

Sindhuli Road Corridor Commercial Agriculture Promotion Project (SRC-CAP)

MANUAL FOR TRAINING TO EXTENSION STAFF TO PROMOTE THE CAP APPROACH



February 2020



Ministry of Agriculture and Livestock Development / Japan International Cooperation Agency

BACKGROUNDS

Sindhuli Road, which links Kathmandu valley and Terai was constructed by Japanese Grant Aid. In order to prepare for the expected changes by the opening of the Sindhuli Road, Government of Nepal (GoN) with the technical assistance from JICA, launched the project for the Master Plan Study on High Value Agriculture Extension and Promotion in Sindhuli Road Corridor (SRCAMP) from April 2011 to March 2014 and drafted the Master Plan and Action Plan to implement prioritized projects.

Based on the request of Government of Nepal (GoN), Japan International Cooperation Agency (JICA) supported to the then DoA/MoALD for a technical cooperation project which aims at increasing farmers' agriculture income through establishing a value-chain for high value commodities along Sindhuli Road Corridor through Sindhuli Road Corridor Commercial Agriculture Promotion Project (SRC-CAP). The Project team has developed an effective market-orientated horticulture extension approach which is named Commercial Agriculture Promotion (CAP) Approach after its Project name.

CAP Approach aims at the behavior and mind-set changes in farmers so that they can manage their farming as business with their own initiatives. Many farmers tend to grow their crops first, and when the harvest season approaches, they rush to find buyers for their produce. As consequence, they tend to sell their produce at low prices. CAP Approach promotes farmers to visit to markets and to directly communicate with buyers to collect the information on trend of demand, and to maintain the communication with buyers to obtain updated information. Based on such information from markets, farmers decide what to grow, when to grow and how to sell their crops. This is the behavior and mind-set changes from "Grow and Sell" to "Grow to Sell". To bring about such changes in farmers, CAP Approach adapts the SHEP Approach¹ developed by JICA in Africa into the Nepali context.

¹ JICA (2018) *SHEP Handbook for Extension Staff: Practical Guide to the Implementation of the SHEP Approach*, Japan International Cooperation Agency, Tokyo

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



PREFACE

We are very glad to present the Operational Guidelines of the Commercial Agriculture Promotion (CAP) Approach. This is an output of the “Sindhuli Road Corridor Commercial Agriculture Project (SRC-CAP)”, which has been implemented for five years between 2014 and 2020 by the Ministry of Agriculture and Livestock Development (MOALD) through the Department of Agriculture (DOA) with the technical and financial assistance from the Japan International Cooperation Agency (JICA).

SRC-CAP aimed at facilitating smallholder farmers to shift their mind-set and behavior from “Grow and Sell” to “Grow to Sell”, in order for them to increase their agriculture income by undertaking market-oriented agriculture. To this end, the project enhanced the knowledge and skills in vegetable farming and marketing of the target farmers and officials and staff of the three tiers of government of Nepal, by adapting the SHEP Approach of JICA into the reality of the target farmers.

The Operational Guidelines consist of the following three volumes. First, “The CAP Approach Handbook for Extension Staff” explains the concept behind as well as the procedure to facilitate farmer groups to carry out a series of the CAP Approach activities. This volume is targeting the extension staff of the local governments and other organizations, which are involved in providing agricultural extension services to farmer groups.

Secondly, “The Manual for Training to Extension Staff to Promote the CAP Approach” provides the concept behind as well the procedure to conduct a series of training on the CAP Approach. This volume is targeting to the officials and staff from Ministry of Land Management, Agriculture and Cooperatives (MOLMAC); Agriculture Development Directorate (ADD) and other organizations of the provincial governments, providing technical backstopping to extension staff.

Finally, “The CAP Approach Guidelines for Local, Provincial and Federal Governments” explains to decision makers and officials of the three tiers of governments of Nepal, about the concept behind as well as the procedure to apply the CAP Approach within their own jurisdictions in view of the promotion of market-oriented agriculture to smallholder farmers.

These three volumes were produced based on the experiences and lessons learnt through the implementation of SRC-CAP, with inputs from DOA, MOLMAC and ADD of Province 3, the 10 Local Governments of Dhulikhel, Namobuddha, Roshi, Temal, Melung, Khandadevi, Sunapati, Sunkoshi, Golanjor, Kamalamai, and the JICA Project Team for SRC-CAP.

In conclusion, I would like to express my sincere congratulations and appreciation to all the stakeholders from the institutions mentioned above for achieving the project objective and for producing this set of Operational Guidelines. I also extend my cordial thanks to JICA for its cooperation in the implementation of this important project. Even after the completion of SRC-CAP, all stakeholders will coordinate and collaborate to promote market-oriented agriculture to our smallholder farmers by referring to the Operational Guidelines. I hope that as many stakeholders and farmers as possible have opportunities to touch and apply this precious CAP Approach.

February 2020, Kathmandu



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(DOA)

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PART 1

PURPOSE AND SCOPE OF

THIS MANUAL

PART 1: PURPOSE AND SCOPE OF THIS MANUAL

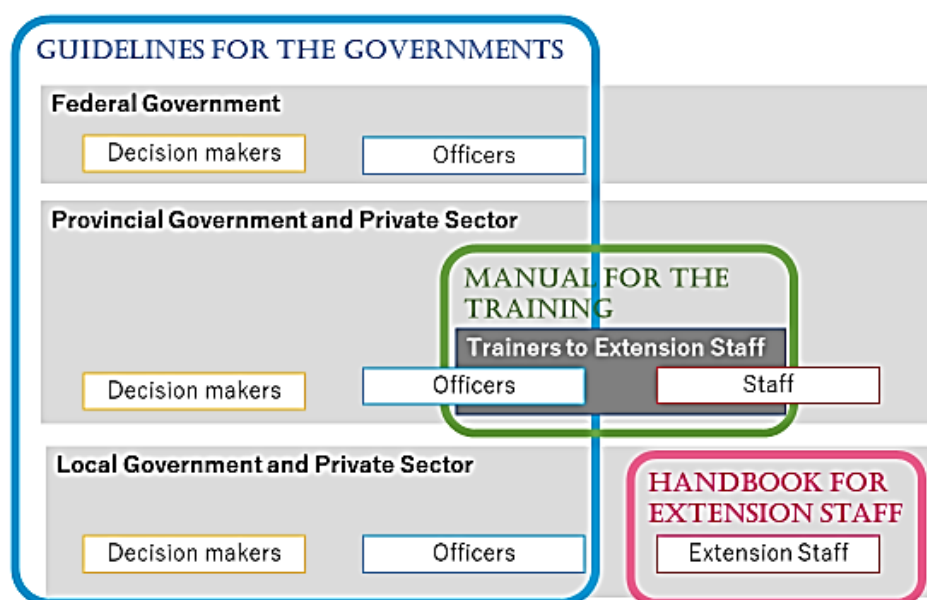
This is a technical manual for those Trainers to Extension Staff of Local Governments that are going to adopt or are currently applying the CAP Approach to promote market-oriented vegetable farming to smallholder farmers.

This Manual cannot go alone and should be referred to as part of the 3 volumes of the CAP Approach Operational Guidelines, namely, the Handbook for Extension staff, the Manual for Training to Extension Staff and the Guidelines for the Local, Provincial and Federal Governments of Nepal. The main target users of each volume of Operational Guidelines are illustrated in Table and Figure below.

The main target users of the 3 volumes of Operational Guidelines

| Volume of Operational Guidelines | Main target readers | Affiliated institution |
|--|---|---|
| Handbook for Extension Staff | Extension Staff | <ul style="list-style-type: none"> Local Government Private sector (firms, international and local NGOs) |
| Manual for Training to Extension Staff | Trainers to Extension Staff | <ul style="list-style-type: none"> Provincial Governments Private firms (firms, international and local NGOs) |
| Guidelines for the Governments | Decision makers, officers in charge of planning and budgeting | <ul style="list-style-type: none"> Local, Provincial and Federal Governments |

Source: SRC-CAP



Distribution of the main target readers of each volume of Operational Guidelines

Source: SRC-CAP

Trainers who are supposed to be the main user of this Manual could be officers of MOLMAC/ the Directorate of Agriculture Development of Provincial Governments, Non-Governmental Organizations, or any other organizations from the private sector. They will provide training to Extension Staff, upon request from Local Governments. Detailed roles of the Trainers are shown in Box 1 below, while those of the Extension Staff are also shown in Box 2.

The contents of this manual are tested through the implementation of the Sindhuli Road Corridor Commercial Agriculture Promotion Project (SRC-CAP) implemented by the Ministry of Agriculture and Livestock Development (MOALD) and the Department of Agriculture (DOA) with the Japan International Cooperation Agency (JICA) between 2015 and 2020.

Thus, this manual may work in most of the places of today's Nepal, however, the contents should be adjusted or improved by Trainers in accordance with the circumstances of the targets of training: Extension Staff of Local Governments.

Box 1: ROLES OF TRAINERS

- ✓ To provide the training to the Extension Staff of Local Government and any other organizations that are going to apply or is already applying the CAP Approach to their target farmers.
- ✓ To conduct the training with suitable contents at appropriate timing, upon a request from the Local Government or any other organization.
- ✓ To provide technical backstopping to the Extension staff by monitoring the activities of the Extension Staff with Farmer Groups, or by responding requests from the Extension Staff.

Box 2: ROLES OF EXTENSION STAFF

- ✓ To participate a series of training in the CAP Approach.
- ✓ To support the Farmer Group (FG) Selection to be undertaken by the Local Government or any other organization in charge.
- ✓ To provide training opportunities to the selected FGs in accordance with the CAP Approach process.
- ✓ To facilitate FGs to conduct market surveys, to make annual action plan, and to mobilize necessary resources to implement their annual action plan.
- ✓ To monitor the FG members' fields and their farming and marketing activities to give necessary advice on the spot.
- ✓ To report progress of the target FGs to the Local Government or any other organization in charge.
- ✓ To seek for external support to solve or alleviate problems faced by the target FGs, when they cannot be sorted out by the Extension Staff

PART 2

OVERVIEW OF THE CAP APPROACH

PART 2: OVERVIEW OF THE CAP APPROACH

1. Purpose of the CAP Approach

The CAP Approach aims at the mind-set and behavior change of smallholder farmers from “Grow and Sell” to “Grow to Sell” so that they can be self-reliant and established market-oriented farmers.

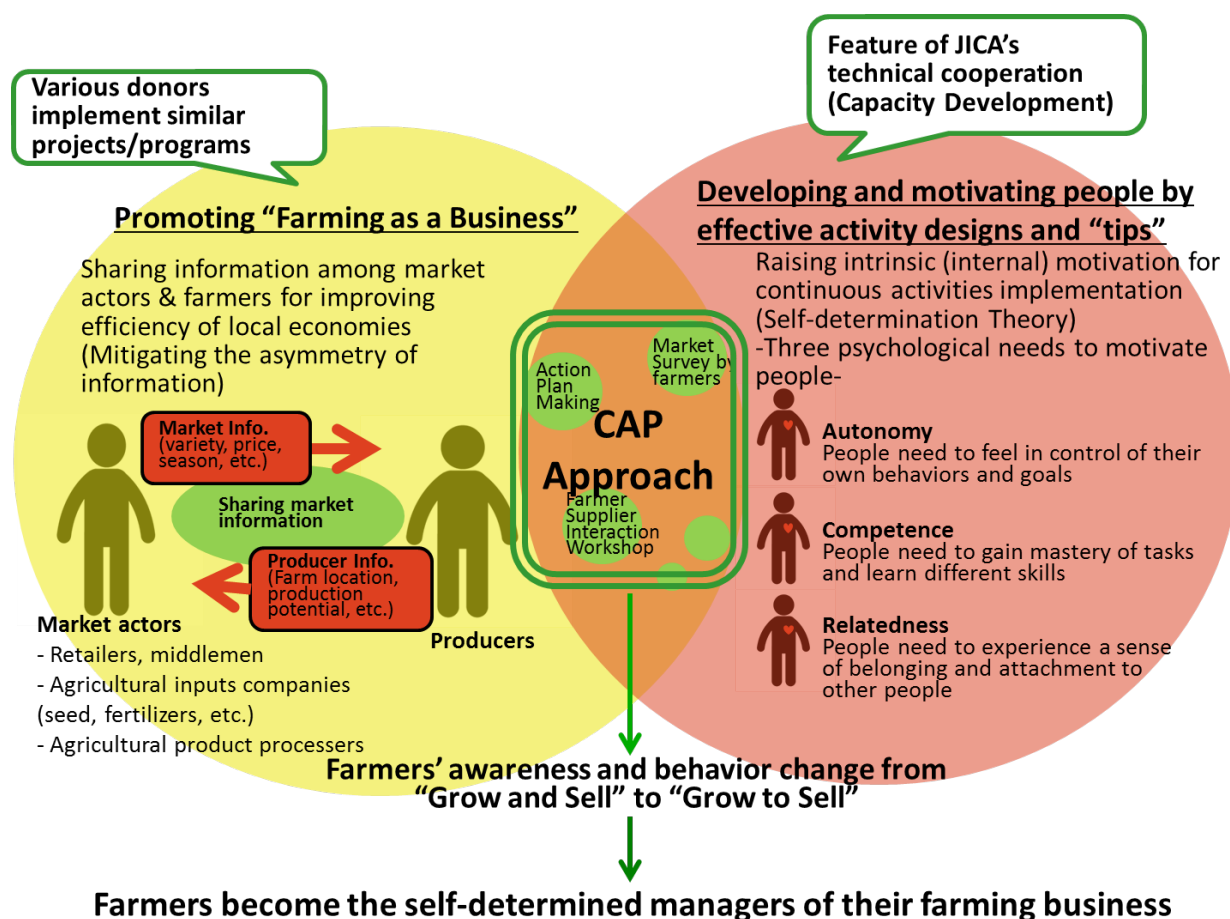
In Nepal, there are still many farmers who first start to grow any crops recommended by officers of the public and private sectors. When the harvest time approaches they suddenly start to look for buyers (“Grow and Sell”). Thus, many farmers ended up selling their produce to those buyers whom they do not know very well at a lower price than their expectation.

The CAP Approach promotes a paradigm shift. It encourages farmers to seek for information on demand in markets first, and to make necessary decisions for their agriculture business by analyzing the information collected. More precisely, with the CAP Approach, when farmers buy seeds of crops, they are supposed to already know to whom to sell their produce, which variety of which crop, when, in which size and how (“Grow to Sell”).

In order to make this paradigm shift happens, with the CAP Approach, the farming and marketing skills of farmers are also strengthened in accordance with the annual action plan prepared by themselves.

2. Two Key Supporting Pillars

2.1 The Two Pillars as the backbone of Approach



Two pillars of CAP Approach

Source: JICA 2018 edited by SRC-CAP

CAP Approach, which adapts 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, CAP Approach attaches a special emphasis on supporting farmers' autonomous motivation as it is an essential ingredient for achieving farmers' self-reliance and sustainable outcome that CAP Approach envisions. The diagram below depicts these two pillars CAP Approach 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 CAP Approach, 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".

2.2 The Economic Theory: Markets with Asymmetric Information

The circle on the left illustrates CAP Approach's main strategy for materializing market-oriented, as opposed to production-oriented, agriculture. CAP Approach believes asymmetric information, i.e. imbalanced information, between smallholder farmers and market actors such as vegetable buyers, agricultural input sellers, and 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, CAP Approach 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 (Column 1).

2.3 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 CAP Approach, 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. Finally, CAP Approach 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.

2.4 Fulfilling Two Requirements for Sustainability

CAP Approach's strength lies in the fact that all its activities are designed to fulfil both requirements maintained in the above-explained economic and psychological theories at the same time. In other words, CAP Approach 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' awareness and behaviour change from "Grow and Sell" to "Grow to Sell" will be realized, and they will be able to manage their farming business on their own initiative even without external support once they have completed the CAP Approach training course. CAP Approach'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.

Column 1 Mitigating information asymmetry by CAP Approach



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 farmers 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 CAP Approach's farmer-initiated market surveys, matching forums and farmer-supplier interaction workshops

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.



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' needs for autonomy, extension staff are advised to prepare opportunities for farmers to know and feel the market by themselves through their own actions such as market survey by themselves with adequate orientation by extension staff. These direct experiences could contribute to supporting autonomy more than simple information provision by extension staff. Also, extension staff need 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 CAP Approach 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 when we have successfully made an impact on our environment, in cases such as when we are able to achieve a task as planned in advance, or when we feel that our abilities are improving and when our curiosity is satisfied.

To provide competence support to farmers, it is necessary to breakdown the goals of the task into small steps and increase the numbers of milestones at which they can feel the impact of their action. In addition, it is also important to be specific about what farmers are doing well so that they gain knowledge that will be useful in judging how well they are doing. To both ends, it is helpful to make farmers understand why, when, and how much they need to do in order to attain each of the small goals or milestones.



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 CAP Approach 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 CAP Approach engagement and to be both physically and psychologically available for the farmers so that they can rely on them.



3. CAP Approach's Four Essential Steps

3.1 Four Essential Steps

With reference to the Self-Determination Theory, CAP Approach 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 and minimizing the information asymmetry. For instance, CAP Approach gives farmers various trainings in an optimal order. This order is called "CAP Approach's Four Essential Steps" as depicted below.

Further, it is recommended for extension staff to facilitate farmer group members reflecting each step in order to utilize the lessons and learnings for the next season's activity.

| Four Steps | Activities |
|---|---|
| 1. Farmers understand the goal | - CAP Approach Workshop |
| 2. Farmers' awareness is raised | - (Optional) Matching Forum - Market Survey by Farmers - (Optional) Farmer Supplier Interaction Workshop - Participatory Baseline Survey - Study Tour |
| 3. Farmers make decision | - Action Plan Making (Crop Selection, Crop Calendar Making & Resource Mobilization) |
| 4. Farmers acquire skills | - On-site Coaching |
| Follow-up and monitoring (including Participatory Endline Survey) | |

3.1.1 Step 1. Farmers understand the goal

First and foremost, Extension Staff 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 CAP Approach tries to achieve. Organizing the **CAP Approach Workshop** is a specific way to share this goal with the target farmers.

3.1.2 Step 2. 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 **Matching Forum** (as an optional activity), **Market Survey by Farmers**, **Farmer-Supplier Interaction Workshop** (as an optional activity), **Participatory Baseline Survey by Farmers** conducted by farmers themselves and **Study Tour**.

3.1.3 Step 3. Farmers make decisions

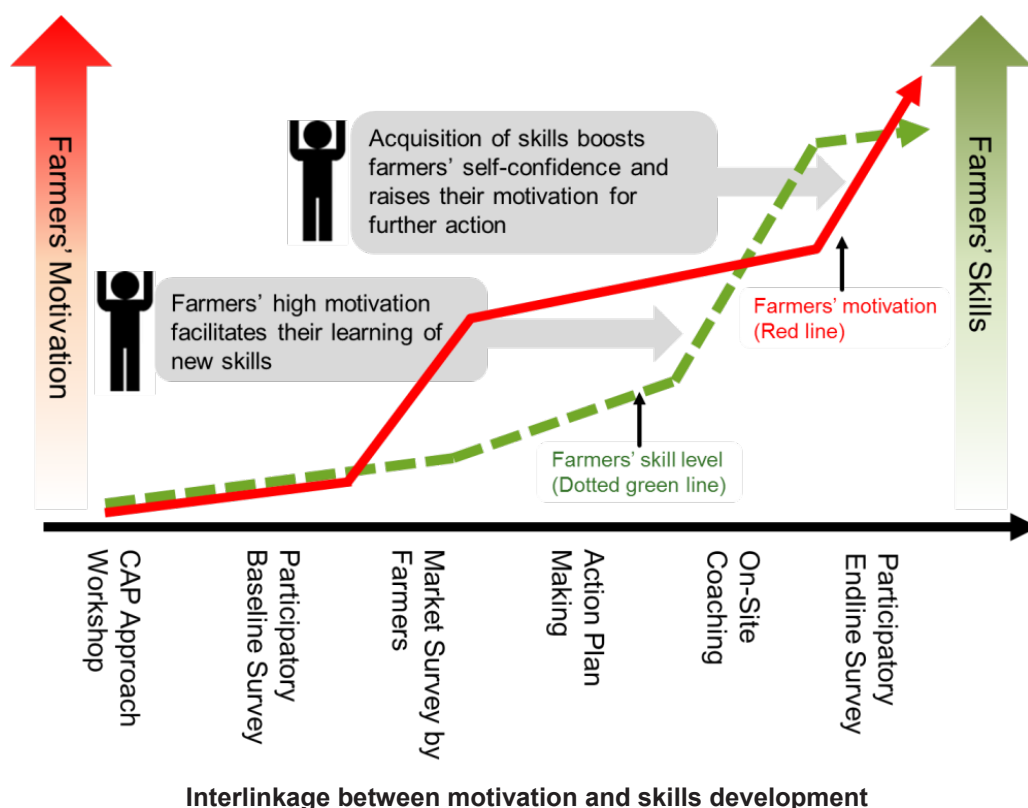
With the awareness and new knowledge, the farmers gained in the second step, they then make decisions to make a change. This is the third step called **Action Plan Making**. This process involves farmers (1) selecting target crops, (2) making crop calendar and (3) mobilising resources so that they will be able to strategically supply their target crops to the specific markets of their choice with the right timing.

3.1.4 Step 4. Farmers acquire skills

As the fourth step, the extension staff provide technical solutions in farming and marketing challenges to the farmers, i.e. give **On-site Coaching** for the crops the farmers selected, so that they can produce the crops as they have planned.

3.2 Interlinkage Between Motivation and Skills Development

Why does the CAP Approach take the rather time-consuming four steps instead of jumping to the 4th step, On-site Coaching? It is because CAP Approach believes that farmers need to first be motivated for them to learn and acquire new skills. CAP Approach 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.



Source: JICA 2018 edited by SRC-CAP

CAP Approach's four steps, or the optimum order of activities, which was examined and validated in Nepal, 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.

4. "Gender and Social Inclusion" in the CAP Approach

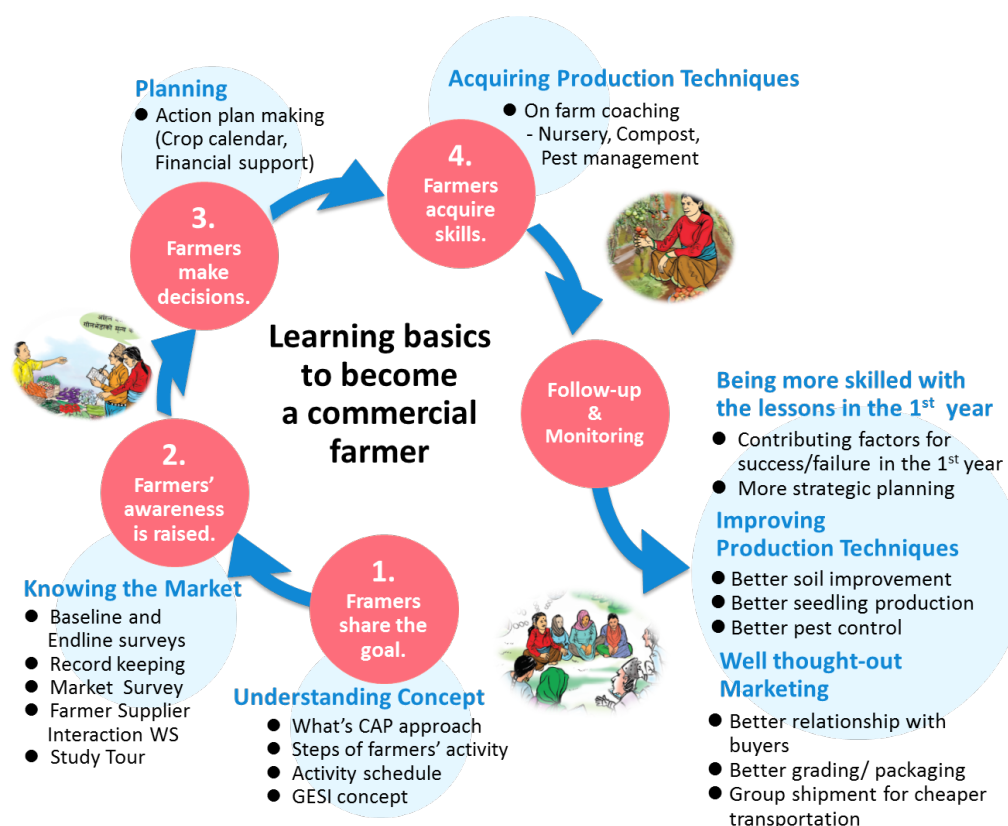
In line with ADS 2015-2035, CAP has also given emphasis on Gender and Social Inclusion (GESI) as one of the major cross cutting thematic area and incorporated it's thrust in all the activities. The project believes that one of the keys for success in market-oriented vegetable farming is that those members from the same household or family, including husband and wife, work as business partners by sharing the responsibility, burden and benefits incurred by their vegetable farming and marketing.

The CAP Approach promotes joint decision making on farming and marketing by those business partners from the same household or family throughout the following activities:

- 1) Providing a GESI training to the Farmer Group members at the initial stage so that they understand the importance of GESI perspectives in market-oriented agriculture;
- 2) Encouraging women and marginalized members to take the decision making positions (chairperson, secretary, treasurer etc.) in the group to make their voice heard;
- 3) Providing equal opportunities to male and female Farmer Group members for all kinds of capacity development activities to enhance their knowledge and skill on commercial farming;
- 4) Encouraging the Farmer Group members to keep the Farm Management Book and share the status of farming with other family members;
- 5) Encouraging the Farmer Group members to share lessons learnt from the project activities with other family members so that decision in vegetable farming and marketing are jointly made by their business partners at the household level;
- 6) Inviting the business partners of the Farmer Group members to other important activities of the project, such as action plan making, on-site coaching and reflections to facilitate them to reach an agreement or consensus in their farming and marketing.

5. Implementation Steps

The figure below is the illustration of the implementation steps. As explained earlier, the CAP Approach has 4 basic steps. After farmers receive assistance on these 4 steps in the first crop season, they continue some of these 4 steps in the second season in the first year. With the lessons learnt from the first year, farmers can become more strategic in production and marketing in the second year. It is recommended for effective results that farmers continue the cycle for 4 crop seasons in 2 years. For further details in implementation steps, refer to “1. Selection of CAP Approach Activities” in PART 3 of the Handbook for Extension Staff.



Flow of the activities for a season

PART 3

**PREPARATION AND
IMPLEMENTATION STRUCTURE**

PART 3: PREPARATION AND IMPLEMENTATION STRUCTURE

1. Orientation Meeting with Executive Committee of Local Government

Before starting the series of training to the Extension Staff on the CAP approach, the Trainer should have an orientation meeting with the executive committee or leaders of the Local Government or any other organization which have a plan to implement the CAP activities.

1.1 Overview of the Orientation Meeting

Objectives

- ✓ To facilitate those interested Local Governments or any other organizations to understand the CAP approach: its objectives; concepts; methodology and process; time; and expected roles & responsibilities of the Extension Staff in it.
- ✓ To facilitate those interested Local Governments or any other organizations to understand how to identify the potential of market-oriented agriculture of their jurisdiction by analyzing the physical and climatic conditions.
- ✓ To facilitate those interested Local Governments or any other organizations to understand how to set the criteria to select farmer groups (FGs) for the application of the CAP Approach.

Outline

| | |
|------------------------|--|
| Duration | Half day* |
| Venue | Conference room of the related Local Government office |
| Participants | Mayor/ Chairperson, Vice mayor/ Vice chairperson, Executive Secretary, Representatives of Extension Staff (Number of participants is around 10.) |
| Necessary Items | Management fee (Khaja and tea etc.), TADA for the participants, Power Point (PPT) Presentation materials, "Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff" |

Example of Timetable

| Duration | Topics | Materials | Reference | Handbook* |
|----------|--|---|-----------|-----------|
| 15min | <ul style="list-style-type: none"> • Introduction of participants • Opening Remarks | - | - | |
| 90min | [Session 1] <ul style="list-style-type: none"> • Explanation on overview of the CAP Approach | <ul style="list-style-type: none"> • PPT Presentation: "What is CAP" • Farm Management Notebook • "Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff" | 2.1.1 | p.2 |
| 60min | [Session 2] <ul style="list-style-type: none"> • Explanation and discussion on group selection | - | 2.1.2 | p.11 |
| 15min | <ul style="list-style-type: none"> • Planning of the next activity | - | - | - |

Note: * Relevant PowerPoint presentations with necessary explanation is made by the Trainers. Handouts of the presentations should be distributed to the participants for their reference.

* It is better to conduct both sessions on the same day.

* "Handbook" is "Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff" to be related each component and to be referred for implementation.

1.1.1 [Session 1] Overview of the CAP Approach

(1) Objectives of the session:

- ✓ To facilitate those interested Local Governments or any other organizations to understand the CAP approach: its objectives; concepts; methodology and process; time; and expected roles & responsibilities of the Extension Staff in it.
- ✓ To facilitate those interested Local Governments or any other organizations to understand how to identify the potential of market-oriented agriculture of their jurisdiction by analyzing the physical and climatic conditions.

(2) Description of the session:

This session is to be made by the Trainer to those Local Government leaders who are interested in the market-oriented agriculture with the CAP Approach. In order for those Local Government leaders to decide if they are going for the application of the CAP Approach or not, all information around the CAP Approach should be given in this introductory session. Not only possible positive impact and results on beneficiary farmers but also information on financial and human resources to be required to implement the activities should be shared.

It is already tested that the CAP Approach can work for vegetable farming. However, this Approach may also work for other crops or products such as fruits, spices, cereals, livestock, as far as the contents are adjusted accordingly. Those interested Local Governments and any other organizations are encouraged to do a SWOT analysis of the target area to identify the potential of their target area in market-oriented agriculture, as vegetables cannot be always the best choice.

(3) Procedure of the session: (Session time: Approximately 90 min)

| S/N | Item | Duration | Materials | Description |
|-----|------------------------------------|----------|-----------------------------------|--|
| 1 | Objectives and agenda | 10 min | - | ✓ The objectives and agenda of the session will be shared with the participants. |
| 2 | Outline of the CAP Approach | 50min | ✓ PPT Presentation: "What is CAP" | <ul style="list-style-type: none"> ✓ The objective, concept, targeting, methodology and procedure of the CAP Approach will be explained to the participants. ✓ The Trainers shall answer to questions and comments to be raised by the participants on the CAP Approach. |
| 3 | Question and Answer | 20min | - | ✓ Discussion for well understanding |
| 4 | Analysis of the target commodities | 20min | - | ✓ SWOT analysis of the target area to identify the potential of market-oriented agriculture |
| 4 | Planning and budgeting | 10min | - | ✓ An action plan with indicative budget to implement the market-oriented agriculture with the CAP Approach will be made by the participants with support from the Trainers. |

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|-------------------------------|---|
| Participants | ✓ Those Local Government leaders, including Mayor/ Chairperson, who are willing to make financial and human resource available for the promotion of agriculture in their jurisdiction should be invited. |
| Timing of Preparation Meeting | ✓ This preparation meeting with the executive committee of the Local Governments should be organized at a convenient day and time of the participants. If possible, it should be better to be held before planning season of the Local Governments. |
| Necessary materials | ✓ Not only handouts of the presentations but also “Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff”, “Guideline for Local, Provincial and Federal Government” and this manual should be distributed to the participants for their reference. |

1.1.2 [Session 2] Group Selection

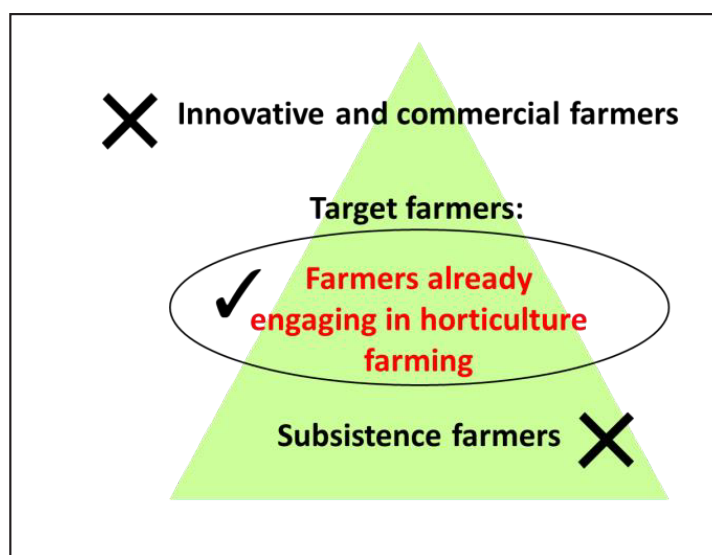
(1) Objectives of the session:

- ✓ To facilitate those interested Local Governments or any other organizations to understand how to set the criteria to select farmer groups (FGs) for the application of the CAP Approach.

(2) Description of the session:

The market-oriented vegetable farming and marketing require farmers both farming and marketing techniques and access to markets. The determinant factors to any farmer groups in Nepal for success in market-oriented vegetable are farming and marketing capacity of farmer groups and the natural and artificial conditions of farmers’ fields.

The target farmers for the CAP Approach are those farmers who are at the middle of the commercially established farmers and the subsistence farmers, as shown on the right-hand side. Preferably those farmers who have some experience in vegetable farming and marketing.



Target Farmer Groups of the CAP Approach

Based on the experience of applying the CAP Approach in Nepal, the followings are identified common characteristics of successful farmer groups in vegetable farming and marketing and they can be considered at setting the criteria for the selection of target farmer groups.

Possible criteria of the target farmers groups

1. The farmer groups are accessible all year-round by roads and transports.
2. The farmer groups have regular monthly meetings and very good group unity.
3. The leaders of the farmer groups address issues in a transparent manner and are interested in working for the members.
4. Agriculture is the main livelihood of the farmer groups and is the only livelihood they have potentials to improve.
5. The farmer groups have good access to markets (3-4 hours of road transport).
6. The group members are interested in increasing their income through vegetable farming and marketing.
7. The group members may have both low land and upland for farming.
8. The lands of the group members are irrigated.
9. The group leader (and/or the field facilitator) are actively involved in vegetable farming and marketing.

(3) Procedure of the session: (Session time: Approximately 60 min)

| S/N | Item | Description |
|-----|--|---|
| 1 | Objectives and agenda | The Trainer shares the objectives and agenda of the session with the participants. |
| 2 | Possible criteria | Taking into account the target population and enabling environment for market-oriented agriculture, possible criteria for the selection of FGs will be presented to participants for consideration. |
| 3 | Discussion among the participants to define criteria | The participants will discuss and agree criteria to be applied in the selection of FGs in their Municipality or Rural Municipality, in accordance with their human resource and financial capacity for the implementation of the program, and environment for market-oriented agriculture surrounding their FGs. |
| 4 | Selection of FGs or preparation of action plan | The participants will select FGs that are invited to the 1 st cycle of the market-oriented agriculture program by applying the agreed criteria. If there are needs to collect some more data or to discuss further on criteria to select FGs, an action plan for the selection of FGs should be developed by the participants in order to make sure that the selection will be done before the commencement of program. |
| 5 | Confirmation of the target FGs | After the session, if FGs selected by the Local Government leaders have willingness to participate in the program will be confirmed by the Extension Staff of the same Local Government. The FGs whose willingness is confirmed will remain as target group for the 1 st cycle of the program. |

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|------------------------|--|
| Selection of the group | <ul style="list-style-type: none"> ✓ The participants determine the selection criteria, but not Trainers, since the participants know better the reality on the ground within their Municipality or Rural Municipality. In addition, it is expected that this process will contribute to nurturing the sense of ownership among Local Government leaders. ✓ After the selection of FGs by Local Government leaders, it is important to confirm if there is willingness among members of the selected FGs to participate the CAP Approach. When the FG members are not willing to be engaged in market-oriented agriculture, the Local Government leaders better select another FG. |

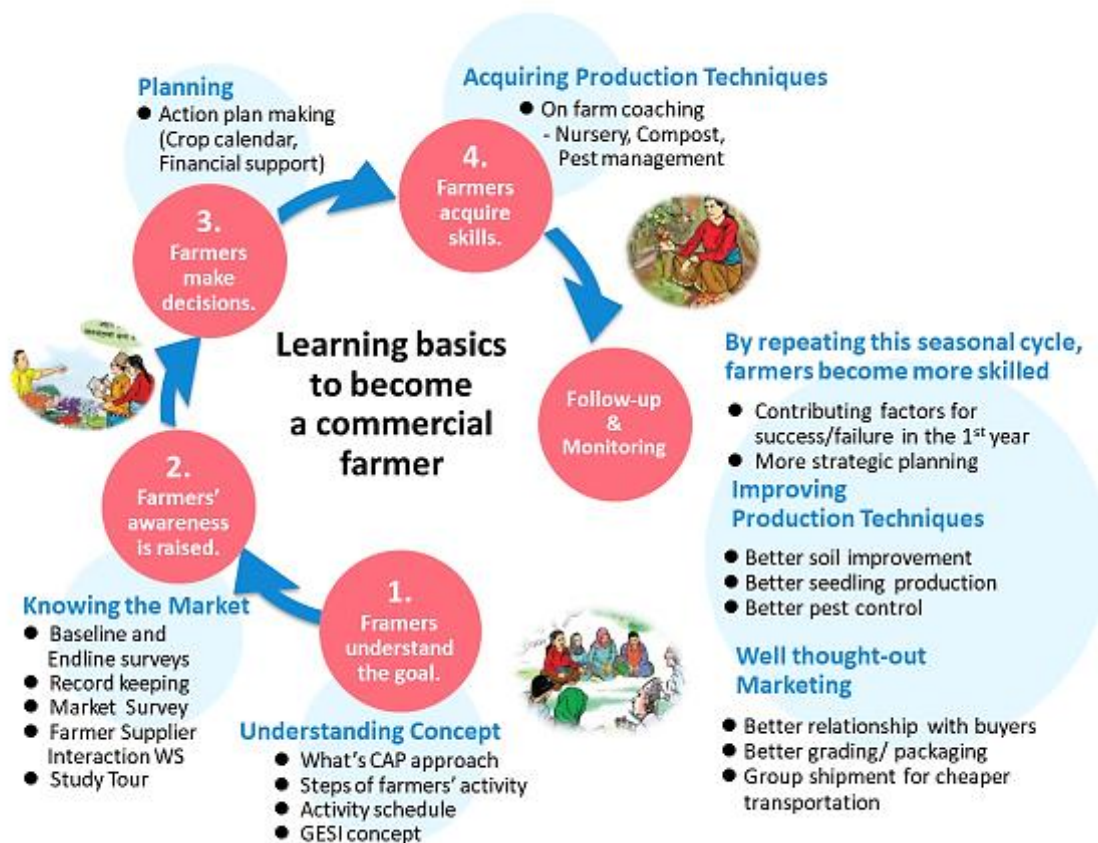
PART 4

TRAINING TO THE EXTENSION STAFF

PART 4: TRAINING TO THE EXTENSION STAFF

1. Overview through One Cycle of Two Years

This CAP approach can be implemented for two years as one cycle for supporting a target group to become commercial farmers. The following figure and table show the implementation steps of CAP activities with the farmers groups. Taking into account the expected timings of farmer activities, the trainings to the Extension Staff should be given at opportune timings

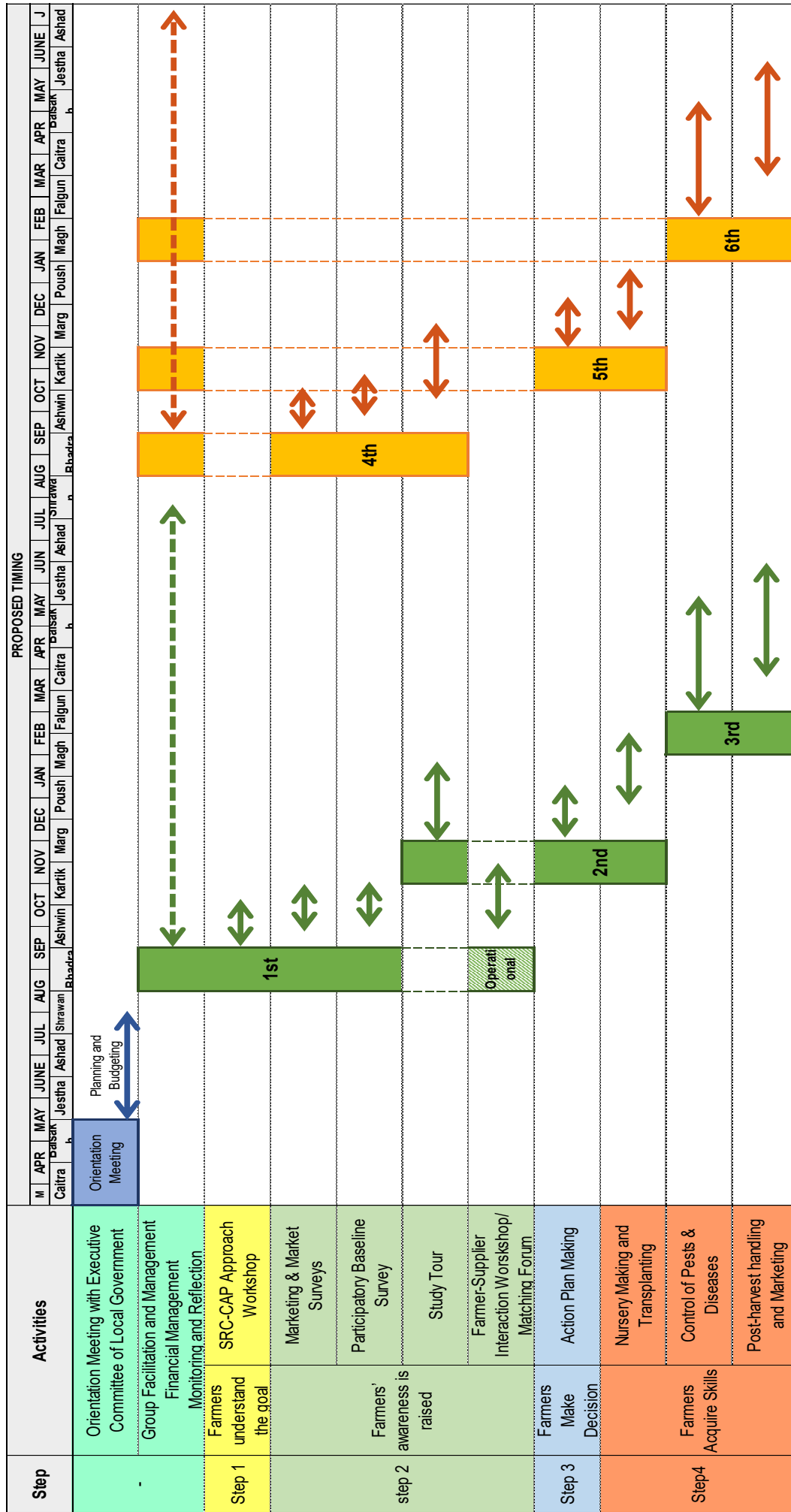


Implementation Steps of CAP Activities in one crop season

Five Essential Steps in the CAP Approach

| No. | Steps | Contents of SRC-CAP Approach | | | |
|-----|-------------------------------------|--------------------------------------|-----------------------------------|---------------------------|---------------------------|
| - | Pre-activity/ Overall activities | Group Selection | Group Facilitation and Management | Financial Management | Monitoring and Reflection |
| 1 | Farmers understand the goal | Overview | | | |
| 2 | Farmers' awareness is raised | Marketing & Market Survey | Baseline and End line Survey | FSIWS/ Matching Forum | Study Tour |
| 3 | Farmers make decision | Action Plan Making | | | |
| 4 | Farmers acquire skills | OFC/Nursery Making and Transplanting | OFC/Control of Pest and Disease | OFC/Post-harvest Handling | |

The implementation schedule in two years and contents of each training to the Extension Staff are shown in the following table.



: Timing of the training to the extension staffs.

: Delivery timing of the CAP activities from the extension staff to the target FGs.

Implementation Schedule of Training to the Extension Staff on the CAP Approach

2. Details of the Training

2.1 First Training

Objectives

- ✓ To help the Extension Staff understand the market-oriented agriculture program with the CAP Approach: its objectives, concepts, methodology and process, and expected roles & responsibilities of the Extension Staff.
- ✓ To help the Extension Staff understand how to implement each activity; CAP Approach Workshop, Participatory Baseline Survey, Farmer Supplier Interaction Workshop, Matching Forum and Market Survey, and to deliver the concepts of CAP Approach and other necessary techniques.

Outline

| | |
|------------------------|--|
| Duration | 3 days |
| Venue | Conference room |
| Participants | Extension Staff (Maximum number of participants is around 30.) |
| Necessary Items | Management fee (Venue, Khaja, Lunch, Water etc.), Stationary (Flipchart, Marker, Pen, Notebook, etc.), TADA for the participants, Power Point (PPT) Presentation materials and handouts, Farm Management Notebook (FMN), Baseline and Endline Survey Sheet |

Example of Timetable

| Duration | Topics | Materials | Reference | Handbook* ¹⁾ |
|------------------------|---|--|-----------|-------------------------|
| - | • Registration | • Attendants list | - | |
| - | • Introduction • Opening Remarks | - | - | |
| 180min (4 sessions) | • Overview of the CAP Approach • CAP Approach Workshop | • PPT Presentation: "What is CAP Approach" • PPT Presentation and Picture Story (<i>Kamishibai</i>): (1) "A Case of Rajan", (2) "A Case of Rupa" • Farm Management Notebook | 2.1.1 | PART 1, PART 2-1.1 |
| 580min (6 sessions) | • Group facilitation and management | • PPT Presentation: (1) "Positive attitude", (2) "Group Management", (3) "Level of awareness", (4) "Facilitation", (5) "Communication skill", (6) "Leadership" • Prepared brief report from the participants • Relevant pictures, stories etc. | 2.1.2 | - |
| 150min (3 sessions) | • Marketing and market survey | • PPT Presentation: "Grow to Sell" • PPT Presentation: "Cases in Marketing" • PPT Presentation: "Market Survey" | 2.1.3 | PART 2-2.2 |
| 40min (1 session) | • Participatory Baseline and Endline survey | • PPT Presentation: "Baseline Survey" • Baseline and End line survey sheet • <i>Anchoko</i> for explanation of both surveys • List of the unit conversion | 2.1.4 | PART 2-2.4 |
| 30min (1 session) | • Farmer Supplier Interaction Workshop/ Matching Forum | • Sample outline of the Farmer Supplier Interaction Workshop/ Matching Forum | 2.1.5 | PART 2-2.1, 2.3 |
| - | • Reflection | - | - | |

| Duration | Topics | Materials | Reference | Handbook ^{*1)} |
|----------|--|-----------|-----------|-------------------------|
| | <ul style="list-style-type: none"> • Planning of the training to the FGs^{*2)} • Closing remarks | | | |

Note: *1) Handbook is “Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff” to be related each component and to be referred for implementation.

*2) In a planning session, the participants make a plan/schedule of the training (Action plan making and On-site coaching) and study tour to the selected FGs.

*3) Relevant PowerPoint presentations with necessary explanation is made by the Trainer. Handouts of the presentations will be also distributed to the participants for their reference after the session.

2.1.1 Overview of the CAP Approach

(1) Objectives of the session

- ✓ To make the Extension Staff understand the Market Oriented Agriculture Program with the CAP Approach: its objectives; concepts; methodology and process; time; and expected roles & responsibilities of the Extension Staff in it.
- ✓ To make the Extension Staff understand how to implement the “CAP Approach Workshop” to the selected FGs.

(2) Description of the session

This is the first session to the Extension Staff, who are going to implement the market-oriented agriculture program with the CAP Approach, and it should be delivered following to the group selection by Local Government. Thus, the trained Extension Staff can start the 2-year program smoothly by giving the same orientation to the selected FGs. In the session, the objective and concept behind, together with all the entailed activities of the said approach are explained so that the Extension Staff can later give the same orientation to members of the selected FGs.



(3) Procedure of the session (Session time: 180min)

| S/N | Topics | Duration | Materials | Description |
|-----|--|----------|---|---|
| 0 | Objectives | 10min | - | <ul style="list-style-type: none"> ✓ Objectives and outline of the session. ✓ Outline and agenda of “CAP Approach Workshop”. |
| 1 | CAP Approach | 40min | ✓ PPT Presentation: “What is CAP Approach?” | ✓ Objective, concept, targeting, methodology and procedure of CAP approach (with practice). |
| 2 | Success story in market-oriented agriculture | 50min | ✓ PPT Presentation: “A Case of Rajan” | ✓ Rajan’s success story in market-oriented agriculture. And how to explain it to farmers with using <i>Kami-shibai</i> . (with practice) |
| 3 | Gender perspectives | 50min | ✓ PPT Presentation: “A Case of Rupa” | ✓ Rupa’s story with the importance of building business partnership within the household in market-oriented agriculture. And how to explain it to farmers with using <i>Kami-shibai</i> . (with practice) |

| S/N | Topics | Duration | Materials | Description |
|-----|------------------------|----------|----------------------------|---|
| 4 | Explanation of the FMN | 30min | ✓ Farm Management Notebook | ✓ Contents and concept of FMN and how to utilize it (with practice) |

*After each topic, it is better to have a question and answer session for well understanding.

* (with Practice): It is better to have a time for participants to practice a role play of the methodology for delivering the contents to the selected FGs. So, the durations include the practice session.

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|------------------------|--|
| All topics | ✓ For all topics, a practice session should be included to understand well the methodology for delivering the contents and techniques to the selected FGs. |
| CAP Approach | ✓ During the CAP activities, a change of the motivation and skill level of the selected FGs are very important. The FG members and their partners should understand the main concept of CAP Approach is not only supporting techniques but also facilitating the selected FG's autonomy, competence and relatedness. |
| Explanation of the FMN | ✓ Farm Management Notebook should be distributed during this training for explaining how to utilize and fill up it. |

2.1.2 Group Facilitation and Management

(1) Objectives of the session:

- ✓ To provide the Extension Staff with knowledge and skills of group management, leadership, communication and facilitation, so that they can effectively deliver extension services to FGs. In addition, it is also expected that the trained Extension Staff pass on the acquired knowledge and skills to FG leaders. Thus, FG leaders may manage and their group in a self-reliant manner, even after the phase-out of external interventions.

(2) Description of the session:

This session should be delivered to the Extension Staff at the beginning of the market-oriented agriculture program together with the orientation session, so that they can build a good relationship with FGs through the implementation of the program. The session can be outsourced to a private firm or consultant specialized in communication/ facilitation. The duration for the intensive session should be for 2 days to cover different aspects of group management. To facilitate the Extension Staff to acquire knowledge and skills within the limited duration of training, role-playing methods should be applied through the session.



(3) Procedure of the session: (Session time: 580min)

| S/N | Topics | Duration | Materials | Description |
|-----|--|----------|---|--|
| 0 | Objectives | 10min | - | ✓ Objectives and outline of the session. |
| 1 | Review and Reflection of the existing groups' and their activities | 120min | ✓ PPT Presentation: "SWOT Analysis" | ✓ Group work: Reflection and analysis through SWOT analysis ✓ Discussion items; input purchase, Income, production, marketing, regular group meeting, communication and sharing, participation, decision making, GESI, capacity building etc. |
| 2 | Attitude and Behavior | 90min | ✓ PPT Presentation: "Positive attitude" | ✓ Question/Answer, Moral stories discussion ✓ Discussion items; Attitude and Types, |

| S/N | Topics | Duration | Materials | Description |
|-----|---|----------|--|---|
| | | | | Importance of Positive attitude, Role of positive attitude for the success |
| 3 | Group Management | 90min | ✓ PPT Presentation: "Group Management" | ✓ Group discussion, Brain storming, presentation and game ✓ Discussion items; Group what and why, Understanding group dynamics, Element of successful group |
| 4 | Essential skills for group Management (1) | 90min | ✓ Prepared brief report from the participants, ✓ PPT Presentation: "Level of awareness" | ✓ Presentation, Group discussion, Question /answer, ✓ Discussion items; understanding behavior of the group members (Level of awareness), Motivation |
| 5 | Essential skills for group Management (2) | 90min | ✓ PPT Presentation: "Facilitation" | ✓ Role play, plenary discussion, presentation, question/answer ✓ Discussion items; facilitation skill, quality of good facilitators |
| 6 | Essential skills for group Management (3) | 90min | ✓ PPT Presentation: "Communication skill" and "Leadership" | ✓ Role play, Plenary discussion, Game, Presentation, Question/answer ✓ Discussion items; effective communication skills, leadership skill, quality of successful leaders |

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|-------------------------|---|
| Lecturer of the session | ✓ In this session, more general and psychological skills for group facilitation are delivered to the participating Extension Staff for their smooth implementation of the market-oriented agriculture program in the field. So, it is recommended to invite an expert on this area. |

2.1.3 Marketing and Market Surveys

(1) Objectives of the session

- ✓ To make the Extension Staff understand the importance of change of farmer's mind-set from "Grow and Sell" to "Grow to Sell" and the concept and methodology of market surveys as tool for such a mind-set change.
- ✓ To make the Extension Staff understand how to facilitate "Market Surveys" and encourage farmers to go to market frequently to collect the information on trend and demand directly from traders.



(2) Description of the session

In conventional agriculture extension, its focus is more on production or productivity than sales of produce in market, which farmers cannot control. That is why the motivation of farmers has remained at a low level and farmers complain about difficulties in marketing and sales.

The CAP Approach encourages farmers to get to know more about the market and marketing in first instance, more precisely, about which crop of which quality has highest demand in market and when. With such market information, farmers can produce to meet the demand in order to obtain a better price.

Note: In this manual, market refers to an arrangement whereby buyers and sellers come in contact with each other directly or indirectly to buy or sell goods. Marketing is the process of producing/developing, promoting and distributing produce to satisfy customer's wants and needs. Marketing is important to all farm enterprises, regardless of their size. It is strongly recommended that farmers identify and research target markets, before they become a market-oriented vegetable grower.

(3) Procedure of the session (Session time: 150min)

| S/N | Topics | Duration | Materials | Description |
|-----|-------------------------------|----------|---|--|
| 0 | Objectives | 10min | - | <ul style="list-style-type: none"> ✓ Objectives and outline of the session. ✓ Outline and implementation procedure of "Market Survey". |
| 1 | Marketing "Grow to sell" | 60min | ✓ PPT Presentation: "Grow to Sell" | <ul style="list-style-type: none"> ✓ Understanding one of the main concepts of CAP Approach "Grow to Sell" ✓ General market situation and characteristics of the market in target area |
| 2 | Group Discussion on Marketing | 50min | ✓ PPT Presentation: "Cases in Marketing" (practice) | ✓ Group discussion to understand how to deal with market-oriented vegetable farming in various marketing situation |
| 3 | Market Survey | 30min* | ✓ PPT Presentation: "Market Survey" | <ul style="list-style-type: none"> ✓ How to arrange and implement the "Market Survey" ✓ Survey contents |

*If the Trainer can give an opportunity for the participants to conduct a trial of Market Survey at the actual market, a necessary time should be added to the total time of the training.

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|---------------|---|
| Market Survey | <ul style="list-style-type: none"> ✓ If the budget and time are available, it is better to have a practice of market survey at the actual market with the Extension Staff. If it is difficult to conduct the practice during the training, the Extension Staff should practice the Market Survey as a role-playing by themselves for well understanding. ✓ The first Market Surveys for farmers may require technical backstopping by the Extension Staff in charge, so that farmers can learn how to conduct it in actual situation. However, in the end, Market Surveys should be conducted by farmers alone with necessary frequency and by appropriate modes (namely, by actual visit, SMS, phone calls, etc.). |

2.1.4 Participatory Baseline and Endline Surveys

(1) Objective of the session

- ✓ To make the Extension Staff understand the objectives and methodology of participatory baseline and endline survey with the individual member household.

(2) Description of the session

Participatory baseline and endline survey enable farmers to evaluate whether/when/how they could to gain a profit or not from the vegetable farming. Based on the experience and result of each season/year, they can know what went well and what not and adjust their farming plan in the coming season. Likewise, the implementing organization such as the Extension Staff from Local Government can assess the cost and benefit ratio of their investment and the selected FG's performance to make a future plan to support the selected FGs continuously, to implement other agriculture extension work and to make a rational decisions in future.



(3) Procedure of the session (Session time: 40min)

| S/N | Topics | Duration | Materials | Description |
|-----|--|----------|--|---|
| 0 | Objectives | 10min | - | <ul style="list-style-type: none"> ✓ Objectives and outline of the session. ✓ Outline and implementation procedure of “Participatory Baseline Survey” (H-p.17). |
| 1 | Explanation of participatory baseline and endline survey | 30min | <ul style="list-style-type: none"> ✓ PPT Presentation: “Baseline Survey” ✓ Baseline and End line survey sheet ✓ Anchoko for explanation of both surveys ✓ List of the unit conversion | <ul style="list-style-type: none"> ✓ Explanation of the contents of the baseline and endline survey form with showing an actual survey sheet; productivity (cultivation area, production and income etc.) and technical level on cultivation and marketing. ✓ Practice to fill up all the contents as example will be done by the participating Extension Staff. ✓ How to facilitate and support farmers to evaluate themselves. |

(4) Tips and expected effect of the session

| Topics | Tips and effects |
|--|---|
| Explanation of participatory baseline and endline survey | <ul style="list-style-type: none"> ✓ It is better to let the Extension Staff fill up all the sheet of baseline and endline as example and make a presentation to other participants. All the participating Extension Staff should learn how to fill up the sheet. ✓ The most striking issue is the use of local units in recording data and standardization into standard measurement unit. For this, it has to be well prepared a conversion table so that final comparison is uniform across the groups and municipality. ✓ During this session, the participating Extension Staff become confident to explain why baseline and endline survey and its analyzed result are important for future improvements or planning. ✓ The format should be easy since farmers themselves should fill up all the contents for knowing the current situation and changes after CAP activities to make a future. |

2.1.5 Farmer-Supplier Interaction Workshop/ Matching Forum (Optional Activity)

(1) Objective of the session

- ✓ To make the Extension Staff understand the objectives, contents of Farmer supplier interaction workshop and Matching Forum.

(2) Description of the session

Farmer Supplier Interaction Workshop is to expose farmers with different actors and stakeholders from research stations, extension offices, input suppliers, bankers/microfinance suppliers, insurance related to vegetable (agribusiness) production activities and update about new technologies necessary for expanding their business. FSIW, however, does not include middlemen and wholesalers who are dealt in separate session called Matching Forum.

Matching Forum is to introduce producer and buyers to know each other and build trust to enhance the vegetable marketing, exchange information gap and opportunities in vegetable marketing and share information regarding what crop, quantity, quality and time of possible transaction in the future.

Both events can be implemented as an option event of the CAP approach. It is better to decide to conduct the event according to the marketing situation of the selected FGs and available budget of Local Government.

(3) Procedure of the session (Session time: 30min)

| S/N | Topics | Duration | Materials | Description |
|-----|---|----------|----------------------------|--|
| 1 | Explanation of Farmer supplier interaction workshop | 15min | ✓ Example of the timetable | ✓ Example of the timetable and expected participating suppliers who links the vegetable farming. |
| | Explanation of Matching Forum | 15min | ✓ Example of the timetable | ✓ Example of the timetable and expected participating buyers who links the vegetable farming. |

(4) Tips and expected effect of the session

| Topics | Tips and effects |
|----------------------------|--|
| Explanation of both events | <ul style="list-style-type: none"> ✓ It is better to explain the difference of both events and to advice the Extension Staff how to prepare and organize both the events by inviting related stakeholders and by mobilizing enough budget. ✓ Preparation needs to be done well in advance as it is difficult to set an appropriate date for all actors and stakeholders. The venue should be accessible by road to facilitate transporting display materials including agriculture equipment and machinery by the service providers. ✓ It is recommended to organize such events jointly by more than two Local Governments in convenient place for both. |



Farmer Supplier Interaction Workshop



Matching Forum

2.2 Second Training

Objectives

- ✓ To help the Extension Staff understand the methodology to train farmers making the action plan through the market information and start the vegetable cultivation based on the plan.
- ✓ To help the Extension Staff understand how to implement each activity; Action plan making, Study tour and On-site coaching, and to deliver the necessary techniques to the selected FGs.
- ✓ To review the activities already implemented by each extension officer at target area.

Outline

| | |
|------------------------|--|
| Duration | 2-3 days |
| Venue | Conference room and field (if the practical training will be conducted) |
| Participants | Extension Staff (Maximum number of participants is around 30.) |
| Necessary Items | Management fee (Venue, Khaja, Lunch, Water etc.), Stationary (Flipchart, Marker, Meta card, Pen, Notebook, etc.), TADA for the participants, Power Point (PPT) Presentation materials, Agricultural equipment (seeds, poly bag, plastic tray, compost, fungicides (ex. Bavistin), water can, roofing materials to protect nursery, hoe etc.), etc. |

Example of Timetable

| Duration | Topics | Materials | Reference | Handbook ^{*1)} |
|--|--|---|-----------|-------------------------|
| - | • Registration | • Attendants list | - | - |
| - | • Introduction of participants • Opening Remarks | - | - | - |
| 30min | • Review for the implemented activities ^{*2)} | - | - | - |
| 150min (2 sessions) | • Action plan making | • PPT Presentation: “Action Plan Making” | 2.2.1 | PART 2-3.1 |
| 30min (1 session) | • Study tour | • | 2.2.2 | PART 2-2.5 |
| 130min~ (3 sessions + depend on the number of crops) | • On-site coaching (Overall outline and Nursery Making and Transplanting for the Dry Season) | • PPT Presentation: “On-site Coaching” • PPT Presentation: Nursery making and Transplanting • PPT Presentation: Cultivation management of each crop • Brochures for the Extension Staff on outline of on-site coaching | 2.2.3 | PART 2-4.1 |
| - | • Reflection • Planning of the training to the FGs ^{*3)} • Closing remarks | - | - | - |

Note: *1) Handbook is “Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff” to be related each component and to be referred for implementation.

*2) In a review session, the participants share the activities done by themselves and good/bad practices, then the Trainers should advise them to improve for the next season.

*3) In a planning session, the participants make a plan/schedule of the training (Action plan making and On-site coaching) and study tour to the selected FGs.

*4) Relevant PowerPoint presentations with necessary explanation is made by the Trainer. Handouts of the presentations will be also distributed to the participants for their reference after the session.

2.2.1 Action Plan Making

(1) Objectives of the session:

- ✓ To make the Extension Staff understand why the farmers shall be encouraged to make their own annual action plan.
- ✓ To make the Extension Staff understand how to facilitate the “Action Plan Making” workshop with the selected FGs.

(2) Description of the session:

Action plan formulation is a planning process at group level, where all the group members and their counterpart are invited to participate and listen the results of Market Survey, reflect their experiences and decide their priority crops, workout area to be cultivated under each selected crops by an individual household (*tentative individual production plan*), list of problems/constraints/difficulty and identify resources and service gaps. Major steps “Action Plan Making” is as below; 1) selection of target crops for the 1st year, 2) development of crop calendar through the year based on the market information and 3) identification of necessary inputs and their sources. In this session both husband and wife of the member household (if not other members) are invited to discuss in the crop selection meeting.

1) Selection of target crops for the 1st year

Session starts with sharing of market survey results by the representatives who visited the market with support from the Extension Staff. The Extension Staff should ask the FG members to list up the major vegetable crops both from the market survey and grown in the local area and to share the information on available opportunities and favorable factors for their commercial agriculture. Then the FG members discuss plenary about the prioritization of crops for production.



According to the result of voting, the 4 crops for 1st year will be finally decided by the participating FG members and their partners. However, the Extension Staff should advise them to select the target crops based on the technical information such as weather condition, cultivation condition, and other government policy which is related to the marketing.

2) Development of crop calendar through the year

Preparation of crop calendar is to make aware all the group members about the schedule; Nursery, Planting/transplanting, disease and pest management, harvesting & post-harvest operations of vegetable production & marketing in the area and prepare their cultivation plan accordingly.

Although FGs should prepare the crop calendar based on the market information, the Extension Staff should advise them to develop the crop calendar of target crops base on the technical information such as weather condition and other cultivation conditions. Procedure of the session. Completed crop calendar format is presented in the plenary for comments and feedback and revised if necessary.

3) Identification of necessary inputs and their sources

The Annual Action Plan of each FG should be completed by identifying necessary inputs and their sources to implement the same plan. The Extension Officers are to facilitate the FG members and their partners to identify all the required inputs and among them which inputs can be provided by the FG member households themselves. Meanwhile, for those technical and financial inputs that the FG members and their partners cannot afford, they are encouraged to seek for external support.

External Officers may collaborate with FGs by facilitating the information on subsidies and technical and financial support from external public and private organizations that are available for the concerned FGs, as the Local Governments tend to have updated information on any external support for farmers in the jurisdiction.

(3) Procedure of the session: (Session time: 150min)

| S/N | Topics | Duration | Materials | Description |
|-----|--|----------|--|---|
| 0 | Objectives | 10min | - | <ul style="list-style-type: none"> ✓ Objectives and outline of the session. ✓ Outline and implementation procedure of “Action Plan Making” |
| 1 | Selection of target crops for the 1 st year | 80min | ✓ PPT Presentation: “Action Plan Making” | <ul style="list-style-type: none"> ✓ Share the market survey results ✓ List up the potential crops ✓ List up the opportunities and favorable factors ✓ Nominate and vote the 4 target crops for 1st year (2 crops will be targeted by each season). |
| | Development of crop calendar through the year | | | <ul style="list-style-type: none"> ✓ Make a plan for target cultivation area and target amount of target crops by each FG member(household) ✓ Calculate the total target cultivation area and target amount of all the group members. ✓ Make a crop calendar on 2 of 4 target crops for 1st season. |
| | Identification of necessary inputs and their sources | | | <ul style="list-style-type: none"> ✓ Discuss the necessary input and how to prepare and manage the necessary input as group activity. ✓ Facilitation of resource mobilization by sharing the information on external financial and technical support opportunities from both public and private sectors. |
| 2 | Role play of Action Plan Making | 60min | - | <ul style="list-style-type: none"> ✓ Role play for the facilitation of the “Action Plan Making” |

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|--|---|
| Selection of target crops for the 1 st year | <ul style="list-style-type: none"> ✓ The Extension Staff should know the possible crops in the target area before hand and update the cost benefit ratio of potential crops, major information about agriculture supports, so the extension staffs they can facilitate the crop selection smoothly |
| Identification of necessary inputs and their sources | <ul style="list-style-type: none"> ✓ Good facilitation skill is required to prepare realistic list of problems with possible solutions. ✓ The Extension Staff should provide information with the farmer groups on how to look for external technical and financial support required for the implementation of their own annual action plan. In addition, how to make a proposal or a request to external organizations of both the public and private sectors (how to mobilize necessary resources). |

2.2.2 Study Tours

(1) Objectives of the session

- ✓ To make the Extension Staff understand the importance of a study tour for the selected FGs to expose them the successful market-oriented farming and to observe advanced techniques/practices of vegetable cultivation and marketing.
- ✓ To make the Extension Staff understand how to prepare and organize the “Study Tour”.

(2) Outline of the session:

Study tour is not a classroom training rather a visit of 2-3 days to an advanced vegetable production sites which is known for market-oriented farming. In this session, the participating Extension Staff learn why the reason to conduct the study tour and how to encourage farmers to learn at the visit site. Additionally, the Trainer can provide some potential sites in order to ensure the appropriateness of the study tour at the points of the technical issues. Pre-visit and other preparation such as selection of the participating farmers, budget,



arrangement of the transportation and accommodation etc. should be done by the Extension Staff. After the study tour, the Extension Staff request the representatives of FG members to share with other FG members what they see and learn at the visit site, interact about the problems, constraint, difficulty, opportunities and comparative advantage of vegetable production and marketing.

(3) Procedure of the session: (Session time: 30min)

| S/N | Topics | Duration | Materials | Description |
|-----|---------------------------|----------|---|--|
| 1 | Explanation of Study Tour | 30min | <ul style="list-style-type: none"> ✓ Example of the outline of the Study Tour ✓ Example of the check list | <ul style="list-style-type: none"> ✓ Explanation of the Study Tour ✓ How to prepare the Study Tour <ul style="list-style-type: none"> - Arrangement of the budget - Selection of the visit site - Pre-visit - Selection of the participating farmers - Arrangement transportation, accommodation, food etc. ✓ How to follow up the Study Tour |

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|-------------------------------|---|
| Preparation of the Study Tour | <ul style="list-style-type: none"> ✓ Preparation starts from the clarifying of the objective/aim of the study tour based on the problems/constraints and opportunities of the market-oriented farming by the small holder farmers in the respective groups. ✓ Pre-visit of at least 3-4 weeks before is better for the planning purpose. The Extension Staff request the resource person from the visit site what to present during the Study Tour. ✓ It is better to prepare an observation check list is prepared before the Study Tour for FG members to promote them learning effectively. ✓ For the participants stationary is also required. ✓ It is easy to reflect what they find at the visit site according to the observation check list. ✓ At least two Extension Staff are recommended to join the Study Tour for handling the participants if the number is more than 15. |
| Follow up of the Study Tour | <ul style="list-style-type: none"> ✓ After completion of the Study Tour, the Extension Staff should remind the representatives of the FG members to share the learning experience for more concrete action in future. |

2.2.3 On-site Coaching (Overall outline and Nursery Making and Transplanting for the Dry Season)

(1) Objectives of the session:

- ✓ To make the Extension Staff as well as the FG members and their partners understand how to implement the “On-site coaching (1. Overall outline and 2. Nursery Making and Transplanting for the Dry Season)” to the selected FGs and how to manage a Training Farm.
- ✓ To make the Extension Staff as well as the FG members and their partners be aware of the importance of nursery making and get required techniques in the nursery making during the winter season (for the produce in the dry season).



(2) Description of the session:

At the beginning of the session, the outline of a series of on-site coaching should be explained to the participating Extension Staff, since this is the first session on the on-site coaching. The On-site coaching is a demand-driven training; it is provided to the selected FGs based on their cultivation and marketing level. Moreover, the training on on-site coaching should be provided to the Extension Staff depend on their technical skills as shown in above (PART 3 2. Implementation of On-site Coaching). If possible, before conducting the training, it is better to collect some information about the technical level of the participating Extension Staff and their FGs as well as the circumstances surrounding those FGs.

The nursery establishment time will differ based on the target crops, target season, cultivation area and other cultivation condition etc. For instance, the suitable season for nursery establishment in dry season is from April to July. Since maintaining the soil temperature for seed germination is great important during the winter season, so it is important to decide the suitable place and timing for nursery making. Therefore, in the session, the information and techniques where/when/how to make a nursery in the target area should be provided to the Extension Staff.

During the theory part in the classroom, the importance of nursery making is cause of good yield and good quality of the vegetables. In the practice part at the field, various methodology from the basic method of nursery making to advanced techniques with using some equipment such as Cocopeat, plastic tray and plastic cover for warming etc. should be delivered to the Extension Staff.

(3) Procedure of the session: (Session time: 130min~)

| S/N | Topics | Duration | Materials | Description |
|-----|---------------------------------|---------------------|---|--|
| 0 | Objectives | 10min | - | ✓ Objectives and outline of the session. |
| 1 | Explanation of On-site coaching | 30min | ✓ PPT Presentation: On-site Coaching | ✓ Outline and implementation procedure of "On-site coaching" (PART 3 2. On-site Coaching, H-p.36). |
| 2 | Theory session | 30min | ✓ PPT Presentation: Nursery making and Transplanting | ✓ Explanation the importance and methodology of nursery making |
| 3 | Practice session | 60min | ✓ Agricultural equipment*1 | ✓ Group work in the field and technical advice form the expert. |
| 4- | Theory session | 90min/ each crop | ✓ PPT Presentation: Cultivation management of each crop | ✓ Cultivation management of the target crops (ex: a. Tomato, b. Cucurbits, c. Beans) |

Note: *1 For on-site coaching on the nursery making in winter season, 2-3 crops can be targeted. If the practice session can be done in this training, some agricultural equipment should be prepared by the Trainer, such as; seeds, poly bag, plastic tray, compost, fungicides (ex. Bavistin), water can, roofing materials to protect nursery, hoe etc. For seeds, 2-3 kinds of crop can be selected.

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|---|--|
| Theory session for technical training | ✓ It is suggested to invite a seed supplier such as a representative from seed company or vegetable seed expert etc. to provide the latest information on vegetable seed and varieties to the participating Extension Staff. |
| Practice session for technical training | ✓ Practice session should be conducted by group work. The Extension Staff can be divided to some groups as per the different types of nursery making in winter season. And also, each group can try various methods of nursery making. At the end, all groups have to share their works in the plenary. |
| Implementation of the on-fam coaching | <p>✓ The timing of the on-site coaching on the nursery making should be decided the condition of the target area, target crops and target season(market). For example, since November-January is suitable to grow the seedlings for dry season crop in mid-hills, so the on-site coaching should be done in the season.</p> <p>✓ It is suggested to invite an Agro-vet owner at on-site coaching, if possible. They may support the selected FGs by providing to the farmers not only input materials but also technical knowledge and skills.</p> <p>✓ The Extension Staff should monitor the Training Farm by visit or calling. In addition, it is better to visit the selected FG and the Training Farm at the time of transplanting.</p> |

2.3 Third Training

Objectives

- ✓ To help the Extension Staff understand the methodology to train farmers on cultivation techniques, marketing and reflection.
- ✓ To help the Extension Staff understand how to implement each activity; On-site coaching, Reflection Workshop, and to deliver the necessary techniques to the selected FGs.
- ✓ To review the activities already implemented by each Extension Staff at target area.



Outline

| | |
|------------------------|---|
| Duration | 2-3 days |
| Venue | Conference room and field (if the practical training will be conducted) |
| Participants | Extension Staff (up to around 30 participants) |
| Necessary Items | Management fee (Venue, Khaja, Lunch, Water etc.), Stationary (Flipchart, Marker, Meta card, Pen, Notebook, etc.), TADA for the participants, Power Point (PPT) Presentation materials, Agricultural equipment (Fungicides and pesticide (ex. Bavistin), fertilizer (Nitrogen etc.), sprayer, pheromone trap, water can, etc.), etc. |

Example of Timetable

| Duration | Topics | Materials | Reference | Handbook ^{*1)} |
|-----------------------------------|---|---------------------|-----------|-------------------------|
| - | • Registration | • Attendants list | - | - |
| - | • Introduction of participants • Opening Remarks | - | - | - |
| 30min | • Review for the implemented activities ^{*2)} | - | - | - |
| 120min~ (+120min/ per crop) | • On-site coaching (Pest and disease control) | • PPT Presentation: | 2.3.1 | PART 2-4.1 |
| 60min | • On-site coaching (Post-harvest handling and Marketing) | • PPT Presentation: | 2.3.2 | |
| 60 min | • Marketing Strategy | • PPT Presentation: | 2.3.3 | |
| 120min | • On-site coaching (Nursery Making for the Rainy Season, Compost Making) | • PPT Presentation: | 2.3.4 | |
| - | • Reflection • Planning of the training to the FGs ^{*3)} • Closing remarks | - | - | - |

Note: *1) Handbook is "Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff" to be related each component and to be referred for implementation.

*2) In a review session, the participants share the activities done by themselves and good/bad practices, then the trainers should advise them to improve for the next season.

*3) In a planning session, the participants make a plan/schedule of the training to the selected FGs.

*4) Relevant PowerPoint presentations with necessary explanation is made by the Trainer. Handouts of the presentations will be also distributed to the participants for their reference after the session.

2.3.1 On-site Coaching (Pests and Diseases Control)

(1) Objectives of the session:

- ✓ To make the Extension Staff as well as the FG members and their partners understand how to implement the “On-site coaching (1. Pest and disease control)” to the selected FGs.
- ✓ To make the Extension Staff as well as the FG members and their partners to be capable of identifying the cause of damage; insects, diseases and micronutrient deficiencies etc., on the selected crops and the possible control measures to minimize the loss of crop damage.

(2) Description of the session:

This session covers the basic theoretical aspects of insects, plant disease, including soil born disease such as nematodes, and micronutrient deficiencies and its symptom of the crops. After completion of basic concept about pest and diseases, the crop specific pest and diseases and its control method to minimize the damage are delivered. It is recommended that the Trainer of this session should collect an information about current situation of the Training Farm such as problems of insects and diseases. After knowing the issues of the selected crops from various sites, the Trainer can screen the most important 4-5 problems and finalize the training materials.



Not only chemical treatment but also non-chemical method; cultural practices, pheromone traps, neem-based insecticides, Integrated Pest management (IPM), Organic Pest Management (OPM) etc. can be provided to the participating Extension Staff. Additionally, the Extension Staff have to learn a safe use of fungicides and insecticides, like keeping a certain period after final treatment of chemicals before harvesting, and safety storage of chemicals etc.

During the session, it is very important to show the different types of color photos of disease and insect symptoms to the Extension Staff to identify the respective problems of plants. If possible, it is better to show the sample crops which is damaged by disease or insect. After completion of the session, it is hoped to take some feedback through the Extension Staff about the training and their learnings. On the countermeasure for the disease or insects, the Trainer can demonstrate different types of pheromone traps, yellow sticky traps etc. Distribution of different types of leaflets, booklets, posters, pamphlet related with the topics of discussion will be also helpful in the training.

(3) Procedure of the session: (Session time: 150min~)

| S/N | Topics | Duration | Materials | Description |
|-----|--|--------------|---|---|
| 1 | Review of Implemented On-site coaching | 30min | - | ✓ Facilitate the participating Extension Staff to discuss a good practice and bad practice of on-site coaching in their target field. |
| 2 | Theory session for technical training | 120min*/crop | ✓ PPT Presentation: Pest and Disease Control of each crop | <ul style="list-style-type: none"> ✓ The basic aspects of the disease, insect and its control method. ✓ Specific disease, insect and its control method crop by crop. |

*ex.120min of theory session time can be divided into 60min for pest and 60 min for insect.

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|--|---|
| Review of Implemented On-site coaching | <ul style="list-style-type: none"> ✓ If possible, it is better to collect the photos of the FG's fields from the participating Extension Staff, before the training. If the Trainer can get such photos, he/she may select and show good practices and bad practices from the photos provided. |
| Theory session for technical training | <ul style="list-style-type: none"> ✓ It is suggested to utilize the color photos for showing the symptoms of disease or insect damages or sample crops which are damaged by disease or insects. The Extension Staff can easily identify the disease and insect in the field and provide the counter measure to the farmers. ✓ The "teach by showing" will guide the training classes smoothly. Even for the countermeasure of the disease or insects, the Trainer can demonstrate different types of pheromone traps etc. |
| Implementation of the on-farm coaching | <ul style="list-style-type: none"> ✓ Based on the location of the selected FGs and Training Farm, timing of "Control of Pests and Diseases" is decided in consultation with FGs members. ✓ The Extension Staff should monitor the progress of the Training Farm by visit or calling/chatting. ✓ It is suggested to make a group with an application of the smartphone. The photos of the field and some urgent problems can be easily shared with the Extension Staff and the Trainer. |

2.3.2 On-site Coaching (Post-Harvest Handling and Marketing)

(1) Objectives of the session:

- ✓ To make the Extension Staff as well as the FG members and their partners understand how to implement the "On-site coaching (Post-Harvest Handling)" to the selected FGs.
- ✓ To make the Extension Staff as well as the FG members and their partners understand the post-harvest and marketing activities after cultivation by discussing the problems (troubles)/constraint (limitation)/ difficulty (complexity) and ways to overcome them by individually as well as collectively.



(2) Description of the session:

This session addresses the theories of post-harvest handling and marketing. During the explanation, materials to be used for post-harvest handling, such as crates, different types of sack, etc. should be demonstrated to the participants. To make the Extension Staff as well as the FG members and their partners understand how the difference between the price of treated (graded) produce and that of untreated (non-graded) is produced, a role playing method should be applied by dividing all the participants of the On-site Coaching into small groups after completing the lecture part.

Procedure of the session: (Session time: 60min)

| S/N | Topics | Duration | Materials | Description |
|-----|---|----------|--|--|
| 1 | Theory session for technical training | 30min | <ul style="list-style-type: none"> ✓ PPT Presentation: Post-harvest handling ✓ Brochure: Post-harvest handling | <ul style="list-style-type: none"> ✓ Explanation of the importance and methodology of post-harvest handling |
| 2 | Practice session for technical training | 30min | - | <ul style="list-style-type: none"> ✓ Role play on implementation of the on-site coaching to the FGs. ✓ Plenary or group discussion about the problems (troubles)/ constraint (limitation)/ difficulty (complexity) and ways to overcome them on the marketing and post-harvest handling. |

(3) Tips and expected effect of the session:

| Topics | Tips and effects |
|--|---|
| Implementation of the on-farm coaching | <ul style="list-style-type: none"> ✓ Not only a lecture but also a role plays to show the difference of the post-harvest treatment or not is effective for farmers to understand how to conduct and how effective the post-harvest treatment. ✓ It is suggested to invite a vegetable traders/buyer to this on-site coaching. The vegetable traders/buyers know the right time of vegetable harvesting, grading practices, variation of vegetable prices of the graded or non-graded and also the right ways of vegetable transportation, methods of packaging for different types of vegetables etc. Since all the information is based on the market demand, so it is also useful to invite them. |

2.3.3 On-site Coaching (Nursery Making and Transplanting for the Rainy Season and Compost Making)

(1) Objectives of the session:

- ✓ To make the Extension staff as well as the FG members and their partners understand how to implement the “On-site coaching (Nursery Making and Transplanting for the Rainy Season and Compost Making)” to the selected FGs and how to manage the Training Farm.
- ✓ To make the Extension staff as well as the FG members be aware in the importance of compost and nursery and get a knowledge of required techniques on vegetable nursery making and good compost in rainy season (for the produce in dry season).



(2) Description of the session:

This session has almost same contents as on-site coaching (1. Nursery Making and Transplanting for the Dry Season) shown in 2.3.4. However, the target crops for the coming rainy season will differ from the previous season. The techniques which is suitable for the target crops in rainy season should be delivered. Practice training for nursery making should be conducted same as previous training.

Additionally, compost making is an additional content in the session. Because well decomposed compost is very effective to improve the soil condition and fertile the soil to provide enough nutrient to the crops. In this session, the characteristics of good compost and methodology to make it will be delivered to all the participants. Moreover, in the practice, the Extension Staff as well as the FG members and their partners can try to make the compost, if a place and materials for making compost is available during the training.

(3) Procedure of the session: (Session time: 120min)

| S/N | Topics | Duration | Materials | Description |
|-----|---|----------|--|---|
| 1 | Theory session for technical training | 60min | <ul style="list-style-type: none"> ✓ Brochure: Nursery Making ✓ PPT Presentation: Compost making ✓ Brochure: Compost making | <ul style="list-style-type: none"> ✓ Explanation of the importance and methodology of nursery making for rainy season crops. ✓ Explanation of the importance and methodology of compost making. |
| 2 | Practice session for technical training | 60min | <ul style="list-style-type: none"> ✓ Agricultural Equipment*1 | <ul style="list-style-type: none"> ✓ Practice to make a nursery bed and sowing ✓ Practice to make a compost |

Note: *1 For on-site coaching on the nursery making in winter season, 2-3 crops can be targeted. If the practice session can be done in this training, some agricultural equipment should be prepared by the Trainer, such as; seeds, poly bag, plastic tray, compost, fungicides (ex. Bavistin), water can, roofing materials to protect nursery, hoe etc. For seeds, 2-3 kinds of crop can be selected.

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|---------------------------------------|---|
| Implementation of the on-fam coaching | <ul style="list-style-type: none"> ✓ Due to heavy and continuous rainfall during rainy season, it is very difficult to grow the vegetable seedlings in rainy season. Necessary techniques to avoid excess moisture in the soil to grow vegetable seedlings in rainy season are different from those for the dry season. For example, the nursery bed should not be covered by plastic tunnels perfectly for aeration. And, a roof of plastic sheet can be also established above the nursery bed. Plastic cell trays can be also used in rainy season to avoid the heavy rain and too much humidity. |

2.4 Fourth Training

Objectives

- ✓ To help the Extension Staff understand the methodology of follow-up and monitoring including the endline survey for reviewing the first season.

Outline

| | |
|------------------------|---|
| Duration | 1-2 days |
| Venue | Conference room |
| Participants | Extension Staff (up to around 30 participants) |
| Necessary Items | Management fee (Venue, Khaja, Lunch, Water etc.), Stationary (Flipchart, Marker, Meta card, Pen, Notebook, etc.), TADA for the participants, Power Point (PPT) Presentation materials |

Example of Timetable

| Duration | Topics | Materials | Reference | Handbook* ¹⁾ |
|----------|---|---------------------|-----------|-------------------------|
| - | • Registration | • Attendants list | - | - |
| - | • Introduction of participants • Opening Remarks | - | - | - |
| 60min | • Review for the implemented activities* ²⁾ | - | - | PART 2-5 |
| 30min | • Endline survey | • PPT Presentation: | 2.4.1 | |
| | <u>Contents should be decided by the situation of the FGs</u> | - | - | - |
| - | • Reflection • Planning of the training to the FGs* ³⁾ • Closing remarks | - | - | - |

Note: *1) Handbook is “Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff” to be related each component and to be referred for implementation.

*2) In a review session, the participants share the activities done by themselves and good/bad practices, then the Trainers should advise them to improve for the next season.

*3) In a planning session, the participants make a plan/schedule of the training (Action plan making and On-site coaching) and study tour to the selected FGs.

*4) Relevant PowerPoint presentations with necessary explanation is made by the Trainer. Handouts of the presentations will be also distributed to the participants for their reference after the session.

2.4.1 Endline Survey of the 1st Year

(1) Objectives of the session:

- ✓ To make the Extension Staff understand about the importance and usefulness of the participatory endline survey (before & after intervention) and its procedure of data capturing for necessary comparison with baseline.
- ✓ To make the Extension Staff understand how to implement the participatory endline survey.

(2) Description of the session:

The importance and usefulness of the participatory endline survey are mentioned above (see 2.2.5). It should be conducted ever season by farmers themselves since it is easy for farmers to reflect and calculate the data only for one season. If time is available, a group work should be done with a given endline format to fill it and analyze the result with sample data. For ease of the group work completed baseline is also provided.

(3) Procedure of the session: (Session time: 30min)

| S/N | Topics | Duration | Materials | Description |
|-----|----------------|----------|---------------------|---|
| 1 | Endline survey | 30min | ✓ PPT Presentation: | ✓ Explanation of the endline survey format and methodology to collect and analyze the data. |

(4) Tips and expected effect of the session:

| Topics | Tips and effects |
|--------------------------------------|---|
| Implementation of the Endline survey | <ul style="list-style-type: none"> ✓ The objectives of the participatory endline survey should be explained well to the Extension Staff. The Extension Staff will understand why the production and sales data need to be recorded and how to analyze them to see if there has been any profit. ✓ The Extension Staff understand that It is necessary to compare the relevant values at the endline survey with those at the baseline survey to know the effectiveness of the CAP approach. ✓ During the endline survey, it is recommended for the Extension Staff to do a cross check with the Farm Management Notebooks of the FG members and to encourage them to continue keeping the records. |

2.5 Fifth and Sixth Training

The timing and contents of fifth and six training can be decided by the Trainer according to the situation of the Extension Staffs' technical/management skills and the situation of the FGs. If the technical skills of the Extension Staffs are not enough even after one year or the FGs need more advanced techniques in their field, the technical training can be done in the fifth or sixth Training. Likewise, if the management or facilitation skills of the Extension Staff are not enough for implementing the activities, a follow up training or reviewing should be organized in the remaining training.

Objectives

- ✓ To review the activities already implemented by each of the Extension Staff with their FGs.
- ✓ To provide the Extension Staff with technical advice upon request.
- ✓ To strengthen cultivation techniques to the Extension Staff.

Outline

| | |
|------------------------|---|
| Duration | 1-2 days |
| Venue | Conference room and filed |
| Participants | Extension Staff (up to around 30 participants) |
| Necessary Items | Management fee (Venue, Khaja, Lunch, Water etc.), Stationary (Flipchart, Marker, Meta card, Pen, Notebook, etc.), TADA for the participants, Power Point (PPT) Presentation materials, Agricultural equipment, etc. |

*Relevant PowerPoint presentations with necessary explanation is made by the trainer. Handouts of the presentations will be also distributed to the participants for their reference after the session.

Example of Timetable

| Duration | Topics | Materials | Reference | Handbook* ¹⁾ |
|----------|---|-------------------|-----------|-------------------------|
| - | • Registration | • Attendants list | - | - |
| - | • Introduction of participants • Opening Remarks | - | - | - |
| 90min | • Review for the implemented activities* ²⁾ | - | - | - |
| - | <u>Contents should be decided by the situation of the FGs</u> | - | - | - |
| - | • Reflection • Planning of the training to the FGs* ³⁾ • Closing remarks | - | - | - |

Note: *1) Handbook is "Commercial Agriculture Promotion (CAP) Approach Handbook for Extension Staff" to be related each component and to be referred for implementation.

*2) In a review session, the participants share the activities done by themselves and good/bad practices, then the Trainers should advise them to improve for the next season.

*3) In a planning session, the participants make a plan/schedule of the training (Action plan making and On-site coaching) and study tour to the selected FGs.

*4) Relevant PowerPoint presentations with necessary explanation is made by the Trainer. Handouts of the presentations will be also distributed to the participants for their reference after the session.

3. Implementation of On-Site Coaching

In a series of the training with the CAP Approach, "On-site coaching" is a cultivation technical training which is a field-based coaching to the farmers directly. Since only a lecture on the cultivation techniques could not be effective to the farmers for providing appropriate cultivation techniques, the on-site coaching has both lecture part and practice part which is done in the field. In

addition, it is also the reason that a uniform technique will not be effective because the farmers field condition in Nepal varies site by site.

For the Trainer, the on-site coaching can be considered as an opportunity for On the Job Training (OJT) for the Extension Staff. Especially, if the Extension Staff have a poor experience of the field cultivation training to the farmers, the technical adviser should conduct the OJT in the on-site coaching.

Objectives of the training

- ✓ To provide technical assistance to the Extension Staff in a form of OJT so that they can become to manage the on-site coaching with FGs by themselves afterwards.
- ✓ To ensure the members of selected FGs and their partners in farming acquire necessary skills and knowledge to cultivate their target crops.

Methodology

1) Preparation of the on-site coaching

- ✓ After completing of action plan making i.e. crop selection and crop calendar preparation, the schedule of on-site coaching on nursery making should be finalized in consultation with the selected FGs.
- ✓ The basic contents of 3 kinds of on-site coaching per season are 1) Nursery making and transplanting, 2) Pest and disease control and compost making and 3) Post-harvest handling. These three types of the on-site coaching will be completed two times in a year.
- ✓ For one season, at least 3 times of on- site coaching should be provided to the selected FGs. However, the number and contents of on-site coaching can be added or reduced flexibility depend on the available budget and cultivation skills of the selected FGs.

2) Training Farm

- ✓ Before starting the on-site coaching, a small scale of Training Farm should be established in a field of one member of the FGs. As per consultation with the FG members, one FG member is selected to provide his/her field to establish a Training Farm.
- ✓ At least 4 square meters of land for one crop is estimated as the Training Farm in a season. The Training Farm should be established in a suitable place within the community where the majority of the FG members live. If the FG members' houses located very scatter, the Extension Staff should advise to the FGs to establish at least 3 training farms at the pertinent place. Training farm can be replaced to the next member as per the decision of group for next season.



- ✓ Landowner of the Training Farm should manage the field with applying the techniques provided by the Extension Staff.

3) Implementation of the on- site coaching

- ✓ The On-site coaching consists of lecture part and practical part for delivering the necessary cultivation techniques on target crops in each selected FG. The theory of cultivation techniques is provided to the farmers in the lecture part at a suitable place where all the participating FG

members and their partners can sit together. After the lecture part, the practical part is conducted in the Training Farm established by respective FGs.

- ✓ Based on the available budget of the Local Government and the target crops, the Extension Staff should prepare necessary materials such as seeds, fertilizer and pesticide etc. However, it is expected that the Extension Staff request the selected FGs to shoulder some part of materials such as agriculture tools, seeds, manure etc.
- ✓ The Extension Staff in charge will provide not only technical skills but also their rationales behind for crop management from the land preparation stage to the post-harvest stage t along with the actual stages in cultivation. At the same time, the Extension Staff gives appropriate advice or addresses technical issues in the fields of respective FG members.
- ✓ Not only the FG members but also their partners or other family members should be invited to the On-site Coaching.
- ✓ Except the day of the on- site coaching, the monitoring visit to the Training Farm by the Extension Staff should be planned for following up of the field and crops.

4) OJT in on- site coaching

- ✓ If there are some Extension Staffs in the target area, the Trainer can organize the on-site coaching as OJT. For example, the first on-site coaching of each subject in the target area, all extension tension staff can participate to learn how to conduct the on- site coaching for the FGs.

Roles and Responsibilities

| S.N. | Stakeholders | Roles and Responsibilities |
|------|--|--|
| 1 | Trainer | <ul style="list-style-type: none"> - Conduct the training on the cultivation techniques and its implementation methodology to be used for the on-site coaching - Technical backstopping for the Extension Staff, ex: answer the question and advice additionally on technical skills |
| 2 | Extension staff | <ul style="list-style-type: none"> - Implement the planned on-site coaching - Conduct the monitoring of the Training Farm temporally |
| 3 | Landowner of the Training Farm | <ul style="list-style-type: none"> - Prepare the Training Farm - According to the techniques provided by the Extension Staff, manage the Training Farm - Ask advices to the Extension Staff if the problems are occurred in the Training Farm |
| 4 | FF | <ul style="list-style-type: none"> - Support the FG members and landowner of the Training Farm to cultivate the target crops. - Support the Extension Staff to arrange and implement the on-site coaching |
| 5 | FG members and co-managers (partners) in farming | <ul style="list-style-type: none"> - Participate the on-site coaching - Cultivate the target crops for their action plan with applying the techniques which they learned in the on-site coaching |

Required cost for the on-site coaching

Basically, the cost for the on-site coaching will be covered by the Local Government such as agriculture input costs for the Training Farm, Transportation and Daily allowance for the Extension Staff and Khaja for all the participants consisting of the FG members, their partners, the Extension Staff, etc. However, some input materials or agriculture equipment should be prepared by the

selected FGs themselves. In the training, the Trainer should provide the information about the required cost for conducting the on-site coaching.

| Particularly | Estimated Cost | Responsible |
|--|--|---|
| Input materials | From 8,000 to 15,000 Nrs/season-farm | The Local Government will prepare the materials according to the target crops selected by the FGs and the available budget. The purchasing should be done before the day of on-site coaching. However, depend on the available budget, the Extension Staff can request the selected FGs to purchase by themselves. And some input materials which can be got in the local area such as compost, grasses as mulching materials |
| Agriculture equipment | N/A | Basically, the selected FGs can prepare by themselves. Ex: Hoe, watering can, compost, mulching materials (ex. Grasses, rice straw, etc.) |
| Khaja | Depend on the regulation of each Local Government. Ex: 50-100Nrs/person/day | By the Local Government |
| Transportation and daily allowance for the Extension Staff | Depend on the regulation of each Local Government. | By the Local Government |
| Transportation and daily allowance for the Trainer | Depend on the regulation of each Local Government or the Trainer | Basically, by the Local Government |

Description of each activity

1) Nursery making and transplanting (Coaching time: 2 hours)

This activity will be conducted at least two seasons in the first year; one is for winter season and another is for rainy season. In the second year, the on-site coaching on nursery making can be cut depend on the selected FG's demand and their skills.

| Materials required | Theory classes (30min) | Field Practical (1.5hrs) |
|--|---|---|
| <ul style="list-style-type: none"> • Seeds (including different varieties) • White plastic sheet • Polybags • Plant protection materials (ex: carbendazim for soil treatment) • Compost • Chemical fertilizers (DAP, Potash, etc.) • White nets • Mulching materials (ex: rice straw, grasses, etc.) • Leaflets of crop cultivation | <ul style="list-style-type: none"> • Importance of nursery • Seed preparation (Selection of varieties, seed quality etc.) • Sowing (soil depth, distance of the crops etc.) • Mulching • Time of seed germination • Management of the seedlings • Methods of transplanting | <ul style="list-style-type: none"> • Making nursery bed including the plastic pot and plastic tray • Sowing • Mulching • Management of the nursery (ex: watering, fertilizing, pest and disease control etc.) • Demonstration of transplanting methods |

TECHNICAL POINTS!!

It is better to modify the contents of the on-site coaching as per the season. For example, some techniques on the nursery making are different between summer and winter seasons. It is most important for winter crops such as tomato and chili, to keep the warm a nursery bed and seedlings with covering by the tunnel made by white plastic sheet or net. The cover is also effective to prevent the leaf minor, Tuta absoluta and virus on crops.

Cucurbits (cucumber, bitter gourd etc.) should be sown with polybags filling with compost, sand and soil or with cell tray putting Cocopeat and vermicomposting (1:2). These poly bags and cell tray must be kept in covered white plastic tunnels. Seedlings must be kept at least for 7 days in the open field without plastic covering before direct transplanting in the field.

For the nursery making of rainy season, controlling of the soil moisture is the most challenging factors during the rainy season to grow the seedlings. However, if the seedling and the ridged nursery bed are covered by the plastic tunnel same as winter season, the soil moisture will be over with high temperature and high humidity. Therefore, a roof by plastic sheets or a half plastic tunnel are should be installed to grow the seedlings with appropriate humidity during rainy season. Additionally, use of Carbendazim (Bavistin- as trade name) in the nursery beds help to reduce the mortality of seedlings from soil burn diseases. Seedlings must be kept at least for 7 days in the natural environment before transplanting in direct field.

2) Pest and disease control and compost making (Coaching time: 2 hours)

In this activity, a prevention method and countermeasure for pest and diseases will be delivered to the farmers, so it is better to show the necessary techniques not only by lecture but also by demonstration with real damaged crops. Therefore, the Extension Staff FG members collect and carry the sample of insect or disease or any problem related with crop growth and production that they observed in the field at the time of onsite coaching. Based on the collected samples or information from the FG members, the Extension Staff should advise them how to control the pest and disease.

The Extension Staff can provide the countermeasures not only applying the chemical pesticides but also using a method of traditional or non-chemical way such as pheromone trap, neem-based insecticides or other physical ways etc.

| Materials required | Theory classes (30min) | Field Practical (1.5hrs) |
|--|--|---|
| <ul style="list-style-type: none">• Pheromone traps with lure• Funnel traps with lure• Yellow sticky traps• Bio pesticides• Chemical fertilizer (Nitrogen, Potassium, Micronutrient, etc.)• Posters/ pamphlets• Leaflets of disease and insect managements | <ul style="list-style-type: none">• Prevention method for pest and disease• Categorization of the actual damage by pest and disease with sample crops• Countermeasure of pest and disease (chemical, non-chemical, traditional, etc.)• Compost making | <ul style="list-style-type: none">• Countermeasure of pest and disease (chemical, non-chemical, traditional, etc.)• Compost making |

TECHNICAL POINTS!!

In Nepal, there are some different kinds of biological materials to minimize the damage of pest and insects; such as pheromone traps, yellow sticky traps, funnel traps with lure, neem-based insecticides and copper oxychloride as a fungicide etc. During the on-site coaching, it is better to introduce various methods as much as possible, so farmers can see the effect of treatment.

For example, in some areas, pheromone traps with lure for some insects such as *Helico verpa* and *Tuta absoluta* in field for tomato cultivation was very effective. Yellow sticky traps are very useful for catching fruit fly or other insects like aphids and whitefly which are harmful leaf and fruit of vegetables.

Moreover, there are many other techniques for plant management such as pruning etc. Depend on the situation and technical skills of target FGs, any useful techniques should be included the training contents.

3) Post-harvest handling and marketing (Coaching time: 2 hours)

In this on-site coaching, the methodology for post-harvest handling will be delivered to the FG members and their partners. In order to show the difference of the quality, size or maturity among the produce, the Extension Staff should request the FG members to bring some of their produce before the day of on-site coaching. If they don't have yet the produce, it is better to bring the posters or other training materials to show the difference in the crops by photos.

In the case that the FG members bring the produce, a role playing is easy way for the participants to understand the suitable time of crop harvesting, crop maturity, cleaning, grading and packaging, etc. Additionally, in the role playing, the FG members can find the difference of the price with grading and without grading. During theory class, different types of sacks and crates also should be demonstrated by presenting their importance in vegetable marketing and in selling.

Regarding the sales of the agriculture produce, farmers need to have a marketing strategy to get a profit. From marketing point of view, the extension staff should encourage the FGs to consider profitability of target crops. Profitability of the produce should be considered not only for one season but also annually or for a few years at least. The extension staff should understand how to promote market-oriented agriculture by explaining a marketing strategy in the field; what crop should be selected, how to sell the produce, where to sell the produce etc.

| Materials required | Theory classes (1hrs) | Field Practical (1hrs) |
|---|---|--|
| <ul style="list-style-type: none">• Flip chart showing the photo/picture of vegetable crops that show the actual time for crop harvesting• Pamphlets having complete package of post-harvest management• Net sacks• Plastic crates• Packaging bags with different sizes• Small weighing machines• Different types of vegetables | <ul style="list-style-type: none">• Methodology of the post-harvest handling• Varieties of the materials which are used for the post-harvest handling• Marketing strategy | <ul style="list-style-type: none">• Role play to know the difference of the crops and price with post-harvest treatment and without post-harvest treatment |

TECHNICAL POINTS!!

“Role playing” as the seller and buyer of vegetables is very effective for the farmers to understand the difference of vegetable price between graded and non-graded. It is better to request the FGs to bring the different types of vegetables before the day of on-site coaching. Followings are steps of the group work.

1. FG members are divided into some subgroups as per the type of vegetables, such as tomato group, cucumber group, bitter guard group etc.
2. Each subgroup calculates and takes note the price of vegetable before grading as lump sum.
3. Then, each group grades their vegetables into two or three grades by quality or size etc.
4. The members of one subgroup have a role as the vegetable producer/seller, and the other subgroup members asked them the price of graded vegetable of different bundles as the role of vegetable buyer.
5. In addition, the latter group members also asked them the price of non-graded vegetable.
6. Step 4 and 5 are repeated according to the number of types of vegetables.
7. The participating farmers certainly can find out the difference of price between graded vegetables and non-graded one.

