

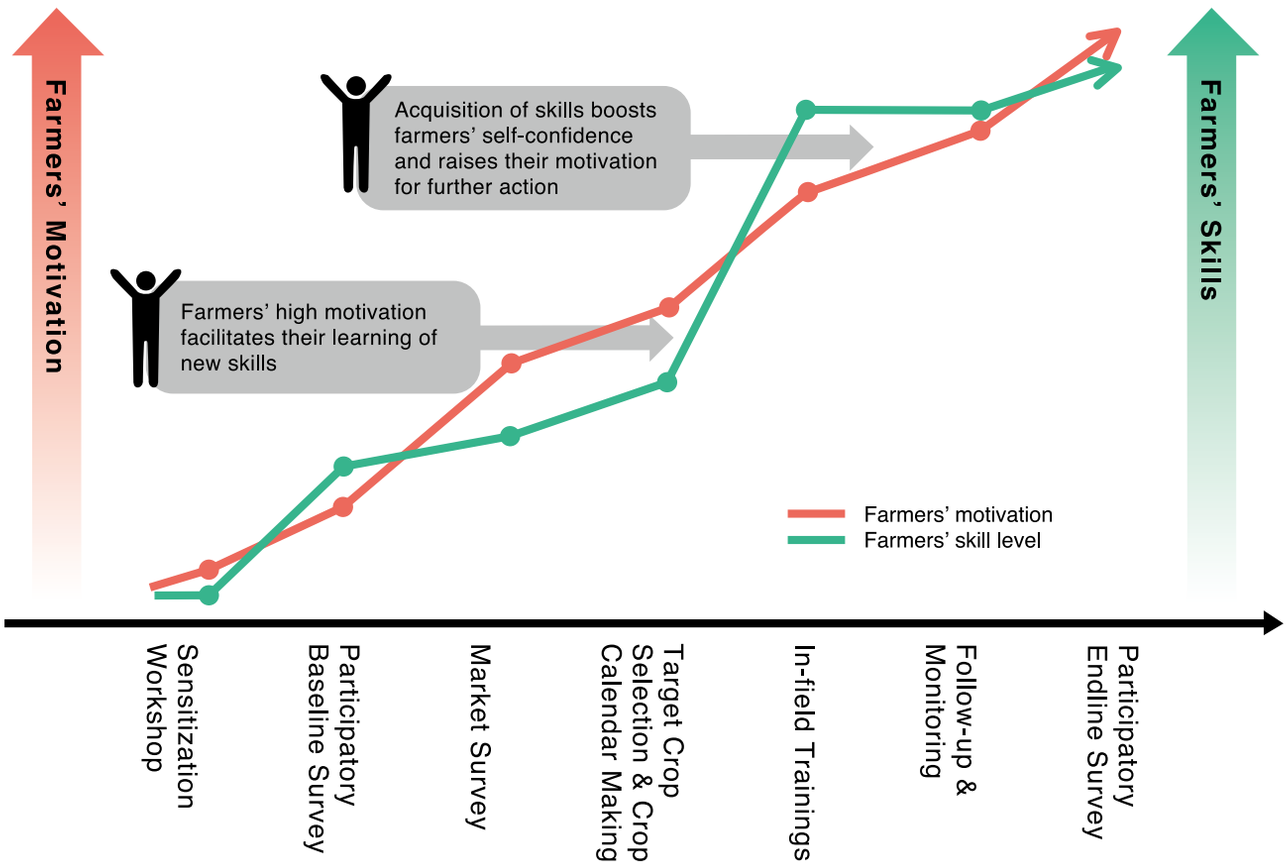


Figure 3 Interlinkage between motivation and skills development

SHEP's four steps, or the optimum order of activities, which was examined and validated in Kenya, take into full consideration this interlinkage between farmers' motivation and skills development. Therefore, it can bring optimal results on the ground in terms of farmers' skills acquisition and high motivation.

1.3. Gender in SHEP

The SHEP Approach considers **gender as an integral and essential part of farm business management** for smallholder horticultural farmers. Gender is an essential aspect in achieving SHEP's goal, i.e. household livelihood improvement. If gender equality is not considered during the intervention, farming couples may have disagreements in their decision-making or one spouse may have to bear a lopsided burden of tedious and time-consuming farming tasks. In Kenya, gender issues were carefully addressed in each of the activities and, as a result, the farming couples became active players of farm business management. This change further led to improvement of their livelihood in the end.

Gender norms and issues are diverse depending on countries and regions. For instance, there may be some communities where people think that men and women are not supposed to sit together in a meeting. Other communities may have only women engaged in agriculture because their husbands are out of town working as migrant workers. In either case, as a husband and wife are the basic unit in managing household finance, it is important to consider them as business partners for promoting farming as a business. Therefore, SHEP implementers are advised to take a close look at gender relations and norms of the target communities and plan extension activities that suit locally-specific situations of the communities.

Figure 4 Gender mainstreaming in SHEP

Photo: Kenya
Couple as a farm management unit

As shown in Figure 4, SHEP in Kenya addresses gender issues from three different viewpoints: (1) equal opportunities, (2) reviewed gender roles and (3) joint decision-making. In order to incorporate these viewpoints into SHEP, it is essential to work on gender mainstreaming at all steps of SHEP implementation. This Handbook provides some useful gender mainstreaming indicators[1], which are included in "CHECKLIST" in each one of the SHEP activities in the "PART 2. PRACTICE" chapter. If the target communities have gender conditions similar to those in Kenya, please make use of the indicators

1 The indicators listed in the Handbook are general in nature and not specific to each country's or region's situation. Therefore, the implementers are advised to look carefully into the gender issues of the target communities and devise the best indicators which would facilitate gender mainstreaming in their countries or regions.

2. SHEP's Advantages

2.1. How is SHEP Different from Other Approaches?

SHEP employs various devices and techniques that are different from those of conventional approaches. The guiding principle of SHEP is to motivate and empower farmers throughout activity implementation, as explained in the "1.1. Two Key Pillars of SHEP Approach". Therefore, SHEP always focuses on the capacity development aspect of the intervention with the utmost attention paid to **making an impact on the ground.** Here are some concrete examples of this **farmer-centered approach** SHEP adheres to.

Photo: Kenya

Sensitization Workshop

- Farmers are informed that SHEP is purely technical assistance and there will be no financial or material assistance directly given to them.
- Farmers agree to participate in SHEP in order to become self-reliant through developing their technical capacity.

Baseline Survey and Endline Survey

- Extension staff and farmers conduct surveys together.
- Minimal but crucial data is collected and farmers themselves can fill out the survey forms.

(Optional) Stakeholder Forum

- Only the most relevant market players in the small-scale horticulture industry are invited to the Forum. Farmers can comfortably have one-on-one business talks with the participants.

Market Survey

- Farmers visit nearby markets and see how crops are sold. They not only collect information on prices but also understand market needs such as marketable crops, and required quality and quantity.
- Farmers also get to know market players and establish personal networks with them.

Target Crop Selection and Crop Calendar Making

- With the technical advice from the extension staff, farmers themselves decide what crops to grow at what timing based on the market information they have collected.

In-field Trainings

- Extension staff provide training to farmers on the crops the farmers have chosen, i.e. demand-driven training.

2.2. Effects and Impacts of SHEP Approach

The experiences in Kenya as well as other SHEP implementing countries has thus far proved that the SHEP Approach can make numerous positive effects and impacts both on the target farmers and market stakeholders. Some of the common changes after SHEP are as follows:

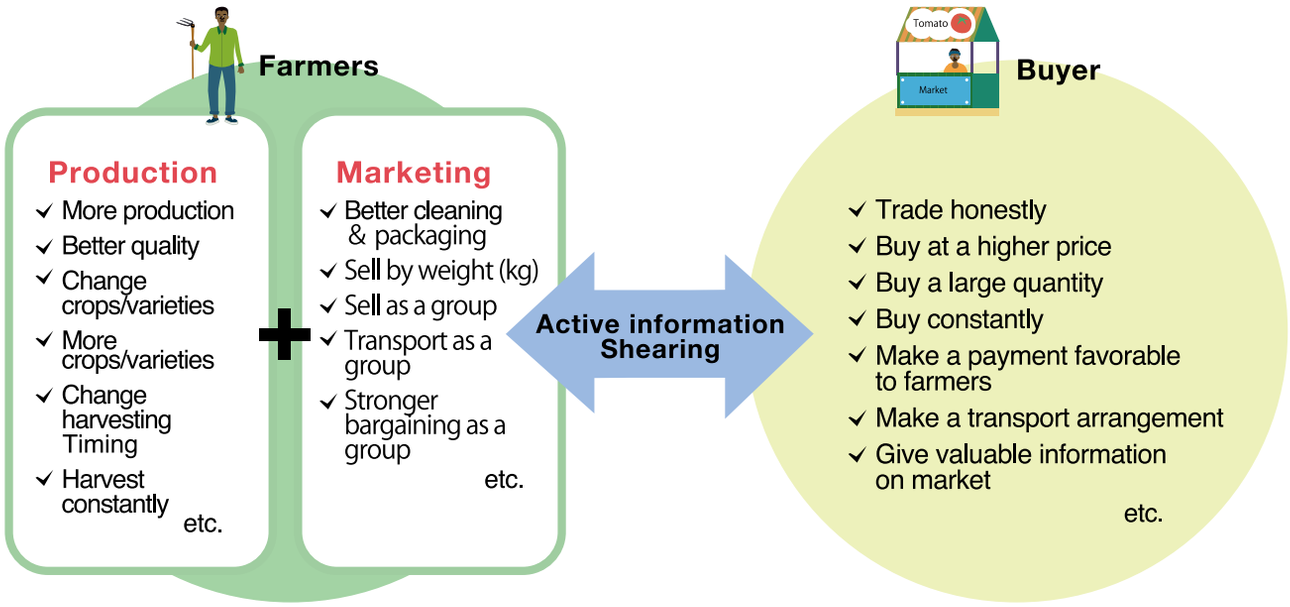


Figure 5 Positive changes after SHEP

[Changes in farming practices]

- Farmers applied cultivation techniques SHEP had introduced to them.
- Farmers changed crops or varieties of the crops in accordance with the market needs.
- Farmers started to use certified seed.
- Farmers changed the timing of planting so that they could harvest at the peak demand period.
- Farmers expanded farmland for horticultural crops so that they could meet the market demand.
- Farmers used appropriate crop management techniques for improving the quality of the marketable crops.

[Changes in management and marketing practices]

- Farmers started to conduct market surveys regularly.
- Farmers researched market needs before deciding crops to grow.
- Farmers started to keep farm records.
- Farmers started to make plans for farm activities.
- Farmers kept contact with potential buyers and exchanged information regularly on the phone.
- Farmers packaged some crops in a way the market required.
- Farmers obtained regular customers (retailers, wholesalers, middlemen, etc.) who were reliable and trustworthy.
- Farmers started contract farming with export companies or food processing companies.
- Farmers made sure that several group members helped the retailers to load crops on the truck when they came to their farmland to purchase their crops.

[Changes in farmer groups' activities]

- Farmer groups developed stronger unity and trust was built among the members.
- Farmer groups started group purchasing and group selling.
- Farmer group members coordinated among themselves so that they could supply produce constantly to the market as a group.
- Farmer groups invested in basic infrastructure for farming such as irrigation facilities with the money they earned from horticultural farming.
- Farmer groups expanded their memberships and officially registered as cooperatives.

[Changes in livelihoods]

- With increased income, farmers bought a house, motorcycle, car or land.
- Farmers sent their children to private schools or higher-level educational institutions.
- Farmers used income from horticulture for investment on part-time off-farm businesses such as hairdressing and kiosk for making extra income.

[Changes in family relationships]

- Husbands and wives started exchanging opinions on farm management and made decisions jointly.
- Husbands and wives reviewed their gender roles and found more efficient divisions of labor both in farming and household work.
- Husbands and wives started managing their family budget together.
- Husbands started to drink less and spend more time on farming, which led to a good relationship with their wives.
- Children started to help their parents with farm work.
- Younger villagers started to stay and farm in the community instead of moving to town to find a job.

PART 2. PRACTICE

“Part 2. PRTCTICE” explains how to undertake each activity of the SHEP Approach in detail.

1. Step 1 – Share Goal with Farmers

The first step of the SHEP Approach is to share SHEP's goal with the farmers. SHEP is not an approach for providing material or financial assistance to farmers. It is a capacity development intervention where farmers need to make a strong commitment in learning new knowledge and skills through their participation in SHEP. The ultimate goal of SHEP is to empower farmers both technically and socially so that they can continue practicing market-oriented agriculture, or "farming as a business", with an entrepreneur mindset. This message should be clearly communicated to the target farmers so that they will be motivated to attain the SHEP goal.

1.1. Sensitization Workshop

Four Steps	Activities
1. Share goal with farmers.	**-Sensitization Workshop** (We are here.)
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

WHY? **- Objectives**

The sensitization workshop aims at **sharing the SHEP vision and goal with the farmers,** which is, to help them become self-reliant farmers with entrepreneurial aspirations.

WHAT? **- Outline**

Once the target farmers are selected, the sensitization workshop is held for explaining the details and timeframe of the SHEP training course as well as the goal of the SHEP Approach.

HOW? - Key Implementation Tips

- The Sensitization Workshop is an important initial event where the implementers and farmers **share SHEP's vision.**
- The farmers understand and agree that the vision will be realized **only through the farmers' own initiatives** to push forward market-oriented agriculture.
- The farmers understand SHEP is **purely technical assistance without provision of any financial and material support** from the government.

STEP - Implementation Procedures (Required time[2]: 1-2 hours)

1. Convene a meeting at a place where the farmers can easily gather such as a community hall, church, school, the group leader's house, etc.
2. The implementers including the extension staff in charge of the group explain the essence of the SHEP Approach so that both parties can share the vision.
3. Further explanation should include the details and timeframe of the SHEP activities, farmers' roles and responsibilities for completing the SHEP training course.


Photo: Zimbabwe

4. The implementers should emphasize that both male and female members need to equally participate in the trainings. In addition, the members and their spouses should actively take part in decision-making and activity implementation throughout the SHEP training course. The implementers should help farmers to engage into discussions on the importance of gender equality and women's empowerment.

Photo: Takeshi Kuno/JICA, Kenya

2 "Required time" does not include preparation time such as securing a venue, communicating with farmers, conducting training of trainers and so forth.

CHECKLIST - Points To Be Confirmed After This Activity

☐ The target farmers understand and agree to the time schedule of upcoming trainings.
☐ The target farmers understand and explain what roles, responsibilities and rights they have as the participants of SHEP.
☐ The target farmers can envision and explain their goal they will achieve at the completion of SHEP training sessions.
☐ The male-female ratio of the participants is balanced.
☐ Discussion on gender equality and women's empowerment was conducted and the participation of (1) both male and female members and (2) the members and their spouses was encouraged.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Farmers Expects "Handouts"** – Since almost all the previous projects/programs provided some kinds of material inputs to farmers, they also expect handouts from SHEP. Will they stop coming to the training when they realize there will be no financial or material support from SHEP?
A: It is extremely important for the target farmers to understand and agree, at the very beginning, that they will only receive technical assistance, not material assistance. When you contact the potential farmers for target selection, explain clearly that only those farmers who are willing to participate in a series of capacity development trainings without receiving any material inputs are suited for SHEP.

Q: **Why Talk about Gender at Sensitization Workshop?** – Why do we need to discuss gender issues at the sensitization workshop? Can we do it at a later stage?
A: As for SHEP's concept in gender issues, please refer to "1.3. Gender in SHEP in PART1". SHEP considers that gender should be seen as an integral part of SHEP's endeavor to actualize its goal; improved livelihoods through self-reliant farm management. SHEP's goal can only be achieved if gender-balanced participation and decision-making are in place throughout SHEP implementation. Therefore, the target farmers should be aware of this issue at the very beginning of the SHEP training course, i.e. the sensitization workshop, so that both male and female farmers as well as their spouses agree to realize active participation and joint decision-making in their engagement in SHEP.

2. Step 2 – Farmers' Awareness is Raised

SHEP's second step is to provide the farmers with ample opportunities in which they can raise awareness of their current situations as well as find opportunities the horticultural business can offer to them. This is the step where SHEP farmers go through eye-opening experiences and further raise their motivation to take concrete action for materializing market-oriented agriculture. Therefore, this step is extremely critical and the SHEP implementers should make sure that the farmers open up their horizon for horticultural farming as a business though exercises such as baseline surveys and market surveys.

2.1. Participatory Baseline Survey

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	**-Participatory Baseline Survey** (We are here.) -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

WHY? - Objectives

The participatory baseline survey gives the target farmers opportunities to look at their current farming situations in terms of production, income and farming techniques so that they can clearly identify areas for improvement. The farmers also understand the importance of record keeping. This occasion enables the implementers to gather hard data on the target beneficiaries' farming practices, which, at a later stage, will be used to monitor the results of SHEP intervention.

WHAT? - Outline

The participatory baseline survey asks the target farmers to fill out two kinds of survey sheets: (1) Baseline Survey Part 1- Production, Income and Cost and (2) Baseline Survey Part 2- Agricultural Techniques. The farmers themselves fill out the sheets with the help of extension staff where necessary. Data are collected and analyzed by the implementers. Feedback on the results of the baseline survey is given to the farmers at a later day when the analyzed data become available.

HOW? - Key Implementation Tips

- The survey should be more **for farmers' benefit than for implementers' benefit** (Figure 6).
- The survey **should be conducted in a participatory manner so that the target farmers are the main actor of the survey**, rather than the extension staff unilaterally collecting information from them.
- The extension staff help farmers calculate basic figures such as crop yield, cost, profit, etc. which are important for farm management.

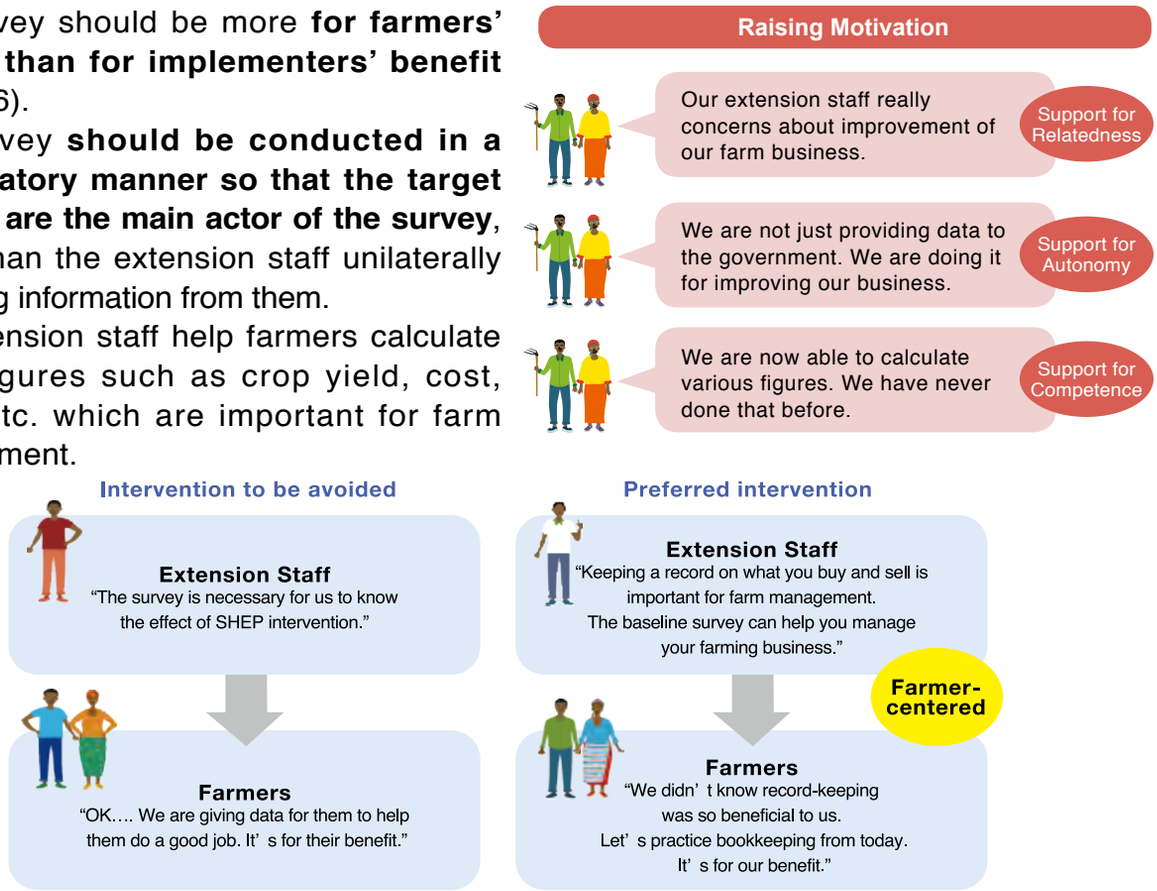


Figure 6 Baseline survey for the benefit of farmers

STEP - Implementation Procedures (Required time: 3-4 hours)

1. (Preparation) Research local units used for trading horticultural crops and prepare a conversion table, i.e. a table which converts local units into kilograms.
2. Convene a meeting and explain the purpose of the baseline survey to the farmers. Instruct the farmers how to fill out the two kinds of survey formats. Tip! *If the farmers, especially illiterate farmers, have difficulties understanding how to fill out the forms, ask literate farmers to assist them.*
3. The farmers themselves fill out the forms with the assistance from the extension staff where necessary.
4. If converting trading units such as bundles, bags, crates, etc. into kilograms is difficult, supply a conversion table which the implementers made beforehand based on the local market situations.
5. When the farmers finish filling out the forms, encourage them to discuss any new findings through this survey exercise. The discussion points include, but not limited to:
   - ✓ Are our current methods of record keeping good enough? How can record keeping help us in managing our farming business?

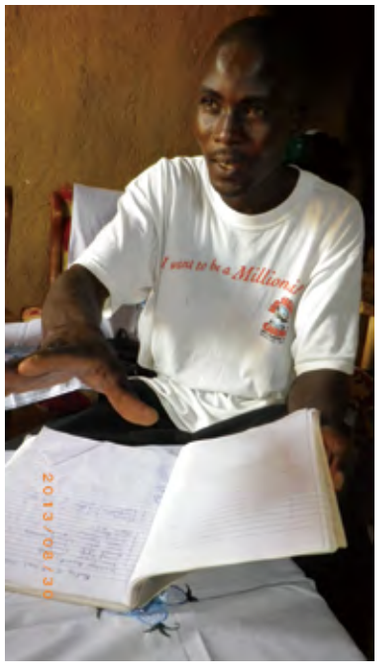


Photo: Kenya

✓ Are we making as much profits as we want? Are we losing money, instead of making money on some crops?
✓ Are we allocating the appropriate size of land for crops with good marketing prospects?
✓ Do we accurately know how much produce we pack in a bag (or crate, bundle, pail, etc.)? Do our buyers know the exact weight?
✓ Do we have sufficient cultivation skills? What are our weaknesses?

6. After the meeting, input the data on spreadsheets, process, analyze and give feedback to the farmers at a later day. (Please confirm who is responsible for data entry, processing and analysis at your organization) The items for feedback may include but are not limited to:
✓ How sufficient and well-kept farmers' records are to make a good analysis of farm management.
✓ Which crops are most commonly produced, which crops are making good profits, etc.
✓ Which area of farming techniques the farmers need to strengthen.

Photo: Kenya

FORMAT - Baseline Survey Questionnaire Forms

Here are samples of baseline survey questionnaire forms. Two types of formats need to be filled out by the farmers.

1.Baseline Survey Part 1- Production, Income and Cost

1.Crop Name and Variety	2.Area under the Crop in meter x meter (m^2) or in ha 100m^2 =0.01ha 1,000m^2=0.1ha 10,000m^2=1ha		3. Production sold at market in various unit (e.g. bags, crates, bundles, bushels, etc.)	4. Production sold at market in kg (converted into kg)	5.Production sold at market in kg per ha	6. Average Price per various unit (local currency per unit)	7. Average Price per kg (converted into kg) in local currency	8.Total Income in local currency	9.Total Cost of Production in local currency (incl. inputs, transportation, labor, etc.)	10.Net Income (profit) in local currency
1	2 a.	2 b.	3	4	(4./2 b.	6	6./unit conversion in box	(3. x 6.) or (4. x7.)	9	8. – 9.
1st Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
2ndCrop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
3rd Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
4th Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				

Please indicate unit conversions in the box below. (e.g.) 1 bag of Irish Potato = 110 kg, 1 head of Cabbage = 2 kg

2.Baseline Survey Part 2- Agricultural Techniques

Pre to Post Cultivation Stages		Items	Horticultural Techniques Advocated for Adoption	Yes	No
1	Pre-Cultivation Preparation	Q 1	Do you undertake a market survey to determine the crop(s) to cultivate each season?		
		Q 2	Do you prepare and use crop calendar(s) based on the market survey results?		
		Q 3	Do you undertake soil testing at least once in two years for vegetables/annual flowers; or before the planting for fruit trees/perennial flowers?		
		Q 4	Do you use recommended composting practices by using different organic materials to supply major nutrients: Nitrogen (N), Phosphorus (P), and Potassium (K) in preparing compost/manure?		
		Q 5	Do you use recommended quality planting material(s) with one or more of the following characteristics: disease resistance and tolerance, high yield, early maturity, better tastes, size, and longer shelf life?		
2	Land Preparation	Q 6	Do you use with one or more following recommended land preparation practices in management of pests & diseases: solarization, timely ploughing, appropriate depth of ploughing, and minimizing movement of soil to check possible spread soil borne pests & diseases?		
		Q 7	Do you incorporate crop residue at least two months before planting into the farm during ploughing to enhance recycling of nutrients?		
		Q 8	Do you incorporate compost/manure or organic fertilizer as a basal application at least 1-2 weeks before the planting?		
3	Crop Establishment (Planting/ Transplanting)	Q 9	Do you use recommended practices in raising seedlings for vegetables/annual flowers or use seedlings for fruit trees/perennial flowers raised from recognized nursery(s)?		
		Q 10	Do you use recommended planting/transplanting spacing?		
		Q 11	Do you plant/transplant using recommended fertilizer application rates?		
4	Crop Management	Q 12	Do you supplement crop water requirement through one or more of the following irrigation methods: watering can, overhead, drip, and furrow to meet the minimum crop water requirement?		
		Q 13	Do you ensure timely weeding and use of appropriate weeding tools in managing of weeds?		
		Q 14	Do you undertake appropriate top-dressing practices: timeliness, type and recommended rate of application, and method of application?		
		Q 15	Do you use at least two of the following Integrated Pests Management (IPM) practices: cultural, biological, physical and chemical?		
		Q 16	Do you observe the following safe and effective use of pesticides: appropriate doses, recommended pesticides, and Pre Harvest Interval (PHI)?		
5	Harvest	Q 17	Do you use at least one of the following harvesting indices: color, size, shape, and firmness?		
6	Post-Harvest Handling	Q 18	Do you use harvesting/storage/transportation containers/standard packaging materials with following characteristics: well-ventilated, easy to clean, and smooth thus minimizing damages?		
		Q 19	Do you apply one of the following recommended value addition techniques: cleaning, sorting, grading, packaging or processing of the produce?		
7	Cost and Income Analysis	Q 20	Do you keep records on cost of production and sales and undertake cost and income analysis?		
8	Collective Action	Q21	Do you purchase agricultural inputs such as seed, fertilizer and chemicals as a group (group purchasing)?		
		Q22	Do you arrange transportation of the produce collectively or sell your produce collectively (group selling)?		
		Q23	As a group, do you select target crops and plan production/ marketing strategies collectively with the group members?		

INNOVATION - Customization in Various Countries/ Regions

Below are examples of adjustments made in some countries and regions so that baseline surveys are smoothly conducted in their areas.

Box1 Visual unit conversion table for baseline surveys

Developing a visual unit conversion table for facilitating weight conversion (Malawi)

<Why?> The farmers and buyers traditionally used various units such as bags, pails, bundles for particular crops to be traded at the local markets. The farmers did not know how much weight each unit actually measured.

<How?> The implementers visited local markets with a scale and camera. They took pictures and weighed commonly traded vegetables and fruits. The visual unit conversion table was developed and used to convert various units into kilograms.

<Results?> Conversion from locally-traded units into kilograms became easier and the farmers increased awareness of importance of trading in weight.

Unit conversion table developed in Malawi

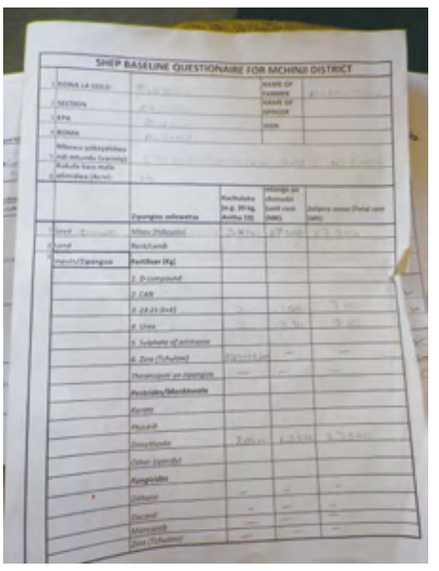
Box2 Worksheet for calculating costs

Developing an additional worksheet for calculating costs (Malawi)

<Why?> The farmers were having a hard time adding up all the costs of agricultural inputs and labor for calculating the total cost to be filled out in the baseline survey form.

<How?> The implementers prepared an additional worksheet to calculate the total costs. The worksheet included items typical to the area, such as costs of various fertilizers, seeds, pesticide, herbicide, labor cost, transportation cost, etc. so that the farmers could easily fill out all the necessary information to sum up the total cost.

<Results?> The farmers were able to calculate the total cost fairly accurately without being confused or overwhelmed.



Worksheet developed in Malawi

Box3 Farmers helping other farmers

Literate farmers helping illiterate farmers (Ethiopia)

<Why?> The target farmer groups had a low literacy rate. It was anticipated that many of the target farmers would have difficulties filling out the survey forms.

Photo: Ethiopia

<How?> The implementers asked approximately ten literate and relatively well-educated farmers from each group to attend the training together with extension staff to learn how to conduct the participatory baseline survey in a pilot project. Those literate farmers worked together with the extension staff to help illiterate farmers to fill out the forms.

<Results?>The illiterate farmers were able to complete the survey with little difficulty thanks to the help from the literate farmers. The farmers' feeling of unity was also strengthened, which contributed to supporting the farmers' psychological need for relatedness.

Box4 Baseline survey for group and individual farmlands

Conducting Baseline Surveys both for group and individual farmlands (Rwanda and El Salvador)

<Why?> Some of the target farmer groups had two types of vegetable gardens; one owned by the group and the other owned by the individual members of the group. The implementers needed to grasp the situations of both types of farmland.

Rwanda farmers at their group garden

<How?> Since the baseline survey formats were primarily designed for gardens managed by individual households, the implementers modified some of the questions, where necessary, and conducted the survey for the group gardens as well as the individual members' gardens.

<Results?> Both the farmers and implementers were able to understand the current situations on group gardens and individuals' gardens. The farmers were motivated to make improvements on both types of the farmlands.

Box5 “Home assignment” system during baseline surveys

Introduction of “home assignment” system for better data collection and stronger spouses’ engagement (Malawi and Nepal)

Photo: Malawi

<Why?> The implementers found that many of the farmers did not have figures, such as production costs and sales amounts at hand during the baseline survey. They needed to go home to check their record or to ask their family members to get accurate figures. Finishing the baseline survey on the spot in a day’s gathering was difficult.

<How?> The implementer organized two-day sessions for the baseline survey. On the first day, they explained what data were needed and gave them a “home assignment” to get accurate data from home. In the case of Nepal, the implementers asked the farmers, as a “home assignment”, to work with their spouses to fill out the form at home. The farmers gathered again on the second day and submitted the survey forms.

<Results?> More accurate and reliable data were collected. Husbands and wives worked together to understand the current situation of their farming business, thereby increased their sense of unity and joint-responsibility as a farm management unit.

CHECKLIST **- Points To Be Confirmed After This Activity**

- ☐ The target farmers understand their current production and sales situation and identify gaps that need to be filled.
- ☐ The target farmers understand their current technical levels in terms of production and marketing and identify gaps that need to be filled.
- ☐ The target farmers understand the importance of farm record keeping, both in terms of bookkeeping and farm activity records and become willing to start keeping records.
- ☐ The male-female ratio of the participants is balanced.
- ☐ Gender-segregated data is collected and analyzed.
- ☐ (optional) The members’ spouses are involved.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Record-Keeping Not Widely Practiced** – Record keeping is not widely practiced by smallholder farmers. Can they really learn record keeping and benefit from it?

A: It is true that many of the smallholder farmers are not practicing record keeping. The first step they are advised to take is to understand the importance of record keeping through their experience of participating in the baseline survey. The implementers are advised to encourage them to keep writing down basic information such as sales of the produce and expenses of seeds, fertilizers and pesticides, etc. in a very simple format such as single-entry bookkeeping. It is beneficial for the farmers to make it a habit to keep record of farm activities and accounting.

Q: **Can Illiterate Farmers Do It?** – Even literate farmers are having a hard time calculating figures needed for the baseline survey. Can illiterate farmers complete the tasks of the survey?

A: Illiterate farmers may have a harder time filling out the survey forms than their literate counterparts. However, that does not automatically mean they are less knowledgeable of their farm management issues than the literate farmers. They just do not have the literacy skills to put their knowledge into paper. Ask assistance from literate group members or their literate family members such as their spouses or children to help them fill out the forms. Illiterate farmers can also continue keeping records with the help of their family members on a daily basis.

Q: **Data Not So Reliable** – Although the farmers did their best to fill out the information, I see some information is still missing or not really accurate. Should I give up getting information from them altogether since reliability and accuracy of the data is not as high as I have hoped?

A: SHEP's participatory baseline survey has two purposes: (1) raising farmers' awareness of their current farming situation and (2) gathering hard data from farmers. We would like you to understand that first and foremost, it is very important to achieve the first purpose, awareness-raising through the survey exercise. On the other hand, ensuring reliability and accuracy of the data, as you are aware, is always a challenge when it comes to gathering data on the ground. Particularly during the baseline survey, it is difficult to achieve very high accuracy since many of the farmers are yet to keep accurate records. We should be patient and encourage the farmers to start record keeping gradually so that reliability and accuracy of the data will be elevated by the time of the endline survey.

Q: **Farmers Not Wanting to Submit Data** – The farmers are willing to fill out the data. However, they do not want to disclose data related to their profits. What should I do?

A: It is not a good idea to force the farmers to submit the data if they feel uncomfortable to do so. Without the submission of the data, the farmers are still given the opportunity to raise their awareness on farm management. Therefore, one of the two purposes of the baseline survey as explained above is at least fulfilled. Ask other farmers if they are willing to submit the data so that you can get some hard data to process and analyze.

Baseline Survey Part 1- Production, Income and Cost

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Name of Farmer:_____ Male/Female:___ Tel. No.:_____

* Please indicate the information of horticultural crops (do not include other crops such as maize and sugarcane) in the last cropping season.

1.Crop Name and Variety	2.Area under the Crop in meter x meter (m^2) or in ha $100m^2$ =0.01ha $1,000m^2$=0.1ha $10,000m^2$=1ha		3. Production sold at market in various unit (e.g. bags, crates, bundles, bushels, etc.)	4. Production sold at market in kg (converted into kg)	5.Production sold at market in kg per ha	6. Average Price per various unit (local currency per unit)	7. Average Price per kg (converted into kg) in local currency	8.Total Income in local currency	9.Total Cost of Production in local currency (incl. inputs, transportation, labor, etc.)	10.Net Income (profit) in local currency
1	2 a.	2 b.	3	4	(4./2 b.	6	6./unit conversion in box	(3. x 6.)or (4. x7.)	9	8. – 9.
1st Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
2nd Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
3rd Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
4th Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				

Please indicate unit conversions in the box below. (e.g.) 1 bag of Irish Potato = 110 kg, 1 head of Cabbage = 2 kg

Example Baseline Survey Part 1- Production, Income and Cost

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Name of Farmer:_____ Male/Female:___ Tel. No.:_____

* Please indicate the information of horticultural crops (do not include other crops such as maize and sugarcane) in the last cropping season.

1.Crop Name and Variety	2.Area under the Crop in meter x meter (m^2) or in ha $100m^2$ =0.01ha $1,000m^2$=0.1ha $10,000m^2$=1ha		3. Production sold at market in various unit (e.g. bags, crates, bundles, bushels, etc.)	4. Production sold at market in kg (converted into kg)	5.Production sold at market in kg per ha	6. Average Price per various unit (local currency per unit)	7. Average Price per kg (converted into kg) in local currency	8.Total Income in local currency	9.Total Cost of Production in local currency (incl. inputs, transportation, labor, etc.)	10.Net Income (profit) in local currency
1	2 a.	2 b.	3	4	(4./2 b.	6	6./unit conversion in box	(3. x 6.)or (4. x7.)	9	8. – 9.
1st Crop: Tomato Cal j	M x M (m^2) 20X100= 2,000m^2	0.2 ha	100 (unit: crate)	2,000 kg	10,000 kg	$20 (unit: crate)	$1	$2,000	$700	$1,300
2nd Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
3rd Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
4th Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				

Please indicate unit conversions in the box below. (e.g.) 1 bag of Irish Potato = 110 kg, 1 head of Cabbage = 2 kg

1 crate of tomatoes = 20kg

Baseline Survey Part 2- Agricultural Techniques

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Name of Farmer:_____ Male/Female:___ Tel. No.:_____

* Please tick "YES" or "NO" to the following questions. Write any additional information in the margin.

Pre to Post Cultivation Stages		Items	Horticultural Techniques Advocated for Adoption	Yes	No
1	Pre-Cultivation Preparation	Q 1	Do you undertake a **market survey** to determine the crop(s) to cultivate each season?		
		Q 2	Do you prepare and use **crop calendar(s)** based on the market survey results?		
		Q 3	Do you undertake **soil testing** at least once in two years for vegetables/annual flowers; or before the planting for fruit trees/perennial flowers?		
		Q 4	Do you use recommended **composting** practices by using different organic materials to supply major nutrients: Nitrogen (N), Phosphorus (P), and Potassium (K) in preparing compost/manure?		
		Q 5	Do you use recommended **quality planting material(s)** with one or more of the following characteristics: disease resistance and tolerance, high yield, early maturity, better tastes, size, and longer shelf life?		
2	Land Preparation	Q 6	Do you use with one or more following recommended **land preparation practices** in management of pests & diseases: solarization, timely ploughing, appropriate depth of ploughing, and minimizing movement of soil to check possible spread soil borne pests & diseases?		
		Q 7	Do you **incorporate crop residue** at least two months before planting into the farm during ploughing to enhance recycling of nutrients?		
		Q 8	Do you incorporate compost/manure or organic fertilizer as a **basal application** at least 1-2 weeks before the planting?		
3	Crop Establishment (Planting/ Transplanting)	Q 9	Do you use recommended practices in **raising seedlings** for vegetables/annual flowers or use seedlings for fruit trees/perennial flowers raised from recognized nursery(s)?		
		Q 10	Do you use recommended planting/transplanting **spacing**?		
		Q 11	Do you plant/transplant using recommended **fertilizer application rates**?		
4	Crop Management	Q 12	Do you **supplement crop water requirement** through one or more of the following irrigation methods: watering can, overhead, drip, and furrow to meet the minimum crop water requirement?		
		Q 13	Do you ensure timely weeding and use of appropriate weeding tools in **managing of weeds**?		
		Q 14	Do you undertake appropriate **top-dressing** practices: timeliness, type and recommended rate of application, and method of application?		
		Q 15	Do you use at least two of the following **Integrated Pests Management (IPM) practices**: cultural, biological, physical and chemical?		
		Q 16	Do you observe the following safe and effective use of pesticides: appropriate doses, recommended pesticides, and Pre Harvest Interval (PHI)?		
5	Harvest	Q 17	Do you use at least one of the following **harvesting indices**: color, size, shape, and firmness?		
6	Post-Harvest Handling	Q 18	Do you use **harvesting/storage/transportation containers/standard packaging materials** with following characteristics: well-ventilated, easy to clean, and smooth thus minimizing damages?		
		Q 19	Do you apply one of the following recommended value addition techniques: **cleaning, sorting, grading, packaging or processing of the produce**?		
7	Cost and Income Analysis	Q 20	Do you keep records on cost of production and sales and undertake **cost and income analysis**?		
8	Collective Action	Q21	Do you purchase agricultural inputs such as seed, fertilizer and chemicals as a group (group purchasing)?		
		Q22	Do you arrange transportation of the produce collectively or sell your produce collectively (group selling)?		
		Q23	As a group, do you select target crops and plan production/ marketing strategies collectively with the group members?		

2.2. Stakeholder Forum（Optional Activity）

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey **-(optional) Stakeholder Forum** -Market Survey We are here.
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

Note: This is an "Optional Activity", which means this activity is to be conducted if (1) the implementers believe it is very effective considering the socio-economic situations of the target areas and (2) there are sufficient human and financial resources to undertake this activity.

WHY? - Objectives

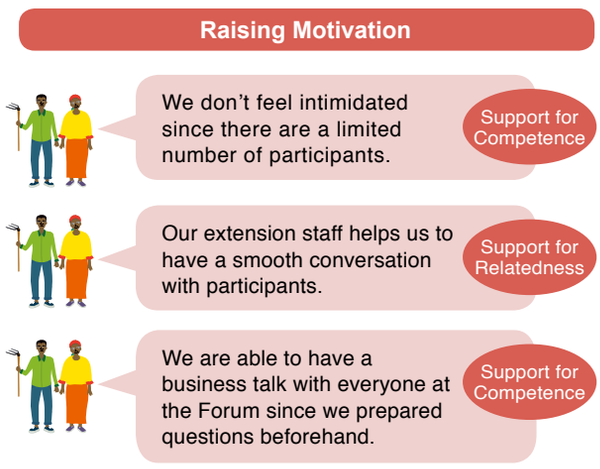
The Stakeholder Forum has two purposes: (1) it **shows farmers a business opportunity** horticultural farming can bring to them, and (2) it helps farmers to **establish business linkages** with a variety of market actors involved in horticulture business.

WHAT? - Outline

The half-day Stakeholder Forum invites the representatives of the SHEP target farmer groups and market stakeholders such as agricultural input suppliers, buyers (traders, middlemen, wholesalers, retailers, etc.), food processing companies, crop exporters, transporters, financial institutions, non-governmental organizations and so forth. The farmers visit the booths of the market stakeholders and exchange information through business talks.

HOW? - Key Implementation Tips

- Unlike large-scale events such as Agricultural Fair or Agricultural Day, the Stakeholder Forum **should restrict the number of participants** for facilitating easier communication between selected participants.
- Only those market stakeholders, such as those local traders, who would become future business partners of the SHEP farmer groups should be invited.
- The extension staff should help farmers have active business talks with market stakeholders.
- **Profiles of the participants should be exchanged beforehand** so that the participants can start business talks right away without wasting too much time at the Forum.



STEP - Implementation Procedures (Required time: 3-4 hours)

1. (Preparation) Reserve a conference room for holding the Stakeholder Forum. Tip! *If a government facility can be used for holding the Forum, the cost for renting a venue will be substantially reduced.*
2. (Preparation) Identify and invite local market stakeholders to the Forum. Tip! *Invite only those stakeholders who are willing to start doing business with the target farmers.*
3. (Preparation) Ask farmer groups to select two male and two female farmers to participate in the Forum as representatives of the group. Tip! *Make sure both male and female farmers are chosen as representatives since a team consisting of both sexes can broaden their views during their interactions with market stakeholders.*
4. (Preparation) Exchange profiles of the participants before the Forum day. Ask farmer groups to bring samples of their produce to the Forum. The samples are to be displayed at their booths.
5. (Preparation) At the forum venue, such as a government conference room, prepare booths with enough tables and chairs for all the participants. Tip! *There should be enough seats for the participants at each booth so that they can focus on their discussions without being disturbed.*
6. During the Forum, the farmer representatives, accompanied by the extension staff, visit booths of the market stakeholders to exchange information and have business talks.
7. After the Forum, the group representatives organize a feedback meeting at their group to share what they have learned during the Forum.

Photo: Ethiopia

Mitigating Asymmetric Information

INNOVATION **- Customization in Various Countries/ Regions**

Some countries arranged Stakeholder Forums differently from those in Kenya. Here are some examples.

Box6 Buyer-Seller Forum

Buyer-Seller Forum - Inviting only buyers and sellers (Nepal & Malawi)

<Why?> There was deep-seated mistrust and misunderstanding between farmers and buyers of horticultural crops.

<How?> Instead of, or on top of, organizing a Stakeholder Forum, the implementers arranged a Buyer-Seller Forum in which only farmers and buyers participated.

Photo: Malawi

<Results?> The participants were able to have focused discussions and understood each other's positions better. They overcame previous mistrust and misunderstanding and started exploring forward-looking solutions which would benefit both parties.

Box7 More farmer representatives attending Forum

More Farmer Representatives Attending Forum (Malawi, Ethiopia)

<Why?> The target farmers in Malawi and Ethiopia had little confidence in communicating with market stakeholders. In addition, they felt they were not so good at explaining to the other group members what they had learned in trainings.

Photo: Malawi

<How?> The implementers invited more than four representatives from each group to attend the Stakeholder Form.

<Results?> The farmers felt comfortable interacting with the market stakeholders. After the Forum, they were able to explain in detail what they had learned during the Forum to their fellow group members in a meeting held at the community.

Box8 Display of labor-saving tools and equipment

Display of labor-saving tools and equipment at the Forum (Palestine)

<Why?> Heavy labor especially for female farmers was a serious issue in Palestine.

<How?> The implementers invited businesses which sold various labor-saving agricultural tools and equipment.

<Results?> The farmer groups decided to buy such tools and equipment so that they can conduct farming more efficiently. Female farmers particularly benefitted from the introduction of labor-saving tools and equipment.

Photo: Palestine

CHECKLIST - Points To Be Confirmed After This Activity

- ☐ The group members are informed of the findings and results of the forum by their farmer representatives who have participated in the forum.
- ☐ The target farmers understand various business opportunities of horticultural agriculture.
- ☐ The target farmers widen their business networks with market stakeholders invited to the forum.
- ☐ The target farmers maintain contacts with the market stakeholders invited to the forum.
- ☐ Male-female ratio of market stakeholders is balanced.
- ☐ Male-female ratio of the representatives from the group is balanced.
- ☐ Male-female ratio of the participants in the feedback meeting organized at the farmer group is balanced.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Willingness to Participate** – The market stakeholders such as traders, retailers and so forth seem not so interested in participating in the Stakeholder Forum. What is their motivation to come to the Forum?

A: They come to the Forum mainly because they want to expand their business networks. Remember, they are very busy people. If they don't see much benefit of participating in the Forum, such as a situation where they only get to know a very limited number of farmer groups at the Forum, they would lose interest. In such cases, visiting market stakeholders individually during the market survey exercise, rather than organizing a Forum might be better.

Q: **Not So Active Discussions** – Farmers are not able to have active discussions with the market stakeholders. Why?

A: There may be several reasons. Farmers may be too nervous, not so confident or not so used to have formal discussions with someone outside their community. Extension staff need to assist them proactively in such a case so that the two parties can have active discussions.

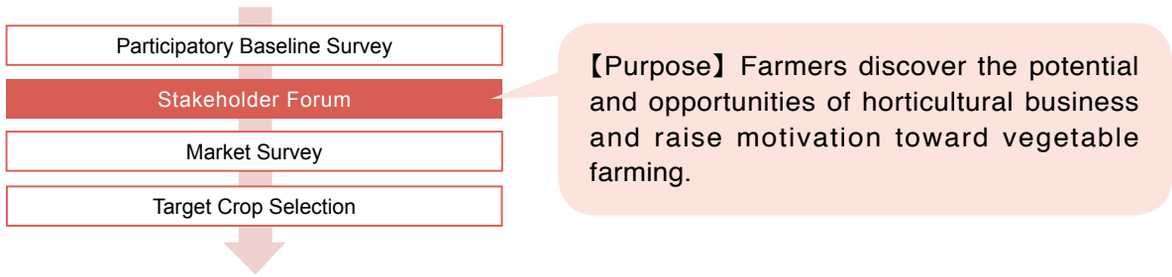
Q: **Discussions Not Constructive** – Buyers and farmers start to complain to each other saying things such as “buyers do not pay a fair price” or “farmers often hide rotten produce at the bottom of a bag”. They cannot have constructive discussions to solve problems they are having. What should we do?

A: At the beginning of the Forum, the implementers are advised to clarify to the participants that the Forum is not a place to put a blame on others. Rather, it is an opportunity for the participants to come up with solutions to the problem they are having. In Nepal, the implementers conducted a plenary brainstorming session to list common trading problems at the start of the Forum. Then, during the one-on-one business talks, the participants are asked to focus on solutions to the problems so that they can aim at developing a win-win situation.

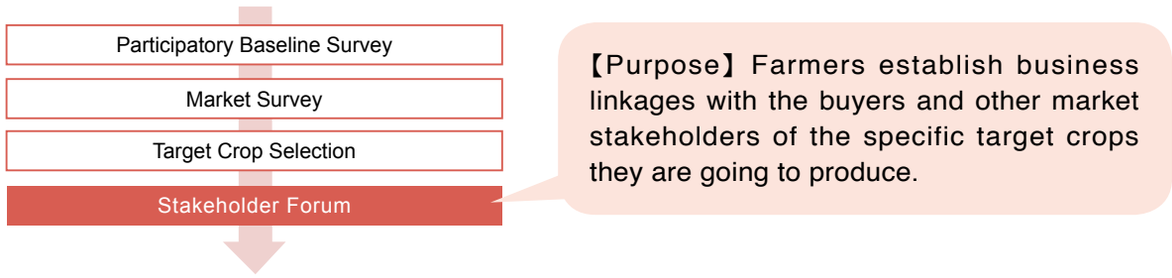
Column 3 Different order, different purpose

In Kenya, the Stakeholder Forum is organized after the participatory baseline survey, i.e. at a relatively early stage of the SHEP training course. On the other hand, some countries such as Ethiopia organize the Stakeholder Forum after farmers have selected target crops. If the Forum is organized at a different timing or order, its purpose is also different as described below.

[Forum organized at an initial stage]



[Forum organized after target crop selection]



Note: Since the market stakeholders are informed of the farmers’ selected crops and interest of farmer groups before the forum is held, they become willing to come to the forum to meet the farmers as their potential business partners.

2.3. Market Survey

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum **-Market Survey** We are here.
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

WHY? - Objectives

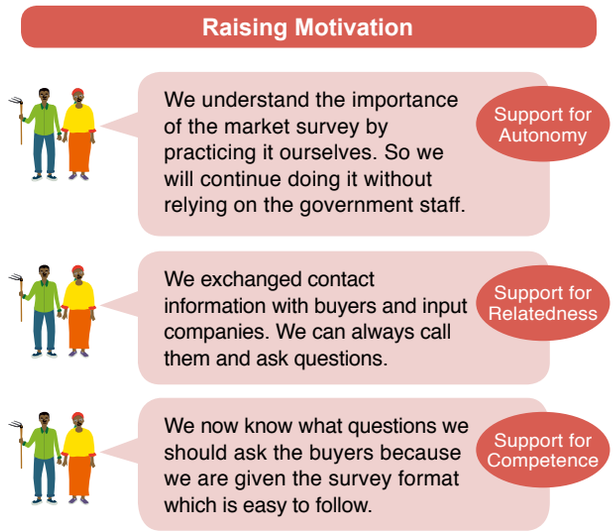
In SHEP, market surveys are conducted not by government staff or external experts but by farmers themselves. The main purpose of SHEP's farmer-initiated market survey is to encourage farmers to have **hands-on experiences of understanding how markets operate and what markets want from the producers.** At the same time, by conducting market surveys, farmers will be able to **build a rapport with various market players,** such as wholesalers, retailers, middlemen, etc., and widen their interpersonal networks which can contribute to creating **a win-win situation with the market stakeholders.**

WHAT? - Outline

The farmer representatives chosen by the farmer groups attend the training to learn how to conduct market surveys. The training includes (1) explanations on how to conduct market surveys and (2) exercising actual market surveys organized and carried out at local markets. After the training, the farmer representatives teach other group members the result of the market survey as well as the way to conduct market surveys so that the group can continue conducting market surveys on their own even after their engagement in SHEP finishes. It is important to remember that the SHEP implementers only provide farmers with an opportunity to conduct a market survey "practice". After the "practice", the farmers are expected to repeatedly conduct "real" market surveys, which are done by the farmers themselves without help from the government.

HOW? - Key Implementation Tips

- The market surveys **should be conducted by farmers**, not by government staff, with a questionnaire form in hand.
- The market surveys aim at collecting **information on not only market prices** but also required quality and quantity of produce, seasonal fluctuations of prices and traded quantity, mode of payments, etc.
- During the market surveys, the farmers are encouraged to **establish business relationships** with the market players they meet at the market.
- Farmers should understand that market surveys **need to be carried out continuously by themselves** on a regular basis without the help of the government.



STEP - Implementation Procedures (Required time: 3-4 hours)

1. (Preparation) Ask the farmer group select their representatives (an interviewer, note-taker and time-keeper, a total of three farmers) who will participate in the market survey training. Tip! *Both men and women should be selected as representatives. Literate farmers may be selected for the ease of training. However, past experience suggests that with sufficient help from literate fellow farmers, illiterate farmers can also work as group representatives.*
2. (Preparation) Obtain permission for conducting a market survey exercise from the manager(s) of the market the farmers are going to visit. If the SHEP implementers and extension staff are not so familiar with how crops are traded in the market, conduct preliminary market surveys among the implementers before taking farmers to the market. Investigate and choose most appropriate day(s) of the week or time of the day so that the farmers can efficiently collect necessary information.
3. Organize a training to teach how to conduct the market survey, first; lectures and next, a practical market survey exercise at a nearby marketplace.
4. Recap the information the farmers have collected at the market. Ask them to share the information with other group members within a certain period of time (e.g. within a week after the market survey) to ensure all the group members will have access to the information the representatives obtained. Tip! *Make sure to set a clear timeframe for sharing the information with other farmers. The extension staff should help the representatives to organize the information sharing meeting.*

Photo: Kenya

Photo: Kenya

Mitigating Asymmetric Information

Farmer

We didn't know so many vegetables are coming from neighboring countries. We can try suppling those crops locally in the future.	We didn't know local farmers are producing high quality vegetables. We can start buying them locally rather than relying on importers.
We did not care about shelf life of the produce before. We should be more careful about this issue so that the buyers will be happy.	We were unable to offer a high price to the local farmers since their produce always go bad quickly. If they can sell us better one, we are more than happy to raise our buying price.
We saw rotten peppers at the bottom of the bag at the market. The buyers were very unhappy. We should be extra careful when we pack peppers next time.	We felt deceived by the farmers because they often put rotten peppers at the bottom of the bag. We wish we could trust our suppliers.

Market Stakeholder

FORMAT - Market Survey Questionnaire

Here is a sample market survey questionnaire. In addition to filling in the columns shown below, the farmers are encouraged to gather any other relevant information they think is important to them. In that case, instruct them to jot down information they obtained in an empty space in the questionnaire sheet.

Name & Contact of the Produce Dealer	Produce & Variety	Produce Quality Market Requirements	Peak Demand (months)	Quantity (kg) & Frequency (daily/weekly etc.) of Supply	Place of Production	Purchasing Unit Price (USD/kg)	Mode of Payment	Terms of Payment	Marketing Challenges	Dealer's Willingness to Purchase the Produce from the Group *

INNOVATION - Customization in Various Countries/ Regions

Below are some examples of innovative customization undertaken in various countries and regions, socio-economic conditions of which are different from those in Kenya. Because of these changes, they have been exceeding expected outputs.

Box9 Visiting various companies and organizations during market surveys

Visiting various companies and organizations during market surveys (Lesotho, Tanzania & Zimbabwe)

<Why?> The SHEP implementation team had substantial limitations on financial and human resources. Organizing Stakeholder Forums was difficult because of resource constraints.

<How?> During the market survey exercise, the implementers arranged visits to various companies and organizations such as agricultural input companies, export companies, hospital, schools, lodges, supermarkets, etc. which were not necessarily at the marketplace but located in the same or nearby towns. The farmers visited and met key market stakeholders in additions to buyers at the marketplace.

<Results?> The impact which a Stakeholder Forum could bring about was gained through this method without using extra financial and human resources for organizing a formal forum.

Box10 Dry run by farmers before the market survey exercise

Dry run by farmers before the market survey exercise (El Salvador)

<Why?> In the target area, the majority of the farmers only sold their produce to middlemen who came to their vegetable gardens. They had never interacted with anyone at the market before. They felt very nervous about asking people questions at the market.

Photo: El Salvador

<How?> After teaching how to conduct market surveys, the implementers asked the farmer representatives to practice asking questions by way of role playing. Some played a role of a farmer, others played a role of buyers at the market.

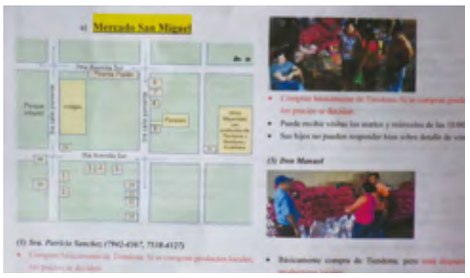
<Results?> The farmers felt more comfortable and confident to ask questions during the market survey exercise. They were able to get the information they wanted from the buyers skillfully with confidence.

Box11 Implementers conducting a preparatory market survey

Implementers conducting a preparatory market survey (El Salvador, South Africa)

<Why?>The implementers were not so familiar with the situations of the local markets.

<How?> The implementers visited the markets in advance and identified prospective buyers, i.e. those who were willing to buy vegetables from smallholder farmer groups. They also drew simple maps of the markets so that the farmers could easily find those potential buyers by looking at the maps.



A map of the market and explanations of potential buyers drawn/ written by the SHEP implementers in El Salvador

<Results?> The farmers were able to locate and identify buyers who were willing to trade with them within a limited space of time during the market survey excercise.

Box12 Farmers choosing more than six crops to investigate

Farmers choosing more than six crops to investigate (El Salvador & South Africa)

<Why?> The target area faced a high level of climate-related and pest/ disease-related risks in crop production. Crop diversification was one of the top priorities for the farmers in the area. Thus, the target farmers were interested in exploring financial and technical feasibility of various different kinds of crops to grow for risk management purposes.

Photo: Kenya

<How?> While the farmers were instructed to select five target crops to investigate in the market survey at the beginning, they were advised to select more than six crops to look at during the market survey after the implementers had realized the need for crop diversification.

<Results?> The farmers were able to find potential crops to grow that were not necessarily familiar to them after the market survey. The implementers supported the farmers by providing training on production techniques specific to the new crops the farmers had chosen as their target crops. Thereby, the farmers were able to engage in crop diversification.

Box13 Illiterate farmers chosen as representatives for market surveys

Illiterate farmers chosen as representatives for market surveys (Ethiopia & South Africa)

<Why?> The majority of the target farmers were illiterate in the target area and those motivated group members who could lead the group were not necessarily literate.

<How?> The farmer group chose both literate and illiterate farmers as group representatives for the market survey exercise.

Photo: Ethiopia

<Results?> The literate and illiterate farmers demonstrated different strengths. For instance, literate farmers had more confidence in interacting with people they did not know. They also took note without difficulty. Illiterate farmers, on the other hand, often had good memories and were very observant. They complemented each other and made good teams as surveyors. Furthermore, choosing illiterate farmers as group representatives psychologically empowered not only those who were chosen but also their fellow illiterate members in the group.

Box14 Conducting market surveys both at formal and informal markets

Conducting market surveys both at formal and informal markets (South Africa and Zimbabwe)

<Why?> The target area had two distinctive markets: the formal market such as supermarkets and the informal market such as local open-air markets. The market players and market requirements of these two were very different.

Photo: El Salvador

<How?> The implementers arranged two market survey exercise sessions; one for the formal market and the other for the informal market. They organized a market survey first at an informal market, which farmers were more familiar with, and then at a formal market.

<Results?> The farmers were able to understand different markets had particular preferences in types, the quality and the quantity of crops. They, who were not familiar with the formal market, started investigating the possibility of penetrating the formal market such as supermarkets by carefully comparing opportunities both at formal and informal markets.

CHECKLIST - Points To Be Confirmed After This Activity

- ☐ The group members are informed of the findings and results of the market survey exercise by the farmer representatives who have participated in the exercise.
- ☐ The target farmers understand the market survey conducted this time is a “practice” and “real” market surveys should be conducted on their own on a regular basis without help from the government.
- ☐ The target farmers maintain contact with the market stakeholders they visited during the market survey.
- ☐ The male-female ratio of the representatives from the group is balanced.
- ☐ The male-female ratio of the participants in the feedback meeting organized at the farmer group is balanced.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Local Market Too Small** -The local market near the target farmers is very small and only sells potatoes and onions. After conducting the market survey there, the farmers were disappointed since they could not learn anything new. How can I solve this situation?

Photo: Takeshi Kuno/JICA□Kenya

A: Even a small local market may be able to give much information useful for the farmers. For example, if interviewed appropriately, the market stakeholders may give the farmers information such as seasonal demand change, annual price fluctuation, different origins of produce depending on seasons, preferred shape, variety, size, etc. The farmers can also strengthen their relationships with local market players by conducting market surveys regularly. Therefore, it is usually a good starting point to visit the nearest local market for a market survey exercise purpose. However, if you and the farmers feel that it would be more beneficial to visit different markets, for example, ones near big cities, you are welcome to do so. After conducting the market survey at such markets, the farmers are most likely to continue visiting the market if they are convinced it is worth the time and transportation costs. Another important point is that a “market” does not necessarily mean a physical marketplace. Markets can be street vendors or institutions such as local schools, hospitals, jails, etc. If the farmers feel nearby marketplaces do not offer much useful information, try contacting such potential buyers in their locality.

Q: **Difficult to Get Information on Prices** - The traders at the market do not give information on the actual selling prices or the buying prices. They are very secretive about the profit they are making. Is there a way to get accurate information on prices?

A: It is natural that the traders are reluctant to disclose information on their profit. Rather than focusing your questions on how much they make, you may want to tactfully ask general questions such as annual price fluctuations on particular produce. You may also want to ask shoppers at the market how much they paid for the crop you are investigating.

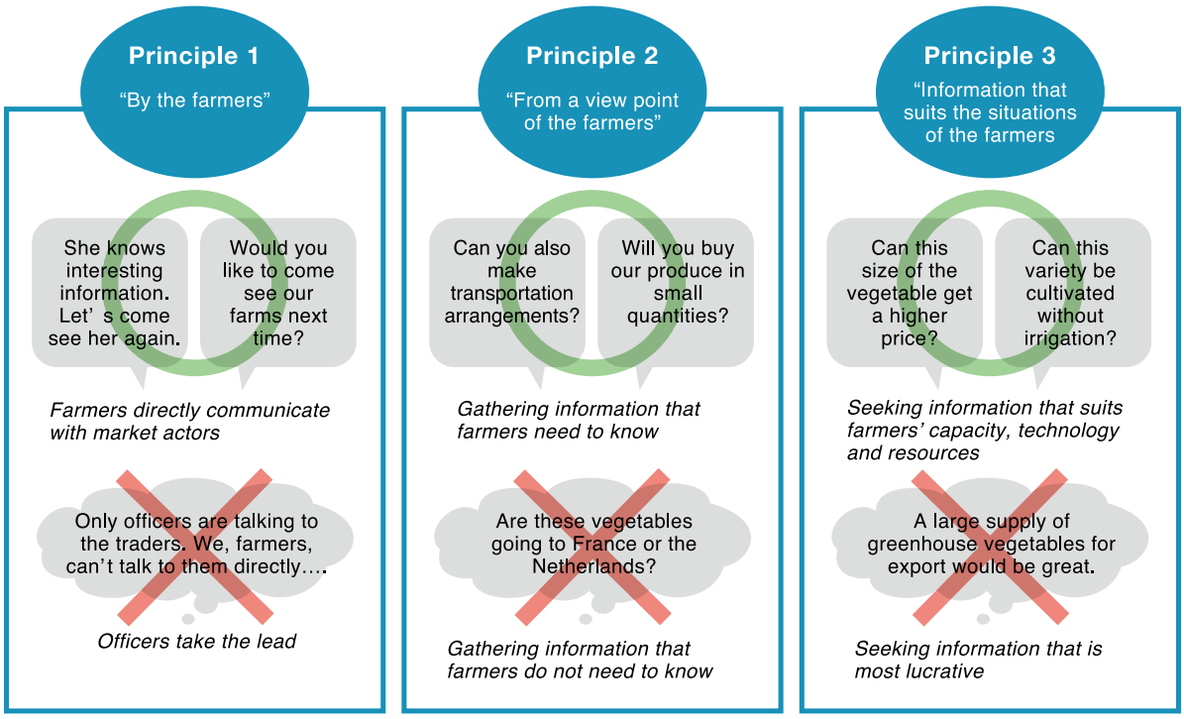
Q: **Different Levels of Motivation within Farmer Group** - While the group representatives are very well aware of the market demands and requirements after successful completion of the market survey exercise, it does not seem other group members are motivated. Why?

A: Did you make sure that the group representatives shared the information they obtained during the market survey with other group members? It should be mandatory for the representatives to give information to other group members so that they won't "monopolize" useful information. Please consider setting a rule, for example, that the representatives should hold a group meeting with a week after the market survey to share what they have found during the market survey.

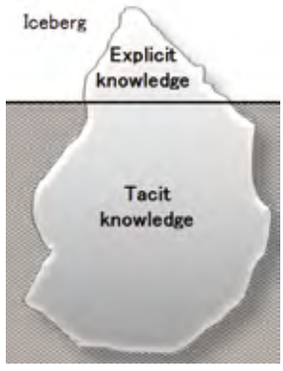
Column 4 Three Principles of The SHEP Market Survey

SHEP's market survey demonstrates the three very important "principles" which place an emphasis on supporting farmers' psychological need for autonomy and competence. The three principles are: to collect information (1) that suits the situations of the farmers, (2) from a view point of the farmers, (3) by the farmers in order for the farmers to explore business possibilities and options. Unlike the conventional notion of market surveys, SHEP's market survey is not only about getting market prices. Rather, it is about finding business potential and options.

SHEP's three principles in market surveys are shown in the diagram below where comparisons between the examples of compliance and those of non-compliance in each of the principles are explained.



Among the three principles, perhaps the most vital of all is the element of surveys "conducted by the farmers". Farmers' autonomy and ownership of market surveys are extremely crucial for the success of SHEP activities.



SHEP's market survey, which tries to capture not only market prices but also multidimensional market information, is, in fact, designed to uncover "tacit knowledge" the market possesses. In order to access, feel and understand tacit knowledge, it is necessary to share experiences and have a dialogue with those who possess such tacit knowledge. In this sense, it is important for the farmers to go to the market themselves and observe/have direct conversations with the market actors such as buyers, middlemen, shoppers and so on. This is why it is critical for the farmers themselves to do market surveys.

SHEP's market survey is to uncover the tacit knowledge of the market, which is relevant to, and beneficial for, the target farmers. In other words, SHEP's market survey is to utilize and share the farmers' own tacit knowledge with the tacit knowledge of the market. The two types of tacit knowledge will be effectively combined and formed into new knowledge in the process of the market survey.

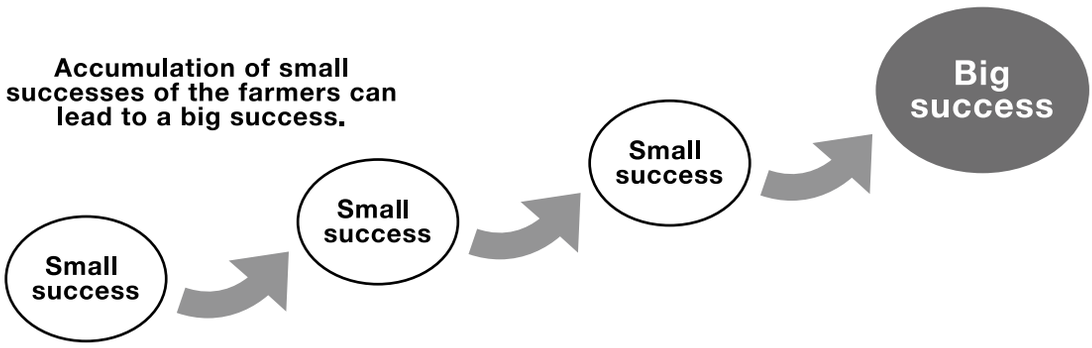
Here are some comments from farmers who successfully conducted market surveys by following the three principles.

Photo: Kenya

- We realized we should harvest carrots earlier than we usually do. Smaller carrots taste better and sell at a higher price than bigger carrots.
- We've found that we should harvest carrots very early in the morning when it's still dark outside. The carrots last longer when harvested that way. The buyers are willing to buy such carrots and give us a better price.
- We've realized that it is less risky to supply produce to the market constantly throughout the season than to supply them in a large quantity at one time.
- We are convinced that certified seed and hybrid seed can produce better quality vegetables, which means we can sell them at a higher price.
- We understand that the timing of planting is important. We should plant seeds at the right time, or should use seed of quick maturing varieties so that we can harvest in the peak-demand months.
- We discovered that at the wholesale market, a variety of cabbage with a long shelf-life is preferred. In contrast, a variety of cabbage which is sweet and succulent, suitable for salad is preferred at the retail market even if it has a shorter shelf-life.
- We met a middleman during the market survey. We obtained information on preferred sizes of potatoes. After that, the middleman started to come to our farms regularly to buy our potatoes at a high price.
- During the market survey, we realized among various banana products, banana biscuits were most popular in this locality. After that, we started to produce a small package of banana biscuits, which the existing market did not have. The package became the best seller at our group's store and many local children love this package of biscuits.
- The retailer has told us he does not want to buy produce from smallholder farmers because they don't help him load the crops when he goes to buy them at their farmland. Medium- to large-scale producers, on the other hand, always have someone available at the farmland to give a hand. After hearing this story, we make sure that several group members help the retailer during the loading process. The retailer now purchases crops from us.

Photo: Kenya

To some, the information the farmers obtained during the market survey as shown above may seem rather insignificant. However, if you take a close look at the nature of the information, you realize that the information the farmers obtained can be utilized by farmers (1) right away and (2) with minimal additional resources. Therefore, such information can easily lead to small successes for the farmers. Small incremental successes are important in reaching larger goals over time.



Market Survey Questionnaire

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Market Survey Conducted by (names of farmer representatives) :_____

Name & Contact of Produce Dealer	Produce & Variety	Produce Quality & Market Requirements	Peak Demand (months)	Quantity &Frequency (daily/weekly etc.) of Supply	Unit Price per kg	Mode of Payment	Terms of Payment	Marketing challenges	Dealer's Willingness to purchase the Produce from the Group

Example Market Survey Questionnaire

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Market Survey Conducted by (names of farmer representatives) :_____

Name & Contact of Produce Dealer	Produce & Variety	Produce Quality & Market Requirements	Peak Demand (months)	Quantity &Frequency (daily/weekly etc.) of Supply	Unit Price per kg	Mode of Payment	Terms of Payment	Marketing challenges	Dealer's Willingness to purchase the Produce from the Group
Mr. S. K. Mwai (0722-xxxxxx)	Tomato (any variety)	- Medium size - Half ripen	March, April, & May	1,000 kg/week	1 dollar	Cash	Cash on Delivery	Inadequate storage Facilities	Willing
Ms. J. O. Ouma (0736-xxxxxx)	Tomato (cal j)	- Large size - Half ripen	February& March	2,500 kg/week	1.20 dollars	Check	Two weeks after Delivery	Inadequate storage Facilities	Willing
Ms. O. J. Aduu (0720-xxxxxx)	Tomato (cal j)	- Medium size - Half ripen	December & January	2,500 kg/week	1.15 dollars	Cash	A week after Delivery	None	Not willing

3. Step 3 – Farmers Make Decisions

After the realization of business opportunities in Step 2, the farmers move on to the next step, Step 3, where they make important decisions on their horticultural businesses. The decisions include their plan on what crops to grow at what time, in what quantity and quality, and so forth. The decisions are based on group consensus and various collective actions for facilitating efficient production and marketing will be discussed and agreed by the farmer group members. The SHEP implementers' role is not to make decisions for the farmers, rather, to help farmers to make the right decisions by providing appropriate guidance and expert knowledge on agriculture.

3.1. Target Crop Selection

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	**-Target Crop Selection** ◄ We are here. -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

WHY? - Objectives

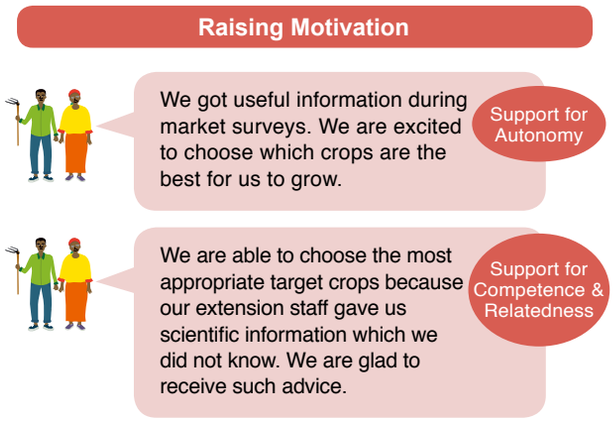
Target Crop Selection is conducted so that the farmer groups can collectively identify the specific types of crops that are demanded by the market. The farmers agree to produce and market the identified crops as a group.

WHAT? - Outline

The farmer groups select the target horticultural crops based on their finding during the market survey. The groups discuss their preferred crops and build a consensus on the crops they will grow as a group. The extension staff, as an expert of crop production, gives advice to the group during the crop selection process.

HOW? - Key Implementation Tips

- The farmer groups discuss their future farming opportunities and **make decisions about the target crops based on their previous SHEP activities, in particular, the market survey.**
- The extension staff **gives useful advice and suggestions, particularly in the area of agro-ecological suitability of specific crops,** so that the farmers can make a well-rounded decision in choosing the target crops.



STEP - Implementation Procedures (Required time: 2-3 hours)

1. Organize a meeting and invite, if a circumstance allows, the members as well as their spouses. Tip! *Inviting the members' spouses facilitate effective decision-making since the spouses also have a strong stake in vegetable production.*
2. Ask the farmer group to discuss the findings of the market survey and fill out the information of some promising crops on the Target Crop Selection Sheet. Tip! *In order to fill out the Sheet, the farmers may need to refer to the results of the market survey and baseline survey. Make those documents available during the target crop selection.*
3. The farmer group discusses advantages and disadvantages of choosing the listed crops as a target crop. The target crops to be selected should be easy to grow, suitable to the local growing condition, affordable and have appropriate technical requirements. Tip! *The extension staff should give advice on production suitability and technical issues so that the farmers do not choose crops solely based on their profitability.*
4. Each group member votes for his/her preferred crops (blind voting) – write the name of his/her 1st & 2nd preferred crops on the voting paper. The majority, preferably more than 70%, of the group members should participate in this process to build a consensus among the group members. Then for the 2nd crop, repeat the process above. Rank the crops in accordance of the number of votes and choose two or three target crops. Tip! *The extension staff should ensure that powerful members of the group, such as group leaders, elderly or well-educated members, do not influence the group's decision.*

Photo: Malawi

FORMAT - Target Crop Selection Sheet

Here is the Target Crop Selection Sheet. The number of crops/varieties to be analyzed depends on the results of the market survey. However, be aware of time constraints. It may require too much time to analyze all the crops the farmers investigated during the market survey. In that case, choose the most promising ones for detailed analysis.

Crop/ Variety	Consumed by locals or not	Experience in cultivating the crop	Month of planting / maturity period	Major production challenges	Average marketable yield per ha (kg)	Average unit price (USD/kg)	Total income per ha (USD)	Cost of production per ha (USD)	Estimated net income per ha (USD)	Main market(s)	Market Requirements (Quality/ Quantity)	Remarks	Ranking

INNOVATION - Customization in Various Countries/ Regions

Below are some examples of innovative customization undertaken in various countries and regions in choosing the target crops.

Box15 Choosing target crops for two different seasons

Choosing Target Crops for Two Different Seasons (Rwanda)

<Why?> Rwanda has two main seasons for vegetable production and crops grown in each season are very different.

<How?> The implementers asked the farmer groups to select target crops for each season.

Photo: Rwanda

<Results?> The farmers were able to choose the best crops to grow for each season. They can now plan better than before.

Box16 Crop budgeting

Crop Budgeting (Palestine)

<Why?> In order to choose the right target crops, farmers wanted to examine profitability of some major crops in detail.

Photo: Palestine

<How?> The farmer groups, supported by the extension staff, carried out income and cost calculations of some major crops based on the farmers' literary and numeracy skills and conducted "crop budgeting" which was a crop-specific profitability analysis.

<Results?> The farmers became more confident in selecting the right target crops. The calculation exercise also enhanced the farmers' business management skills.

CHECKLIST - Points To Be Confirmed After This Activity

- ☐ The target farmers understand the methods of target crop selection.
- ☐ The target farmers understand that not only profitability but also agro-ecological conditions, as well as their technical skills and financial capacity, need to be taken into consideration in choosing crops to grow.
- ☐ The target groups agree to undertake target crop selection on a regular basis by themselves in the future.
- ☐ The male-female ratio of the participants is balanced.
- ☐ The quality of participation of male and female members in decision-making is ensured.
- ☐ (optional) The members' spouses are involved in decision-making.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Tie Vote** – What should I do if several crops get the equal number of votes as the target crop?
A: Ask the farmers to vote again. This time, they will vote only for the crops which got the same number of votes.

Q: **Concerned about Oversupply** – I am afraid that selecting two or three target crops will lead to oversupply of those crops at the local market, which brings down the price in the end.
A: During the market survey, the farmers gather information, along with other pieces of information, on quantity of the crops that the target market can absorb. Therefore, the farmers should be able to judge how much is too much for which market at what timing. Selecting a few target crops do not necessarily saturate the local market as long as the farmers know when and what quantity they should supply to the market.

Q: **Unselected Crop** – I was asked by the farmers if they were allowed to plant crops that were not selected by the group. What should I answer?
A: Selecting the target crops means that the farmers can get intensive production trainings on those crops from the extension staff. The farmer groups can also plan collective marketing for those selected crops. Farmers, on the other hand, are free to grow any other crops as they wish. It is just that they may not be able to receive crop-specific trainings and opportunities to undertake a group planning for such crops.

Target Crop Selection Sheet

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____

Crop/ Variety	Consumed by locals or not	Experience in cultivating the crop	Month of planting / maturity period	Major production challenges	Average marketable yield per ha (kg)	Average unit price (USD/kg)	Total income per ha (USD)	Cost of production per ha (USD)	Estimated net income per ha (USD)	Main market(s)	Market Requirements (Quality/ Quantity)	Remarks	Ranking

Example Target Crop Selection Sheet

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____

Crop/ Variety	Consumed by locals or not	Experience in cultivating the crop	Month of planting / maturity period	Major production challenges	Average marketable yield per ha (kg)	Average unit price (USD/kg)	Total income per ha (USD)	Cost of production per ha (USD)	Estimated net income per ha (USD)	Main market(s)	Market Requirements (Quality/ Quantity)	Remarks	Ranking
Carrots/ Nantes	Yes	Yes	March & July/ 3months	Carrot Rust Fly (Pest which affects roots)	10,000	0.20	2,000	825	1,175	X Market Y Market	X Market: 300kg on Thursday Y Market: 200kg on Monday	Small ones can be sold in the village, Disease resistant	3
Spinach/ Cornet	Yes	Yes	March/ 3months	High cost of seed	22,500	0.15	3,375	1,000	2,375	Y Market Z Retailer	Y Market: 500kg on Monday Z Retailer: 100kg on Wednesday	Z Retailer comes to farm	1
Spring Onion/ White Lisbon	Yes	Yes	Feb & June/ 1 month	None	5,000	0.10	500	75	425	X Market Y Market	X Market: 600kg on Thursday Y Market: 400kg on Monday	Easy to grow	
Kale/ Thousand Head	Yes	Yes	March/ 3 months	Black rot (Leaf spot)	20,000	0.15	3,000	1,000	2,000	X Market Y Market	X Market: 600kg on Thursday Y Market: 200kg on Monday	Can be sold in the village	2

3.2. Crop Calendar Making

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	-Target Crop Selection **-Crop Calendar Making** ◄ We are here.
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey)	

WHY? - Objectives

Crop Calendar Making enables the farmer group to plan future action as a group in terms of both production and marketing of the target crops selected in the previous activity.

WHAT? - Outline

The farmer groups make an annual plan of production as well as marketing activities as a group focusing on the target crops they selected earlier. The plan includes collective actions to take for producing and marketing crops as well as other group activities which facilitate the groups' farming business.

HOW? - Key Implementation Tips

- The farmer groups discuss and decide the best way to realize sustainable farming businesses through laying out a specific annual production and marketing plan for the target crops. The plan also includes other activities to be conducted as a group which will facilitate generating more income from horticulture (Figure 7).
- The extension staff ensures that the plan is realistic and attainable considering the current capacity of the farmer group.

Crop Calendar as an Axis for Group Work

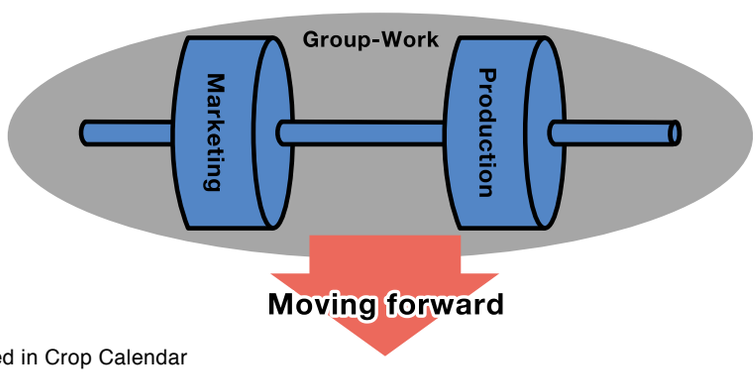


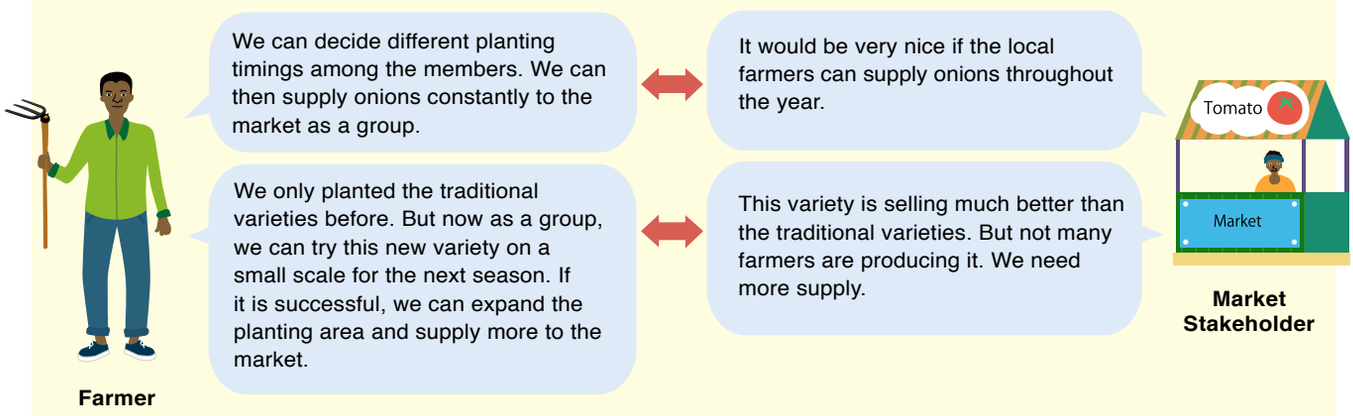
Figure 7 Items to be addressed in Crop Calendar

STEP - Implementation Procedures (Required time: 2-3 hours)

1. In accordance with the Crop Calendar format, the farmer groups first decide what changes they want to make with regard to the target crops. The changes, both in production and marketing, include changes and or improvement of crops/varieties, quality, quantity, harvest timing, buyers, and others such as packaging.
2. After deciding what changes they want to achieve, the farmer groups make an annual plan specifying monthly actions to take in terms of (1) production, (2) marketing & business management, and (3) other group activities focusing on the target crops. Tip! *The extension staff helps the farmer groups to remember what they have learned during the previous SHEP activities such as market information, record-keeping skills, etc. so that they can utilize such knowledge in planning concrete actions.*

Photo: Malawi

Mitigating Asymmetric Information



FORMAT - Crop Calendar

Here is the format of Crop Calendar. First of all, the groups decide what they want to change or improve and tick the corresponding squares at the top of the Calendar. Then they write specific monthly actions for the production and marketing of the target crops. They also identify any other relevant group activities which would contribute to the production and marketing of the crops. If the group is working on more than three target crops, create new rows to accommodate more target crops.

We are improving and/or changing ☐Crop/Variety, ☐Quality, ☐Quantity, ☐Harvest timing, ☐Buyers, ☐Others (specify:)

Month													
Production	1st Crop ( )												
	2nd Crop ( )												
	3rd Crop ( )												
Marketing & Business Management													
Group Activities/Others													

CHECKLIST - Points To Be Confirmed After This Activity

☐ The target farmers understand the methods of crop calendar making.
☐ Each one of the group members understands what specific actions and roles he or she will be taking in accordance with the group's crop calendar.
☐ The target groups agree to undertake crop calendar making on a regular basis by themselves in the future.
☐ The male-female ratio of the participants is balanced.
☐ The quality of participation of male and female members in decision-making is ensured.
☐ (optional) The members' spouses are involved in decision-making.

INNOVATION - Customization in Various Countries/ Regions

Below are some examples of innovative customization in Crop Calendar making.

Box17 Development of Peak Demand Table

Development of Peak Demand Table (Tanzania)

<Why?> In order to understand when crops to be produced to gain higher prices in the market, farmers surveyed the annual price fluctuations of major crops.

<How?> The farmer groups, supported by the extension staff, developed a simple calendar that showed which month a crop would be given higher prices than others. They highlighted peak-demand/ high- prices seasons on the calendar.

<Results?> With the exhibition of this calendar at a village office, many farmers became able to identify potential crops for marketing throughout a year, including the types of crops to be produced and the timing of harvesting.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	karoti	karoti									
	brokori	brokori				brokori	brokori	brokori	brokori	brokori	brokori
	cowlflower	cowlflower				cowlflower	cowlflower	cowlflower	cowlflower	cowlflower	cowlflower
	Lettuce	Lettuce	Lettuce			Lettuce	Lettuce	Lettuce	Lettuce	Lettuce	Lettuce
	zukini	zukini		zukini	zukini	zukini	zukini	zukini	zukini	zukini	zukini
Viazi	Viazi	Viazi	Viazi	Viazi							Viazi
	Tomato	Tomato	Tomato	Tomato	Tomato						
Snowpeas	Snowpeas	Snowpeas	Snowpeas	Snowpeas	Snowpeas						Snowpeas
Beatroot	Beatroot	Beatroot	Beatroot	Beatroot							
			Green peppers	Green peppers	Green peppers						
	French beans	French beans					French beans	French beans			
Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers	Color peppers
Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint	Basil&Mint

Peak Demand Table developed in Lushoto District, Tanzania

Box18 Crop calendars for both group's and individuals' farmlands

Development of Crop Calendars for Both Group's and Individuals' Farmlands (El Salvador & Nepal)

<Why?> The farmer groups in El Salvador and Nepal had both group farms and farmers' individual farmland for vegetable cultivation. The farmers wanted to formulate plans for both farmlands.

<How?> The farmers made two types of Crop Calendar: one for the group farmland, the other for individual farmland.

Photo: Nepal

<Results?> The farmers were able to plan and implement farming activities effectively using the two types of Crop Calendars.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Need to Plant at the Same Time?** – Does making the Crop Calendar mean that all the group members need to plant the same crops at the same time?

A: Not necessarily. The group can agree, for example, to stagger planting timing among the members so that they can harvest a constant amount of produce for an extended period of time. Such planning should be done by the group members during the Crop Calendar making process so that they can best cater to the target market.

Q: **Already Passed the Planting Time** – When the farmers made the Crop Calendar, the planting time for some of the target crops had already passed. What should I tell the farmers to do?

A: It is ideal to make the Crop Calendar well before the planting season starts. However, it may not be possible to do so due to various administrative or technical reasons. Encourage the farmers to produce the crops in the next crop season if not this coming season. Make sure you give production technique training on all the crops they selected at the right timing.

Crop Calendar

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____

We are improving and/or changing ☐Crop/Variety, ☐Quality, ☐Quantity, ☐Harvest timing, ☐Buyers, ☐Others
(specify:_____).

Month													
Production	1st Crop ( )												
	2nd Crop ( )												
	3rd Crop ( )												
Marketing & Business Management													
Group Activities/Others													

Example Crop Calendar

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____

We are improving and/or changing ☐Crop/Variety, ☐Quality, zQuantity, ☐Harvest timing, ☐Buyers, ☐Others
(specify: Packaging, Stronger price negotiation).

Month		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Production	1st Crop (Tomato)		Land preparation; Nursery	Transplanting	1st Topdressing; Pest & disease control; Weed control	2nd Topdressing; Pest & disease control; Weed control	Harvesting/ Cleaning/ Grading/ packaging						
	2nd Crop ( ) Cabbage												
	3rd Crop (Sweet Potato)												
Marketing & Business Management		Market survey at X market and Y market	Start record keeping for this season	Regularly contacting potential buyers			Arranging transportation Group selling	Profit analysis					
Group Activities/Others		Convert maize field to veggie garden	Group purchasing of seed & fertilizer	Cleaning irrigation canals			Collecting group membership fee						

4. Step 4 – Farmers Acquire Skills

Step 4 is the last step of the SHEP Approach where the farmers are imparted with knowledge and skills necessary for producing the crops demanded by the market. By this time, the farmers' willingness to learn new knowledge should be high since they are already convinced of the market opportunities of the target crops they have selected. The contents of the technical training should be specifically catered to the farmers' needs so that they can immediately adopt and apply the technologies in their farming practice. In other words, making the training demand-driven, as opposed to supply-driven, is the key to success.

4.1. In-field Trainings

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	**-In-field Trainings** ◄ We are here.
Follow-up and monitoring (including Participatory Endline Survey)	

WHY? - Objectives

In-field Trainings are designed to disseminate skills and knowledge necessary for the practical production of the target crops which the farmers have chosen. **It is a demand-driven training.**

WHAT? - Outline

The extension staff organizes training sessions where the target farmers learn skills, techniques and knowledge necessary for the production of the target crops. The training should be practical and conducted at the farmers' fields or in their vicinity with ample demonstrations and exercises.

HOW? - Key Implementation Tips

- The training should address the needs of the farmers. Spend more time where farmers need more training and spend less time if the farmers are already familiar with the topics.
- The training should be conducted using easy-to-understand materials such as flip charts, posters, leaflets and so on.
- If the training is conducted truly by a demand-driven approach, the farmers' adoption rate of the new techniques should be significantly high compared with that of supply-driven trainings (Figure 8).

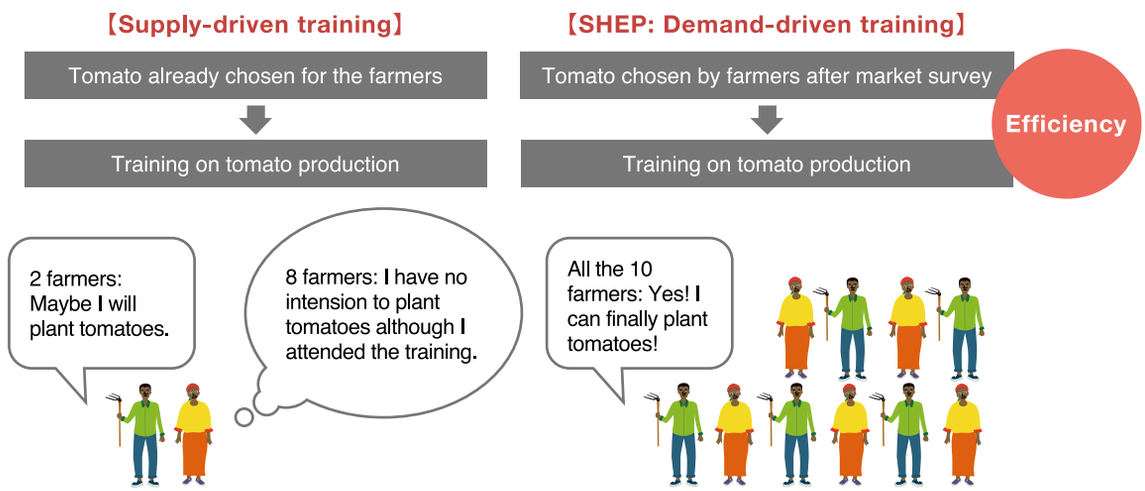
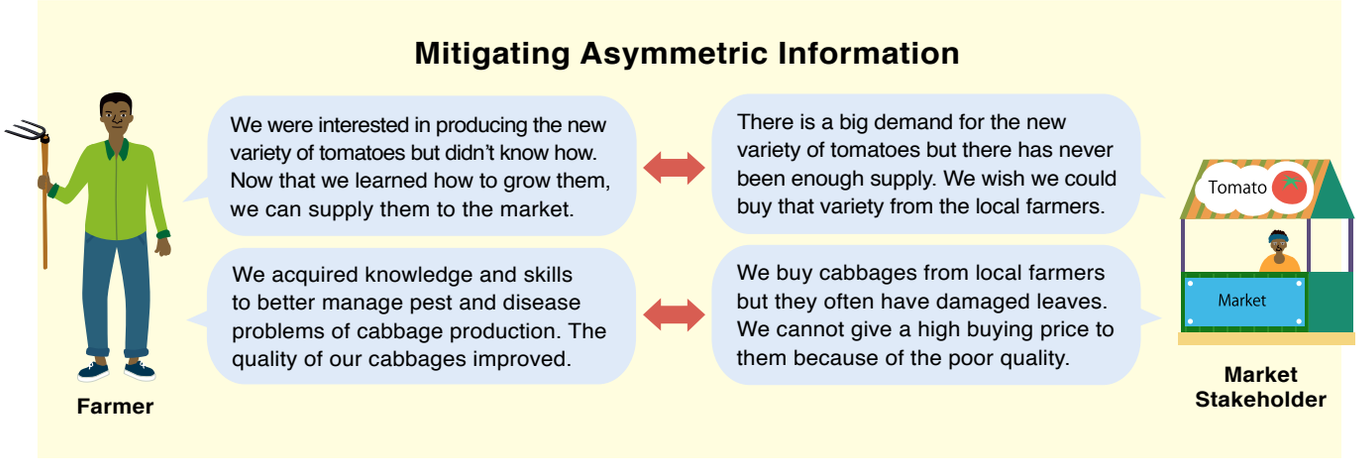


Figure 8 Comparison between supply-driven and demand-driven trainings

STEP - Implementation Procedures (Required time: 6-7 hours[3])

1. (Preparation) The extension staff should be well equipped with knowledge and skills necessary for teaching farmers. If they need more training, the implementers should organize Training of Trainers (TOT) for extension staff before training for farmers are conducted.
2. The extension staff organizes training sessions composed of lectures, exercises and demonstrations for each topic using effective teaching materials. Tip! *Invite the members' spouses to the training if they are engaged in horticulture production.*
3. The topics of the training should exactly match the needs of the target crop production and farmers' capacity development needs. Generally speaking, the training topics can be categorized into three areas: (1) general horticultural crops production and post-harvest handling techniques, (2) crop-specific production techniques, and (3) managerial skills such as bookkeeping, crop budgeting, and farm record keeping.

3 It is not that 6-7 hours of training is conducted in a day. Short training sessions, such as one-hour training sessions, are conducted for several days and the total training hours become 6-7 hours.



EXAMPLE - Example of Training Module

Here is an example of the module for In-field Trainings for a farmer group which has chosen two target crops.

Session 1	**1st Target Crop Production**: specific techniques on the 1st crop
Session 2	**2nd Target Crop Production**: specific techniques on the 2nd crop
Session 3	**Pre-Cultivation Preparation**: soil testing, composting & quality planting materials
Session 4	**Land Preparation**: land preparation practices (solarization), incorporating crop residue & basal application
Session 5	**Crop Establishment**: raising seedlings, planting/transplanting spacing, fertilizer application rates
Session 6	**Crop Management**: managing weeds, top-dressing, integrated pest management practices, safe & effective use of pesticides
Session 7	**Harvest and Post-harvest Handling**: harvesting indices, containers/packaging materials & value addition techniques
Session 8	**Managerial Skills**: Bookkeeping, crop budgeting, farm record keeping

CHECKLIST - Points To Be Confirmed After This Activity

- ☐ The target farmers understand and acquire technical knowledge and skills taught in the trainings.
- ☐ The target farmers do not face any technical, financial or social difficulties applying techniques taught in the trainings. (If they do, identify the problems, consult them and give appropriate guidance to them. Furthermore, give feedback to the SHEP implementers so that they can improve their training materials and modules in the future.)
- ☐ Male-female ratio of the participants is balanced.
- ☐ Participation of the members' spouses is encouraged.
- ☐ Gender stereotype and gender-insensitive training methods and materials are avoided.
- ☐ Sufficient consideration is given to illiterate and Non-illiterate farmers in designing training methods.
- ☐ Labor-saving techniques or tools/ equipment, especially for women's benefit, are introduced.

INNOVATION - Customization in Various Countries/ Regions

Below are some examples of innovative customization in In-field Trainings.

Box19 Farmer to Farmer Extension for production techniques

Training through the Farmer to Farmer Method (Rwanda, Ethiopia)

<Why?> The Rwandan government promoted the Farmer Field School approach for disseminating production techniques to farmers. There was also the issue of an insufficient number of extension staff to cover all the target farmers.

Photo: Lesotho

<How?> Several farmer representatives from each group gathered and learned new skills. They then went back to their community and taught knowledge to other farmers at demonstration fields.

<Results?> Despite the challenges of insufficient number of extension staff, the target farmers were able to learn production techniques from their farmer representatives.

Box20 Establishment of demonstration plots/ training farms

Establishment of Demonstration Plots/ Training Farms (Nepal, Rwanda, Ethiopia, South Africa, Zimbabwe)

Photo: Kenya

<Why?> The governments' experience suggested that farmers were likely to adopt new technologies if they saw and experienced them first at a demonstration or training plot.

<How?> The implementers established a plot in the community of the target farmer group and showed new techniques there. The farmers were responsible for taking care of the plot from land preparation up to harvesting. In some countries, the government invited private sector organizations to establish demonstration plots.

<Results?> After seeing the positive results of the demonstration plot/ training farm, the farmers started to adopt the new techniques they had learned during the training.

Box21 Collaboration with private sector extension services

Collaboration with Private Sector Extension Services (Lesotho, South Africa, Zimbabwe)

Photo: Kenya

<Why?> Private sector extension services such as those undertaken by non-governmental organizations, commodity associations, seed companies, exporters, and so on are common in some countries. They are willing to provide extension services to farmers on horticulture production.

<How?> The implementers invited private sector organizations to conduct some of the training sessions for farmers as part of the In-field Trainings.

<Results?> The government was able to mobilize locally-available resources for conducting trainings and speedy implementation of some training sessions were realized.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Farmers Having Difficulties in Understanding** – Some farmers seem to be having a hard time understanding production techniques which are new to them. How can I help them understand better?

A: Try to make the training as practical as possible. For example, use a language easy for them to understand, choose user-friendly training materials, show techniques by conducting a plenty of demonstrations rather than spending too much time giving lectures. Review such teaching methods and, most importantly, ask the farmers how they want the trainings done.

Q: **Farmers too Busy to Attend Trainings** – Although the farmers showed willingness to attend the trainings, they are now too busy with agricultural work to attend training sessions. The participation rate is not so high.

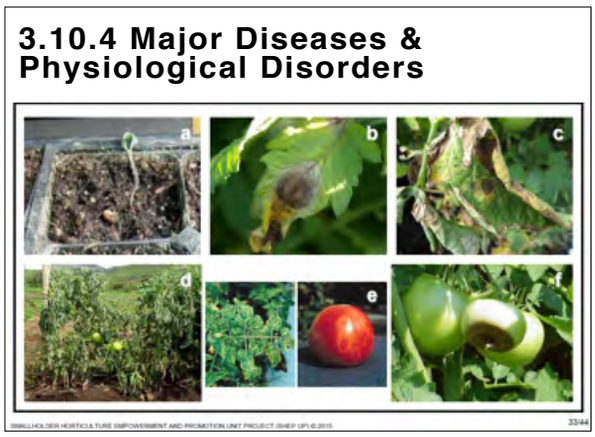
A: It is advised that the production technique trainings be conducted right before the farmers start planting target vegetables so that they would eagerly attend the training and immediately apply the techniques they have learned at their farmland. When such an arrangement is not possible, try organizing trainings when farmers' availability is high.

Column 5 Various Training Materials for Production Techniques

Teaching materials for horticulture crop production have been developed in many SHEP implementing countries. Materials are designed in such a way that best suit the needs of the target farmers in respective countries. Here are some examples.

1.Kamishibai (A4 Laminated Picture Cards) in Kenya

Kamishibai is a Japanese word meaning story panels with pictures, which look like flip charts. Kenya developed a kamishibai type of material in full-color and laminated to make it all-weather. The front page is for farmers to look at and has many pictures. The back page has descriptions of the pictures so that extension staff can read them aloud to the farmers.



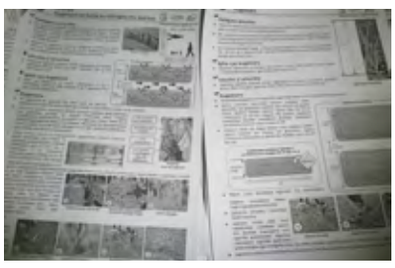
Front page

Back page

Figure 9 Kamishibai developed in Kenya

2.Booklets and leaflets in Nepal, Palestine, Rwanda and Ethiopia

Countries such as Nepal, Palestine, Rwanda and Ethiopia developed booklets or leaflets on crop production. The SHEP implementers in these countries disseminated the materials to the target farmers so that they can take them home and review them after the training. Illiterate farmers who have received the materials usually ask their literate family members to read them at home when necessary.



Leaflets in Rwanda

Leaflets in Nepal

Leaflets in Ethiopia

Figure 10 Leaflets developed in Rwanda, Nepal and Ethiopia

3.Posters in Palestine

The SHEP implementers in Palestine developed posters as well as leaflets. The posters are used during the training and also displayed at government offices where farmers can easily see them when they visit the offices.

Figure 11 Poster in Palestine

4.Existing e-materials and online database in South Africa

South Africa has well-established e-materials and an online database on crop production called “Extension Suite Online”. The users of the system, including local implementers and extension staff, can download various teaching materials from this online-based platform. Therefore, instead of developing training materials from scratch exclusively for SHEP, the implementers in South Africa utilize these existing materials.

5. Follow-up and Monitoring (including Participatory Endline Survey)

Four Steps	Activities
1. Share goal with farmers.	-Sensitization Workshop
2. Farmers' awareness is raised.	-Participatory Baseline Survey -(optional) Stakeholder Forum -Market Survey
3. Farmers make decisions.	-Target Crop Selection -Crop Calendar Making
4. Farmers acquire skills.	-In-field Trainings
Follow-up and monitoring (including Participatory Endline Survey) ◄ We are here.	

WHY? - Objectives

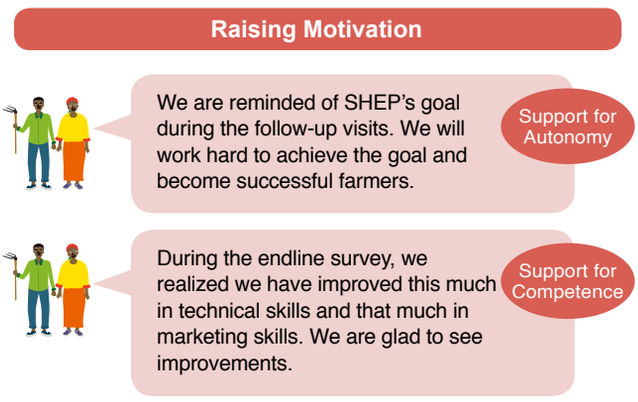
Follow-up and monitoring visits to the target farmers aim at ensuring farmers' actual application of taught techniques and knowledge. The visits not only look at farmers' production practices but also assess their progress of marketing and other collective work as a group.

WHAT? - Outline

Follow-up and monitoring visits are to be conducted periodically to ensure that the farmers are applying the knowledge they have learned during the SHEP trainings. The implementers also monitor the progress of activities described in the groups' Crop Calendars. After a certain period of time, the Participatory Endline Survey is conducted using almost the same survey formats as the Participatory Baseline Survey. The data obtained by the survey is analyzed for the purpose of comparison with the results of the Baseline Survey.

HOW? - Key Implementation Tips

- Follow-up and monitoring visits should be conducted in such a way that **helps the farmer group "take off" to become self-reliant farmers who can practice market-orient agriculture on their own initiatives** (Figure 12).
- The Participatory Endline Survey should give the farmers opportunities to confirm how much they have improved through their experience in participating in SHEP.



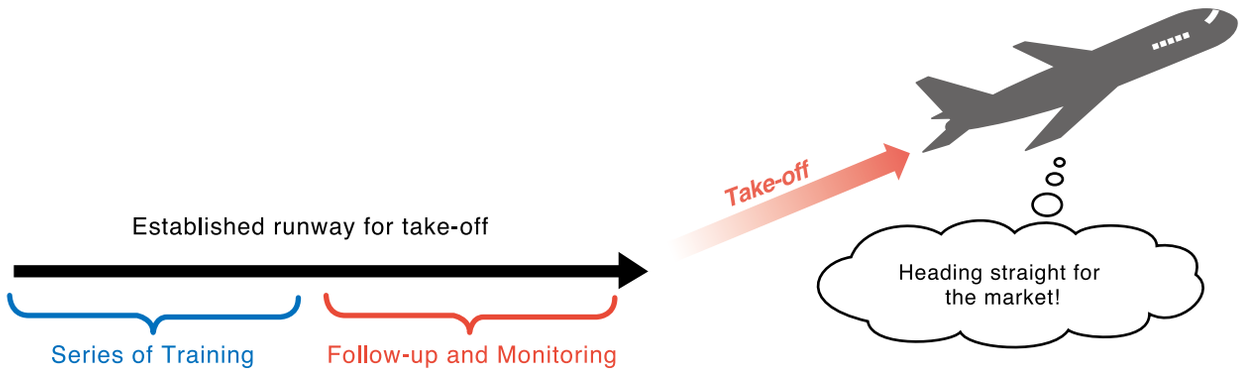


Figure 12 Ensuring "take-off" by follow-up and monitoring

STEP - Implementation Procedures (Required time: 3-4 hours)

1. The extension staff and the implementation team visit the farmer groups periodically to give advice and monitor the progress of activity implementation.
2. Refer to the results of "Baseline Survey Part 2- Agricultural Techniques" and judge how much improvement the farmers have been making in terms of adoption of techniques. If there are still weaknesses, provide support to those farmers who still have difficulties adopting new techniques.
3. Refer to the Crop Calendars the target farmers have made and monitor the progress of activity implementation. Provide consultation where necessary.
4. Collect qualitative information on gender, i.e. success stories, to see how gender equality and women's empowerment have contributed to attaining the groups' goal.
5. After a certain period of time as prescribed by the implementation team, undertake the Participatory Endline Survey by using (1) the Endline Survey Part 1- Production, Income and Cost and (2) the Endline Survey Part 2- Agricultural Techniques, which are the same formats as the Baseline Survey except for columns where the farmers are asked to write information on what changes they have made after SHEP.
6. Data are to be entered, cleared, processed and analyzed by the implementers. The extension staff gives feedback to the farmers particularly in the areas of farmers' progress and improvement since the Baseline Survey.

Photo: Zimbabwe

FORMAT - Endline Survey Questionnaire Forms

The formats for the Participatory Endline Survey are as the same as those of the Participatory Baseline Survey except for the columns where the farmers are asked to write information on what changes they have made after SHEP.

CHECKLIST - Points To Be Confirmed After This Activity

☐ The target farmers understand their strengths and weaknesses and are given specific guidance and advice to further improve their production and marketing.
☐ The target farmers understand when and how they can "graduate" from SHEP.
☐ The target groups agree to, and are willing to, undertake activities such as market surveys, target crop selection, crop calendar making, and application of acquired production techniques continuously in the future.
☐ Male-female ratio of the participants is balanced.
☐ Quality of participation of male and female members is reviewed
☐ Gender-segregated data of the endline survey is collected and analyzed.
☐ Changes in gender roles between husband and wife are reviewed.
☐ Changes in decision-making between husband and wife are reviewed.

TROUBLESHOOTING - Solutions for Frequently Occurring Problems

Q: **Crop Failure Leading to Demotivation?** –What should I do if the farmers become demotivated due to a crop failure?
A: The SHEP Approach supports farmers' psychological needs for autonomy, among other psychological needs, and helps them to be proactive in pushing forward continuous farming businesses. Through their SHEP experience, farmers feel they "own" the whole process of planning, decision-making, risk-taking and taking concrete action in horticultural production and marketing. Therefore, they do not easily become demotivated because their motivation is already too strong to be discouraged by common adversities such as crop failure agriculture is inherently susceptive to.

Q: **Production Techniques not Sufficiently Adopted** – During the follow-up, I noticed that some target farmer groups were yet to adopt the production techniques I taught during the training.
A: Process and required time for individual farmers to adopt new techniques vary according to personality and surrounding environment. Some farmers may take more time than others to accurately understand and adopt the techniques. Seeing success story of neighbors is one of the effective means to convince farmers to introduce new skills and technologies. We concentrate to have the story and create opportunity to let farmers learn it. The purpose of follow-up is to assist such farmers to move forward. Keep encouraging them, ask them why, and give additional instructions or coaching as necessary.

Q: **The group is disintegrated. What can we do about it?**
A: Try to probe what went wrong at what point. It is also a good idea to explore how the group can share their interest to make more profits. It is important for the farmers to understand that securing a volume of produce is an essential factor for small-scale farmers to increase profitability of farming business. Reconsider the group membership if it feels absolutely necessary to reorganize the group after all these discussions.

Endline Survey Part 1- Production, Income and Cost

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Name of Farmer:_____ Male/Female:___ Tel. No.:_____

* Please indicate the information of horticultural crops (do not include other crops such as maize and sugarcane) in the last cropping season.

1.Crop Name and Variety	2.Area under the Crop in meter x meter (m^2) or in ha $100m^2$=0.01ha $1,000m^2$=0.1ha $10,000m^2$=1ha		3. Production sold at market in various unit (e.g. bags, crates, bundles, bushels, etc.)	4. Production sold at market in kg (converted into kg)	5.Production sold at market in kg per ha	6. Average Price per various unit (local currency per unit)	7. Average Price per kg (converted into kg) in local currency	8.Total Income in local currency	9.Total Cost of Production in local currency (incl. inputs, transportation, labor, etc.)	10.Net Income (profit) in local currency
1	2 a.	2 b.	3	4	(4./2 b.	6	6./unit conversion in box	(3. x 6.)or (4. x7.)	9	8. – 9.
1st Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
2nd Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
3rd Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
4th Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				

Please indicate unit conversions in the box below. (e.g.) 1 bag of Irish Potato = 110 kg, 1 head of Cabbage = 2 kg

Please write what changes you have made after SHEP. (e.g. Found a new buyers who buy a large quantity. Started group purchasing of certified seed to reduce cost)

Example Endline Survey Part 1- Production, Income and Cost

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Name of Farmer:_____ Male/Female:___ Tel. No.:_____

* Please indicate the information of horticultural crops (do not include other crops such as maize and sugarcane) in the last cropping season.

1.Crop Name and Variety	2.Area under the Crop in meter x meter (m^2) or in ha $100m^2$ =0.01ha $1,000m^2$=0.1ha $10,000m^2$=1ha		3. Production sold at market in various unit (e.g. bags, crates, bundles, bushels, etc.)	4. Production sold at market in kg (converted into kg)	5.Production sold at market in kg per ha	6. Average Price per various unit (local currency per unit)	7. Average Price per kg (converted into kg) in local currency	8.Total Income in local currency	9.Total Cost of Production in local currency (incl. inputs, transportation, labor, etc.)	10.Net Income (profit) in local currency
1	2 a.	2 b.	3	4	(4./2 b.	6	6./unit conversion in box	(3. x 6.)or (4. x7.)	9	8. – 9.
1st Crop: Tomato Cal j	M x M (m^2) 20X100= 2,000m2	0.2 ha	100 (unit: crate)	2,000 kg	10,000 kg	$25 (unit: crate)	$1.25	$2,500	$600	$1,900
2nd Crop:	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
3rd Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				
4th Crop	M x M (m^2)	ha	(unit:)	kg	kg	(unit:)				

Please indicate unit conversions in the box below. (e.g.) 1 bag of Irish Potato = 110 kg, 1 head of Cabbage = 2 kg

1 crate of tomatoes = 20kg

Please write what changes you have made after SHEP. (e.g. Found a new buyers who buy a large quantity. Started group purchasing of certified seed to reduce cost)

I started producing a variety of tomatoes, Cal j, which the market prefers. That particular variety of tomatoes can sell at a higher price.
I started to arrange transportation with my group members to reduce the transportation cost.

Endline Survey Part 2- Agricultural Techniques

Date:___/___/____
Name of District:_____ Name of Sub-District:_____
Name of the Farmer Group:_____
Name of Farmer:_____ Male/Female:___ Tel. No.:_____

* Please tick "YES" or "NO" to the following questions. Write any additional informationin the margin.

Pre to Post Cultivation Stages		Items	Horticultural Techniques Advocated for Adoption	Yes	No
1	Pre-Cultivation Preparation	Q 1	Do you undertake a market survey to determine the crop(s) to cultivate each season?		
		Q 2	Do you prepare and use crop calendar(s) based on the market survey results?		
		Q 3	Do you undertake soil testing at least once in two years for vegetables/annual flowers; or before the planting for fruit trees/perennial flowers?		
		Q 4	Do you use recommended composting practices by using different organic materials to supply major nutrients: Nitrogen (N), Phosphorus (P), and Potassium (K) in preparing compost/manure?		
		Q 5	Do you use recommended quality planting material(s) with one or more of the following characteristics: disease resistance and tolerance, high yield, early maturity, better tastes, size, and longer shelf life?		
2	Land Preparation	Q 6	Do you use with one or more following recommended land preparation practices in management of pests & diseases: solarization, timely ploughing, appropriate depth of ploughing, and minimizing movement of soil to check possible spread soil borne pests & diseases?		
		Q 7	Do you incorporate crop residue at least two months before planting into the farm during ploughing to enhance recycling of nutrients?		
		Q 8	Do you incorporate compost/manure or organic fertilizer as a basal application at least 1-2 weeks before the planting?		
3	Crop Establishment (Planting/ Transplanting)	Q 9	Do you use recommended practices in raising seedlings for vegetables/annual flowers or use seedlings for fruit trees/perennial flowers raised from recognized nursery(s)?		
		Q 10	Do you use recommended planting/transplanting spacing?		
		Q 11	Do you plant/transplant using recommended fertilizer application rates?		
4	Crop Management	Q 12	Do you supplement crop water requirement through one or more of the following irrigation methods: watering can, overhead, drip, and furrow to meet the minimum crop water requirement?		
		Q 13	Do you ensure timely weeding and use of appropriate weeding tools in managing of weeds?		
		Q 14	Do you undertake appropriate top-dressing practices: timeliness, type and recommended rate of application, and method of application?		
		Q 15	Do you use at least two of the following Integrated Pests Management (IPM) practices: cultural, biological, physical and chemical?		
		Q 16	Do you observe the following safe and effective use of pesticides: appropriate doses, recommended pesticides, and Pre Harvest Interval (PHI)?		
5	Harvest	Q 17	Do you use at least one of the following harvesting indices: color, size, shape, and firmness?		
6	Post-Harvest Handling	Q 18	Do you use harvesting/storage/transportation containers/standard packaging materials with following characteristics: well-ventilated, easy to clean, and smooth thus minimizing damages?		
		Q 19	Do you apply one of the following recommended value addition techniques: cleaning, sorting, grading, packaging or processing of the produce?		
7	Cost and Income Analysis	Q 20	Do you keep records on cost of production and sales and undertake cost and income analysis?		
8	Collective Action	Q21	Do you purchase agricultural inputs such as seed, fertilizer and chemicals as a group (group purchasing)?		
		Q22	Do you arrange transportation of the produce collectively or sell your produce collectively (group selling)?		
		Q23	As a group, do you select target crops and plan production/ marketing strategies collectively with the group members?		

Please write what changes you have made after SHEP. (e.g. Started making compost. Started to keep farm records.)

6. Example of Gender Awareness Training

In Kenya, a training called Gender Awareness Training has been part of the SHEP training course and offered to all the target farmer groups[4]. Kenya's gender awareness training is introduced here as an example[5]. Kenya SHEP's Gender Awareness Training is participatory and consists of four main exercises: (1) roles and responsibilities, (2) access to & control of resources, (3) daily activity calendar, and (4) farm family budgeting. Based on the realization of their gender issues through these four excercises, the farmers are to formulate (5) gender action plan and implement it.

Tip! *If it is difficult to talk about gender issues due to local social norms, consider involving local opinion leaders such as religious leaders of the community in the training. They need to be well briefed in advance so that they would be aware of the essence of the training.*

Tip! *During the group discussions, it is important for a facilitator to create a friendly environment so that the farmers can interact with each other comfortably without playing the blame game of arguing over who is responsible for certain issues.*

(1) Exercise on role and responsibilities

Male and female farmers, working separately in a group, identify which productive task (in this case, horticultural crop production) and reproductive task (household work) is done by which sex by allocating a total of four ticks per row. After finishing working in the group using the formats shown below, male and female groups present their discussion results and compare how men and women perceive gender roles differently in their daily productive and reproductive work. They will then discuss what changes in gender roles can be made in order to manage farm and household more efficiently. If there are many illiterate participants, pictures, instead of letters, can be used in activities boxes.

Productive Roles <Example>

	Activities	Men	Women
1	Seedbed establishment	✓	✓✓✓
2	Land preparation	✓✓✓	✓
3	Transplanting	✓✓	✓✓
4	Fertilizer application	✓	✓✓✓
5	Pesticide application	✓✓✓✓	
6	Weeding		✓✓✓✓
7	Harvesting	✓	✓✓✓
8	Cleaning, grading, packaging	✓	✓✓✓
9	Marketing	✓✓✓	✓
10	Income control	✓✓✓✓	

4 Since the target farming households in Kenya almost always have both husbands and wives heavily engaged in horticultural crop production, conducting gender-focused trainings on top of other marketing and production related trainings is considered beneficial for raising farmers' motivation and improving the efficiency of farming business.

5 Please contact your nearest JICA office for the full training curriculum and materials developed in Kenya.

Reproductive Roles <Example>

No	Activities	Men	Women
1	Cooking		✓✓✓✓
2	Washing		✓✓✓✓
3	Fetching firewood	✓	✓✓✓
4	Fetching water		✓✓✓✓
5	Caring for children	✓	✓✓✓
6	Caring for the sick	✓	✓✓✓
7	Grinding		✓✓✓✓
8	House repair	✓✓✓	✓
9	Security	✓✓✓✓	

(2) Exercise on access to & control of resources[6]

Male and female groups continue working to complete the two formats below. They identify which sex have access to important resources for various productive work. They also identify which sex have control over the same resources. Male and female discussion results will be compared and they will discuss how gender-specific restriction on access to, or control over, important resources can pose negative impact on the farm life. If there are many illiterate participants, pictures, instead of letters, can be used in resources boxes.

Access[7] to Resources <Example>

No	Activities	Men	Women
1	Land	✓✓	✓✓
2	Farm tools	✓✓✓	✓
3	Improved Dairy Cow	✓✓✓	✓
4	Local goat	✓	✓✓✓
5	Local chicken	✓	✓✓✓
6	Training on agriculture	✓✓✓	✓
7	Tomato (as a main crop)	✓✓	✓✓
8	Pepper (as a main crop)	✓✓	✓✓

Control[8] of Resources <Example>

No	Activities	Men	Women
1	Land	✓✓✓✓	
2	Farm tools	✓✓✓✓	
3	Improved Dairy Cow	✓✓✓	✓
4	Local goat	✓✓✓	✓
5	Local chicken	✓✓	✓✓
6	Training on agriculture	✓✓✓✓	
7	Tomato (as a main crop)	✓✓✓✓	
8	Pepper (as a main crop)	✓✓✓✓	

6 Resource: Anything that can be owned and used by farmers, such as land, tools, crops, animals, etc. to obtain a benefit from it.

7 Access: The opportunity to make use of a resource.

8 Control: The power to decide how a resource is used, who has access to it, when it can be sold.

(3) Exercise on daily activity calendar

Both males and females draw their daily activity calendars of a typical weekday. The activities include farm work, domestic work such as cooking and cleaning, as well as resting, sleeping, etc. In the plenary discussion, men and women compare their daily activity calendars and think about better time use for couples.

Men's daily activity calendar <Example>

Women's daily activity calendar <Example>

(4) Exercise on farm family budgeting

Male and female groups work separately to fill out the expenditure amount of each month on "Farm Family Budgeting Sheet" based on their typical annual spending pattern. If the farmers have trouble writing numbers due to literacy challenges, the implementers can ask them to use candy, small stones, etc. to represent a certain amount of money. Upon completion of the exercise, male and female groups show each other's sheet and discuss issues caused by lack of communication between a husband and wife on household budgeting, inefficient utilization of financial resources, and so forth. Through the process, the group is guided to explore what they can do for the better management of family budget.

Farm Family Budgeting Sheet

	Expenditure Item	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
	Total													

Photo: Kenya

(5) Gender Action Plan

Realization of inefficient gender roles, imbalanced decision-making power, and lack of trust and communication between a husband and wife leads to the group's further discussions on how they can overcome these issues. To assist them to take concrete action based on their increased awareness, the Gender Action Plan as shown below will be formulated. The plan lays out action items which would help solve some of the identified problems through the previous four exercises. The farmer groups are expected to implement the action plan through the course of SHEP implantation.

Gender Action Plan <Example>

Objective	Most tedious work	Activities	Resources	Schedule	Implementer	Monitoring indicator	Monitor	Remarks
Women's heavy workload reduced.	Fetching firewood	Purchasing of improved cooking stove	Money (Ksh.800) Labor to construct the kitchen	Dec 2018	Each group member	More than 70% of group members implemented	Group facilitator Executive Committee	When the sales of horticulture products in the next season is done

Suggestion: Organizing discussion sessions using anecdotal stories

The training modules explained from (1) to (5) so far are those of the Gender Awareness Training conducted in Kenya. Some countries, however, may face financial and human resource limitations for organizing such training sessions. In such a case, instead of organizing Kenya's way of gender training, holding a discussion meeting for exposing the target farmers to some of the key gender topics may be beneficial. An example of such a meeting is to introduce to the farmers some real-life anecdotal stories as shown below so that farmers would easily understand how important it is to have both husbands and wives actively engaged in decision-making for farm management. If the implementers can organize discussion sessions after introducing these stories, such an occasion can be a good awareness-raising opportunity for the farmers.

Column6 A story of a husband in a farming household

One day I left home in the morning to go look for a market for my tomatoes which were ready for harvesting. While I was away busy looking for a market, a buyer visited my home and found my wife. He asked if she could sell the tomatoes to him but since she had no authority whatsoever to make decisions and never knew my plans, she declined. My search for a market was unsuccessful so I headed home where my wife reported to me the events of the day. I really felt bad and my tomatoes got spoilt since I couldn't find a place to sell them.

Ask farmers:

✓ Is this situation familiar to you?

✓ Why do you think this problem happened?

✓ How do you think this kind of situation can be avoided?

Column7 A story of a wife in a farming household

My husband told me "I've heard cauliflower is profitable. Let's plant cauliflower on all of our land". I opposed to him by saying "Yes, but just on half of our land, not entire land" because I saw many other farmers had planted cauliflower already and heard many people saying they wanted to plant cauliflower. I knew by the time we harvest it, the price would go down. My husband did not listen to me and did what he wanted. We made a huge loss at the end of the season. After this bitter experience, however, my husband started to ask me "What crop do you think is good for this season?"

Photo: South Africa

Ask farmers:

✓ Is this situation familiar to you?

✓ Why do you think this problem happened?

✓ How do you think this kind of situation can be avoided?


I used to count money secretly in the toilet.
Right. I enjoy working together with you. We trust each other as a team.
But now you have become a better husband, discussing various farming and family accounting issues with me.

PART 3. GUIDANCE

“Part 3. GUIDANCE” provides additional information useful for the implementation of the SHEP Approach.

1. FAQs (Frequently Asked Questions)

Here are some frequently asked questions by SHEP implementers across the world. Based on diverse experiences of SHEP implementers and planners in and outside Kenya, some answers are prepared as shown below. Needless to say, there is no single answer to these types of questions. The readers are encouraged to find their own answers through working with farmers on the ground.

1.1. Questions Regarding Applicability and Methods of SHEP

Q1. Is the SHEP Approach only for horticulture? Can it be applied to other agricultural activities such as cereal and livestock production?

A1. The SHEP Approach can also be applied to other sub-sectors of agriculture. JICA is promoting the SHEP Approach in various agricultural sub-sectors as well as to countries outside Africa. For example, a rice project in Madagascar is using the SHEP Approach. In Namibia, promotion of livestock is now planned using the SHEP Approach. The target farmers in Pakistan are now trying to understand the market needs of livestock and improve their livestock business practices in accordance with the market preference. Other sub-sectors such as promotion of various cereals, fisheries, or agro-processing can also be potential users of the SHEP Approach as long as the initiative is about bridging the information gap between producers and market stakeholders through raising motivation of concerned actors of development. In fact, many of the SHEP farmers find themselves applying the knowledge they learned in SHEP to other income-generating activities such as livestock and food processing without being prompted by the government staff.

Q2. Won't the farmers get demotivated once the implementation of the SHEP training course is completed? How can I keep their motivation high even after SHEP intervention?

Photo: Takeshi Kuno/JICA, Kenya

A2. Those farmers who "graduated" the SHEP training do not usually become demotivated. It is true that after the intensive intervention of the SHEP training course, the extension staff visits the groups less frequently. However, since the relationship between the famer groups and extension staff is much stronger than before, they can communicate frequently over the phone and maintain a close relationship. Furthermore, since the farmer groups have established business networks with buyers, agricultural input suppliers, food processing companies, financial institutions, research institutes, and so forth through their participation in SHEP, they can continue having interactions and business transactions with them without one-on-one assistance from the extension staff. It is important for the SHEP implementers to explain to the target farmers that SHEP is about achieving self-reliant farming businesses at the beginning of the training.

Q3. How is SHEP different from other approaches such as Farmer Business School (FBS)? Don't they both promote market-oriented agriculture?

A3. It is true both SHEP and FBS try to promote "farming as a business". FBS usually invites representatives from a group and offer them intensive training sessions. The farmer representatives are expected to disseminate knowledge to the other group members after their participation in FBS trainings. SHEP, on the other hand, offers training opportunities to all the group members and helps them acquire and practice new skills though a "learning by doing" method. Therefore, things get rolling immediately because of that. Some SHEP implementers have also said that the SHEP Approach brings farmers and extension staff close together and they start trusting each other, which is an additional advantage of SHEP. Last but not least, SHEP not only promotes market-oriented agriculture but also raises farmers' motivation for practicing it based on the Self-Determination Theory. This point is something very unique to SHEP.

Q4. How is the SHEP Approach different from the Value Chain Development Approach?

A4. Both approaches try to achieve an efficient market economy by establishing stronger business linkages among the stakeholders on the value chain of particular commodities. While the Value Chain Development Approach often focuses on offering platforms where all the stakeholders in the value chain can have dialogues, the SHEP Approach places a special emphasis on farmers' capacity development so that the farmers themselves can identify market stakeholders on the value chain who are most relevant to their farm business and establish business networks with those stakeholders on their own initiative. In short, the SHEP's focus is on supporting farmers' autonomous motivation and skills to develop and leverage the value chain by themselves.

Q5. What are the main differences between the market survey and Stakeholder Forum if both events aim at filling the information gap between farmers and market actors?

Photo: Senegal

A5. Both events basically have the same purpose of addressing the issue of information asymmetry. However, implementers and farmers of SHEP implementing countries have identified some differences: (1) People have more time to have detailed and focused discussions in an undisturbed environment during the Stakeholder Forum than in the market survey, (2) Since a market survey is to be conducted by farmers themselves, the farmers can carry it out as frequently as they wish, in fact, on a regular basis, without a help from the government whereas the Stakeholder Forum is usually organized only once a year or so when resources become available at the government side. Therefore, the two events have different advantages and disadvantages.

1.2. Questions Regarding Marketing Challenges

Q1. For gaining more profit, isn't it better to advice farmers to "skip" middlemen and trade directly with wholesalers or retailers than to encourage them to have a good business relationship with middlemen?

A1. It is true that there are many cases where farmer groups increased profitability by skipping middlemen. However, for those farmers who live in remote areas, transportation is a big issue and they have few options as to where to sell. The only option may be to sell to middlemen. In such cases they are advised to seek a good business relationship with middlemen, rather than eliminating them. There are also other cases where the farmer groups compare two scenarios based on the information they gathered during the market survey: (1) sell to middlemen at the farm gate or (2) transport crops and sell to wholesalers at a market. After comparing the two scenarios, they may choose selling to middlemen in the end because profitability is high or because risk is low. The important thing is that the farmers become aware of who the market stakeholders are and what choices they have.

Q2. One of the major challenges of smallholder farmers is their inability to supply crops constantly to the market. How do the SHEP farmers overcome this problem?

A2. Since SHEP works with farmer groups, it tries to make the most of this arrangement. With regard to the issue of constant supply, successful farmer groups plan and coordinate harvesting times among the group members so that they can supply their crops to the market constantly. SHEP helps them with this process by teaching them how to prepare the Crop Calendar.

Q3. How can smallholder farmers start supplying their produce to supermarkets?

A3. In most cases, supplying to supermarkets is not easy for the smallholder farmers because of the supermarkets' strict quality requirements. The farmers start with local markets and gradually improve their production skills to meet the requirements of the supermarkets. It is best to take one small step at a time.

1.3. Questions Regarding Forms of Assistance

Q1. Can SHEP really achieve a high participation rate even though it does not give any financial or material assistance to farmers? I am afraid that the farmers' attendance will be less and less as we go along.

Photo: Takeshi Kuno/JICA, Kenya

A1. According to the Self-Determination Theory, it is not a good approach to say "Come to the training and you will get material assistance" because farmers' psychological needs for autonomy would be thwarted and they would only come to the training for receiving handouts. It is extremely important for the implementers, before starting SHEP activities, to clearly explain to the farmers that SHEP is purely capacity development training and does not give any material support. Make sure to choose those farmers who are willing to participate in SHEP after hearing this explanation. Having said

that, it is not that SHEP gives no support for addressing the issue of farmers' lack of financial means. SHEP does help the farmers to gain access to financial or material assistance. It is done by linking them with relevant stakeholders, such as NGOs, financial institutions and government departments, through the Stakeholder Forum and market survey. The important thing is that the farmers should take the initiative to establish relationships with the stakeholders who can provide various material assistance as SHEP supports farmers' psychological need for autonomy.

Q2. Sometimes providing material support is crucial for villagers' survival. But SHEP tries not to give financial or material support to farmers. Is SHEP denying humanitarian aid?

A2. Humanitarian aid is absolutely necessary in emergency situations such as disasters and conflicts. SHEP is designed to be implemented not in such an emergency but in a normal situation because SHEP's objective is to build farmers' capacity for conducting their farming business sustainably. SHEP also targets farmers who are above the subsistence level. In other words, they have a certain degree of financial capability to invest in horticultural businesses and it is not necessary for the government to provide them with material support to start SHEP activities. As for subsistence farmers, they need to be supported by an approach different from SHEP.

Q3. Many farmers are lacking in basic infrastructure for agricultural production or need start-up money for expansion of their farming business. They need loans. Does SHEP provide loans to the farmers?

A3. Not directly. However, through the Stakeholder Forum or market survey the farmers have a chance to link with banks, microfinance institutions or NGOs which provide loans to them. Many SHEP farmers in Kenya receive loans from such institutions for the expansion of their horticultural business.

Photo: Takeshi Kuno/JICA, Kenya

Q4. Shouldn't SHEP emphasize exporting and processing to add high value to horticultural crops?

A4. Exporters and processing companies can be invited to the Stakeholder Forum or visited during the market survey. Many farmers in Kenya actually succeeded in exporting vegetables to Europe. However, it is important to remember that SHEP's goal is not necessarily to get the farmers to export or add value to horticultural crops. As long as the farmers improve their farming business, it does not matter if their income comes from exporting or from domestic sales. The most important thing is to help farmers find the way of doing business which suits their situations the best.

1.4. Questions Regarding Targeting

Q1. Can we implement SHEP if the majority of the farmers are illiterate?
A1. Sure, we can. In fact, many SHEP implementing countries/ regions have a substantial number of illiterate farmers as beneficiaries. It is, however, necessary for the implementers to devise various means to overcome difficulties arising from illiteracy issues, such as developing visually attractive teaching materials, asking literate farmers to help their illiterate group members with reading and writing.

Q2. Can SHEP target a large farmer group with its members exceeding 100?
A2. It is possible to have a group of 100 plus as a target group. However, we need to be extra careful about issues such as efficiently disseminating information among the members and ensuring democratic decision-making. For that reason, you may want to ask the group to divide themselves into several sub-groups during training sessions for practical purposes, without damaging their feeling of unity as one group.

Q3. What if there are no organized farmer groups in the target area?
A3. The group does not have to be a formal group. Unregistered groups or informal groups can also be SHEP's target as long as there is a genuine sense of unity among the members of the group. It is also possible to implement the SHEP Approach to individual farmers if farmers in the target area only work individually without belonging to any form of a group. In such cases, it may be difficult to plan activities as a group during Crop Calendar making. The implementers need to encourage farmers to make a plan individually.

1.5. Questions Regarding Extension Staff and Systems

Q1. Will SHEP increase the workload of the extension staff?
A1. Experience suggests that there may be a slight increase in staff's workload particularly when they carry out new activities in the areas of marketing. However, many extension staff say their work became easier because they no longer get many phone calls from farmers asking them where to sell their produce during the harvesting months. Extension staff also get more job satisfaction than before because they can see farmers improve their livelihoods and their work is appreciated by the farmers. SHEP indeed not only motivates farmers but also motivates extension staff.


Photo: Ethiopia

Q2. Can SHEP be implemented if the number of extension staff is very much limited?
A2. Yes, it can, as long as you make some modifications to the standard implementation process. For example, Rwanda has overcome this problem by introducing the farmer to farmer extension approach for dissemination of production techniques.

1.6. Questions Regarding Financial Resources

Q1. Can SHEP be implemented if financial resources are very much limited at the government side?

A1. Yes, it can. This Handbook is designed for those circumstances where financial resources for implementation are limited. If you follow the instructions of the Handbook, you realize the activities are simple and streamlined, thereby they do not require a large budget. The SHEP Approach can, in fact, be incorporated in routine extension work without much extra financial resource.

1.7. Questions Regarding Gender

Q1. Gender is a sensitive topic. Are the farmers willing to discuss this issue?

A1. Kenya's experience suggests that farmers, both male and female farmers, are very happy about SHEP's gender-related activities. Gender is one of the most popular training topics among SHEP farmers in Kenya. The farmers like SHEP's gender topic because its focus is always on improving farming business, not on criticizing each other for gender-related problems.

2. Resources

For the promotion of the SHEP Approach, JICA has prepared various reference/ educational materials. Here is the list of some of the materials you can access on the Internet. Should you require additional information, please contact the JICA office in your country.

▶ SHEP Website
https://www.jica.go.jp/english/our_work/thematic_issues/agricultural/shep/index.html

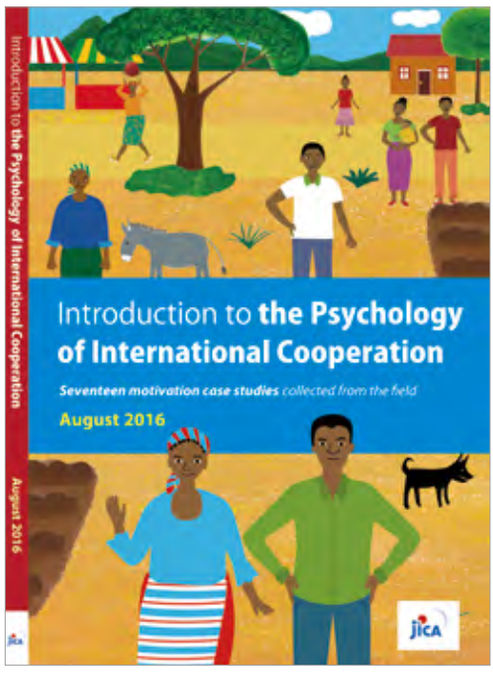
▶ SHEP Facebook
https://www.facebook.com/jicashep/

▶ SHEP Youtube Video “Smallholder Farmers Make Changes for Success at Market-SHEP Approach Spreading to the Whole Africa”
https://www.youtube.com/watch?v=idGw6xLljH8&feature=youtu.be

- JICA-Net multimedia-based Learning Material SHEP Approach (Short ver. 6min, Full ver.26min)
  https://jica-net-library.jica.go.jp/jica-net/user/lib/contentDetail.php?item_id=10064

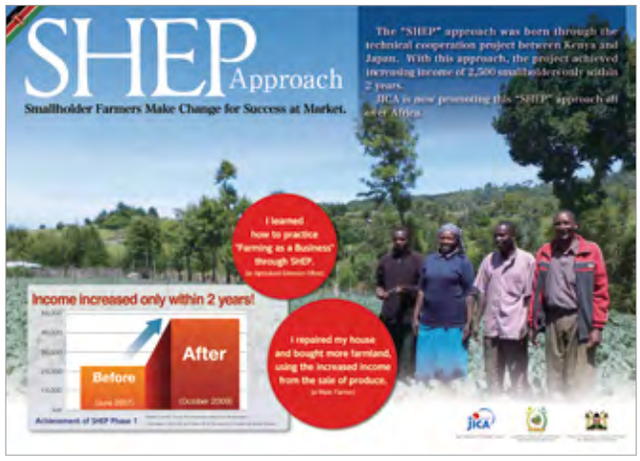
- SHEP Game App “Fun Fun Farming!”
  https://jica-net-library.jica.go.jp/jica-net/user/lib/contentDetail.php?item_id=10035

- Booklet “Introduction to the Psychology of International Cooperation”
  http://libopac.jica.go.jp/images/report/12092193.pdf



▶ SHEP Brochure “JAPAN Brand SHEP (September 2016)”
https://www.jica.go.jp/english/publications/brochures/c8h0vm0000avs7w2-att/japan_brand_08.pdf

▶ SHEP Brochure “SHEP pamphlet (March 2013)”
https://www.jica.go.jp/english/our_work/thematic_issues/agricultural/c8h0vm00009ul5bk-att/shep_04_en.pdf



▶ SHEP Brochure “SHEP’s Story (February 2014)”
https://www.jica.go.jp/english/our_work/thematic_issues/agricultural/c8h0vm00009ul5bk-att/shep_05_en.pdf

- SHEP Brochure “Do-nou Technology – Improving Rural Access Roads”
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ISBN978-4-86357-079-5