



Food and Agriculture  
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United Nations



People for development

# Farmer Field School Curriculum on Climate Smart Agriculture in Coastal/Delta Zone, Ayeyarwady Region



Myanmar

**Farmer Field School Curriculum**  
**on**  
**Climate Smart Agriculture**  
**in**  
**Coastal/Delta Zone, Ayeyarwady Region**  
**Myanmar**

**Sustainable Cropland and Forest Management in Priority Agro-  
ecosystems of Myanmar Project (GCP/MYA/017/GFF)**

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## ACRONYMS

AESA	Agro-ecosystem Analysis
AVSI	Association of Volunteers in International Service
CA	Conservation Agriculture
CSA	Climate Smart Agriculture
DoA	Department of Agriculture
EPI	Ear Primordial Initiation
FAO	Food and Agriculture Organization of United Nations
FAA	Fish Amino Acid
FFS	Farmer Field School
FGD	Focus Group Discussion
GAD	General Administrative Department
GAP	Good Agricultural Practices
GEF	Global Environment Facility
GHG	Greenhouse Gas
IMO	Indigenous Microorganism
IPM	Integrated Pest Management
MoALI	Ministry of Agriculture, Livestock and Irrigation
MONREC	Ministry of Natural Resources and Environmental Conservation
NGO	Non-government Organization
PTD	Participatory Technology Development
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
SRI	System of Rice Intensification

## **1. Background / Context**

The Food and Agriculture Organization of the United Nations (FAO) is implementing a project entitled “Sustainable Cropland and forest management in priority agro-ecosystems of Myanmar (SLM-GEF)” in coordination with the Ministry of Natural Resources and Environmental Conservation (MoNREC) and the Ministry of Agriculture, Livestock and Irrigation (MoALI) with funding from the Global Environment Facility (GEF). AVSI Foundation has been contracted to develop the National Farmer Field School (FFS) curriculum and FFS Handbook. AVSI Foundation has developed a FFS curriculum/module on climate smart agriculture (CSA) techniques/practices for each selected agricultural crop and for each of the three agro-ecological zones incorporating solutions to the major problems identified during the need assessments and also considering the findings of value chain analysis.

## **2. Introduction and Objectives of FFS in Coastal/Delta Zone**

The Farmer Field School (FFS) is a learning process whereby a group of farmers come together and engage in a process of hands-on field-based learning process over a season/ production cycle. FFS is a time-bound learning by doing activity with a beginning and an end and aims to solve the problems related to cultivating crops.

FFS is a platform for holistic learning, and should address issues and aspects that directly or indirectly contribute to the performance of the local farming system, even if these issues are not agriculture-based as such.

All FFS programmes need to integrate programming on gender equality and nutrition concerns in FFS development. Gender norms, roles and customs are very relevant for FFS implementation such as assessment and targeting of the specific needs of male and female farmers, selection and gender awareness of facilitators, and composition of an FFS group (with adequate representation of women and girls) and targeting the specific needs and priorities of men and women.

This module of FFS has been designed to increase agricultural productivity of the priority crops in Ayeyarwady Region (Labutta Township) by addressing the challenges identified during the needs assessments based on knowledge systems and practices by FAO with support of AVSI as a Service Provider. During the need assessment cultural barriers for FFS implementation, gender norms, traditions, etc. were considered. Generally, it’s been observed that farmers, both men and women, have low knowledge of climate smart agriculture (CSA). The learning objectives of the proposed FFS modules are to:

- Empower farmers (both men and women) with knowledge and skills to improve the productivity of their main crops.
- Sharpen the farmers' ability to make critical and informed decisions that render their farming profitable and climate-smart for both male and female farmers.
- To sensitize farmers in new ways of thinking and solve problems linked to climate changes.
- Help farmers learn how to organize themselves and their communities, with a focus on women and girls.

### **3. Key Steps of FFS Implementation**

FFS implementation follows a three phases approach in a crop season depending upon the duration of the crop cultivation.

#### **I. Preparatory Phase**

- a. Situation Analysis,
- b. Village selection for FFS implementation,
- c. Farmers selection for FFS (both male and female farmers),
- d. FFS group formation and organization,
- e. Selection and training of facilitators,
- f. Selection of learning activity/enterprise, and
- g. Design and setup of the FFS experimental field (demonstration plots). This is to compare the current practices with improved/alternative practices.

#### **II. Basic FFS Cycle**

- a. Regular learning cycles/sessions,
- b. Evaluating participatory technology development (PTD) activities,
- c. Gender-sensitive monitoring and evaluation to assess the different impacts on men and women,
- d. Conducting field day (at the end of the season),
- e. Organizing exchange visits (Exchange visits with other FFS), and
- f. Organizing graduation ceremony. All the farmers (FFS Committee Members) who took part in the FFS activities by attending all the FFS trainings/meetings (with more than 80% of the attendance) and planting the given seeds in their own field will be awarded with a FFS Certificate during the graduation ceremony.

#### **III. Post-graduation Phase**

- a. Follow up activities,

- b. Networking, and
- c. Income generation and setting up second generation FFS, especially when new livelihood opportunities or challenges arise.

#### **4. General Principles of Climate Smart Agriculture in FFS context**

There are two ways by which agricultural production can contribute to mitigate climate change:

- Reducing GHGs emissions per unit of land and/or agricultural products, and
- Enhancing soil carbon sinks

CSA aims to sustainably improve agricultural productivity, enhance food security, boost farmers' adaptive capacity and resilience to climate shocks and contribute to GHG mitigation. Given limited understanding of farmers about CSA, the module aims to raise awareness of the principles of CSA. CSA approach is embedded in all activities of this module. The principles of CSA are:

- sustainably increasing agricultural productivity and incomes;
- adapting and building resilience of agricultural livelihoods to climate change; and
- reducing and/or removing greenhouse gas emissions, where possible.

CSA aims to strengthen livelihoods and food security, especially of male and female smallholders - farmers, herders, fishers, forest-dependent communities, as well as indigenous people –by improving their management and use of natural resources and adopting appropriate methods and technologies for the production, processing and marketing of agricultural products.

Adoption of climate smart agriculture is very important for adaptation and mitigation of the adverse climate impact and increase the resilience of livelihoods to threats and crises, especially for the poorest and most marginalized people that are disproportionately affected by hazards and crises.

FAO foresees a broader approach, working to build synergies among social protection and climate change to achieve sustainable growth and eliminate rural poverty. FAO uses a “twin-track” approach, on the one hand taking immediate steps to protect and support agriculture, food and nutrition, and on the other addressing in the longer term the underlying factors driving risks, disasters and crises. FAO's work focuses on developing, protecting and restoring sustainable livelihoods so that the integrity of societies that depend on farming, livestock, fish, forests and other natural resources is not threatened by crises. CSA uses a comprehensive approach in

seeking to improve rural livelihoods, increasing the productivity and resilience of poor communities, including rural women and girls, while also providing mitigation benefits.

## **5. Pre-FFS Preparation**

### **5.1 Village Selection for the Establishment of FFS**

There will be one FFS organized in each of the selected villages. FFS villages should be selected considering the following criteria:

- The villages should represent the specified agro-ecological zone.
- The villages should fall in the given pilot Township.
- The villages should be selected in such a way that they should represent the various variability within the given agro-ecological zone.
- The community in the village must be interested in and willing to take part in FFS activities. The community in the village should be informed about the FFS to be established in order to obtain formal consent and interest to partake in FFS activities.
- Sufficient number of men and women must be identified for the FFS Committee and to run the FFS, to represent the interests and priorities of both male and female farmers. Additional knowledge created by women differs from men's due to their life experience; ensuring that both co-create the FFS thus significantly enriches the entire group.

As a general rule, to avoid duplication, FFS will only be established in villages where there are not already similar FFS activities supported by other organizations. However, if there is scope of complementarity and synergies with existing initiatives, FFS can be established in the same village.

### **5.2 FFS Committee Formation**

Assist the community in forming a FFS Committee comprising of 20-30 members, either through the formation of new group or strengthening of existing groups, ensuring an adequate number of women and girls. The gender dimensions should be analyzed and if men and women are generally involved in the farming activities, mixed FFS groups should be formed. The main criteria applied for selection of participants should be as follows.

- Group (FFS Committee) of 20-30 farmers,
- Observe the gender, age and experience balance and encourage women and youth participation as far as possible.
- Farmers having experience of local production and livelihood system and to grow the crops which are included in the FFS,
- Must be resident from the same village,
- Smallholder farmers (owning no more than 10 acres of land) or land users who are resource-poor and often have limited access to education, information, extension services, market access and financial capital,
- Farmers demonstrate interest and commitment to the full FFS cycle,
- Farmers demonstrate good attitude: eager to learn and share knowledge and experience, keen to work in the group, help to clean the site after the FFS session, etc., and
- Should continue for at least two subsequent crop cycles to see the results.

Facilitate FFS Committee to select a Chairperson, a Vice Chairperson, a Secretary, a Treasurer and a Lead Farmer. The Lead Farmer will host and take lead to establish study/ learning/ experiment/ demonstration plot and will gradually take over the responsibility of FFS Facilitator from DoA Extension Officer from the second year onwards. Rest should be considered as general members. The other members of the FFS Committee will be responsible for taking part actively in the regular FFS meetings/training to contribute, to learn and to replicate the learning in their own field and to disseminate to other farmers.

### **5.3 Selecting a Lead Farmer (FFS Facilitator)**

The FFS Facilitator is a technically competent person who facilitates hands-on exercises. The Lead Farmer/Facilitator should possess the following skills/characteristics.

- Must be a member of the FFS Committee of the respective village.
- **Social skills:** ability to engage everyone in the group into productive learning and exchange process, gender sensitivity, good communication and presentation skills.
- **Interpersonal skills:** non-judgmental, supportive attitude, sensitivity to group dynamics processes (e.g. managing dominant behavior).
- **Technical skills:** ability to lead the group through the process of improving the crop production according to CSA principles, prior experience (or education) in farming and agriculture, understanding of market economy.

- **Organizational skills:** ability to guide the process for setting up the demonstration field and ability to keep records.
- **Gender awareness:** ability to address potential gender barriers as well as to be familiar with concepts of social inclusion and social vulnerability. Qualified female member should be given priority as far as possible to become Facilitator/Lead Farmer. The FFS ToT programme will include gender mainstreaming issues/topics.

In the first year, while a Lead Farmer will be selected from among the FFS Committee Members, there will be a FFS Facilitator assigned by the respective Township DoA for each FFS who will be a technically competent person responsible for leading the group members through the hands-on exercises. From the second year onwards, the DoA Extension Officer will take a back seat only offering guidance whenever needed and the Lead Farmer from the FFS Committee will take over the responsibility of FFS Facilitator. Both the FFS Facilitator from the DoA Office and the Lead Farmer from the FFS Committee should ensure an adequate involvement of women and girls since the FFS is set up.

## 6. Collection of relevant information/data:

A village profile will be developed for each FFS village prior to the FFS implementation using a standard format. The village profile will include geographical information, demographic information, available resources and livelihoods opportunities, livelihoods profile of the people, major crops grown in the village, cropping patterns/calendar, major problems associated with priority crops, major needs of the community and analysis of the gender roles and the division of tasks of men and women for each of the selected crops, assessing their capacity and needs.

All the relevant information from the standing crops and post-harvest information will be obtained using a standard template. The tools, methods, and indicators/questions used will be gender-sensitive, i.e. they do not exclude women from being able to give their opinions, and by including questions that directly address gender inequalities in the context of implementation. Gender-disaggregated data/information will also be collected on FFS attendance and gender-sensitive indicators will be created accounting for the diversity of ethnicity, gender, age, class, religion, and culture in the impact assessment. Specific indicators will be developed that are able to measure the achievement of gender equality among programme participants. This may require disaggregation of data by sex and their analysis to identify functional relations and effects.

## 7. Cropping Calendar of the Potential Crops (Paddy, and Green Gram) in Coastal/Delta Zone

Crops	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
MSN Paddy – SUM Paddy	Monsoon Paddy						Summer Paddy					
MSN Paddy – Green Gram	Monsoon Paddy						Green Gram					

Source: Township DOA Office, Labutta Township (Nov, 2017)

## 8. Guiding Principles of FFS in Coastal/Delta Zone

As per the initial need assessment and value chain analysis done by FAO with AVSI Foundation as a Service Provider, paddy, and green gram/ black gram have been identified as the potential crops in the area based on technical feasibility, the crops already being grown in the area and have high market demand and contribute to improved nutrition of men and women and their households, especially children, the elderly and the disabled. Gender considerations will cut across all indicators for data collection to ensure that information can be easily gender disaggregated. Therefore, the FFS module and FFS activities will cover those two prioritized crops.

The **guiding principles** for this FFS module are:

- Working in groups (15-30 farmers);
- Season-long activities (following the season of crops);
- Regular meetings/sessions during the season. The formal meeting/training has been planned in the curriculum to be one time in a month however, the FFS Committee meet informally as and when needed;
- Study/learning plots/experiments/demonstration to compare current practices with improved/alternative practices;
- Using group knowledge to solve problems;
- Role of facilitator: to facilitate group work, rather than impose knowledge;
- Technical expert to provide input on CSA techniques and practices related to: a) high resistance seeds to the adverse factors, b) soil testing practices, c) land preparation techniques, d) soil nutrients and water management, e) proper application of crop protection and crop nutrition substances, f) integrated pest management, g) post-harvest techniques (storage) and prospects for processing;
- Keep regular schedule of the meetings as specified in the curricula presented in the Section 9;
- Observe the demonstration plot regularly after every FFS meetings and also outside the FFS meetings, as much as possible, to see the changes and any problems in the demonstration plot, and
- Keep the crop records during the whole cycle. Also analyse and keep record on how male and female farmers are actually benefitting from these crops and the new techniques and practices.

Once the FFS has started and demonstration plot has been established, each FFS meeting/session, occurring after establishment of the crops till harvesting, should include the following steps:

- Agro-ecosystem analysis (AESA),
- A group dynamics exercise,
- Special topic, and
- Feedback on the session. The feedback will include the views and perceptions of both men and women.

After the completion of the one cycle of FFS, the FFS Committee will need to continue the FFS on longer run on their own with minimum support from the project only for second year. The respective Township DoA Office will provide necessary technical supports as and when needed and will be responsible for the follow up activities. The DoA will also be responsible for monitoring the extent of adoption of newly acquired practices and how these are being scaled up in other neighboring communities.

## 9. FFS Curriculum/Module for the Potential Crops (Paddy, and Green Gram) in Coastal/Delta Zone

Month	Module	Subject and Competences
May	Pre-FFS Introductory Meeting	<ol style="list-style-type: none"> <li>1. Objectives of FFS, guiding principles, FFS Farmers selection, FFS Committee formation, Selection of Lead Farmer etc.</li> <li>2. Introduction of participants: Facilitator, technical specialist, participants from the village.</li> <li>3. Site selection for establishing demonstration plot (in Lead Farmer's Field) also discussion and agreement on size (one acre), treatments to be included and layout of the demonstration plot.</li> <li>4. Introduction of crops that will be covered in FFS: Paddy, Green Gram and Sunn Hemp (<i>Crotalaria juncia</i>).</li> <li>5. Collection of soil samples for soil analysis that will be sent to soil lab to get the base line data of pH, soil texture, electrical conductivity, organic carbon, nutrient contents (N, P, K, Ca, Mg, S, Zn, B) and Na and related radicals (Cl, CO<sub>3</sub> and HCO<sub>3</sub>).</li> </ol>
June	Module 1	<ol style="list-style-type: none"> <li>1. Concept of Climate Smart Agriculture.</li> <li>2. Concept of GAP and its practices.</li> <li>3. Concept of CA and its practices.</li> <li>4. Analysis of existing farming systems that affect the soil, the crop/plant, and environment from the participant's perspective (putting the points on the flipcharts) and general discussion on that (braining storming session).</li> <li>5. Introduction to Climate Changes and its effects.</li> <li>6. Introduction of different cultivation practices of paddy applied in the area (broadcasting, direct seeding by drum seeders, transplanting by BMP/SRI: SRI practice will be applied in FFS as it is one of the CSA practices recommended by FAO).</li> <li>7. Selection of paddy variety to grow in Demo Plot (Farmer's preference is Paw San Yin and registered seeds are available at Myaungmya Seed Farm and Certified seeds at DOA Labutta).</li> <li>8. Preparation for nursery raising in Demo Plot by SRI practice (Detail descriptions are in the Handbook).</li> <li>9. Keeping records on crop managements for each crop and data entry in every training session.</li> <li>10. Keeping financial records on input costs and general expenditures.</li> <li>11. Open discussion on the whole training session of the day and recording of participants feedbacks.</li> <li>12. Production of plans of actions for individuals to replicate the learning from the FFS Demonstration Plot in their own farm.</li> </ol>
July (First week)	Module 2	<ol style="list-style-type: none"> <li>1. Introduction to the principles of SRI.</li> <li>2. Comparison of seed rates by existing farmers' practices and SRI practice.</li> <li>3. Germination of seeds (Detail descriptions are in the Handbook).</li> </ol>

Month	Module	Subject and Competences
		<ol style="list-style-type: none"> <li>4. Broadcasting of germinated seeds on the soil in the frames at the rate of one tin of seeds on six frames.</li> <li>5. Land preparation of Demo Plot for transplanting in next ten days, leveling the field by temporary bunds if necessary.</li> <li>6. Fertilizer application prioritizing animal dung, compost and organic fertilizer, use of chemical fertilizer should be limited.</li> <li>7. Preparation of Home-made organic products (Indigenous Microorganism-IMO, Fish Amino Acid-FAA, Preparation of EM, Tobacco-chili-ginger pesticide, etc.).</li> <li>8. Compost making exercise.</li> <li>9. Introduction of rearing of earthworms for compost production.</li> <li>10. Recording of expenditures in financial record book.</li> <li>11. Review on the individual's activity undertaken at their farms according to their plans in the previous training session.</li> <li>12. Production of individual's action plans to undertake at their farms.</li> <li>13. Open discussion on the practices already undertaken in the whole day session and feedbacks from participants.</li> </ol>
July (Third week)	Module 3	<ol style="list-style-type: none"> <li>1. Concept of paddy not the aquatic plant: weak growth of paddy plants under submerged condition.</li> <li>2. Transplanting of ten-day old seedling (Detail descriptions are in the Handbook).</li> <li>3. Open discussion on the transplanting practice of SRI and individual's opinion and comments are recorded.</li> <li>4. Group Dynamic Exercise.</li> <li>5. Special Topic.</li> <li>6. Review on the individual's activity undertaken and analyzing the strengths and weakness.</li> <li>7. Production of individual's action plan to undertake at their farms.</li> </ol>
August	Module 4	<ol style="list-style-type: none"> <li>1. Concept of IPM and practices.</li> <li>2. First weeding and inter-cultivating the paddy field after two weeks of transplanting, not beyond 24 days after sowing, by mechanical weeder (herbicide application is strictly prohibited).</li> <li>3. Application of home-made organic fertilizers (IMO, FAA, EM) at the time of weeding.</li> <li>4. Following manual weeding after rotary weeding if necessary.</li> <li>5. Insect survey, insect collection and identification of beneficial and pests.</li> <li>6. Counting tillers – minimum, maximum and average by marking specific plants for continuous tiller counts.</li> <li>7. Special caring on water management, not to be flooded all the time, breaking the bunds at the lower portion of the field.</li> <li>8. Recording of crop performances in crop management record books.</li> <li>9. Review on the individual's activity undertaken and analyzing the strengths and weakness.</li> <li>10. Production of individual's action plan to undertake at their farms</li> <li>11. Open discussion on the whole training session of the day and recording of participants feedbacks.</li> </ol>

Month	Module	Subject and Competences
		12. Second time weeding will be followed after next two weeks, i.e. at the age of about 40 days paddy plant and necessary arrangement is to be done.
September	Module 5	<ol style="list-style-type: none"> <li>1. Agroecosystem Analysis Exercise – Groups comprising of five Participants will study and make records on the following in Demo Plot               <ol style="list-style-type: none"> <li>i) the effectiveness of SRI and other CSA practices, ii) plant establishment and tillering, iii) soil organic matter and soil moisture conditions, iv) incidence of weeds and v) overall crop performances and incidences of pest and diseases etc.</li> </ol> </li> <li>2. Recording of findings by groups.</li> <li>3. Group presentations on their findings and responding to questions raised by other groups.</li> <li>4. Making decisions and recording of important points for further actions for improvement.</li> <li>5. Review on participants understanding on CSA based on the practices undertaken in Demo Plot. The level of knowledge and skills of male and female farmers will be assessed, and agreement will be made on how to better involve them in the agroecosystem analysis.</li> <li>6. Green Manure.</li> <li>7. Importance of water management in tiller formation and tiller numbers.</li> <li>8. Counting tillers in specified plants.</li> <li>9. Keeping of water in the field when the plant age is around 85 DAS (stage of Ear Primordial Initiation – EPI).</li> <li>10. Application of home-made fertilizers, EM, FAA, and pesticides.</li> <li>11. Recording of crop performances in crop management record books</li> <li>12. Recording of expenses in financial record book.</li> <li>13. Review on the individual’s activity undertaken and analyzing the strengths and weakness.</li> <li>14. Production of individual’s action plan to undertake at their farms.</li> <li>15. Open discussion on the whole training session of the day and recording of participants feedbacks.</li> </ol>
October	Module 6	<p style="text-align: center;"><b>Exchange Visits</b></p> <p>An adequate participation of women and girls in such exchange visits will be ensured.</p> <ol style="list-style-type: none"> <li>1. Visits to other FFS in the Township (Building up the relationship among farmer groups).</li> <li>2. Observation on the progress in other FFS and making comparisons with each other.</li> <li>3. Sharing of experiences among farmer groups.</li> <li>4. Dissemination of new findings to other farmer Groups.</li> <li>5. Specific discussion during the exchange visits is on CSA based on their experiences in FFS and why the practices in FFS are relevant to CSA.</li> </ol>
November (First week)	Module 7	<p style="text-align: center;"><b>Farmer’s Field Day</b></p> <p>An adequate participation of women and girls in the Farmer Field Day will be ensured.</p>

Month	Module	Subject and Competences
		<ol style="list-style-type: none"> <li>1. Visitors observation on the performances and achievements undertaken in FFS, especially paddy crop grown by SRI practice.</li> <li>2. Presentations on the activities undertaken in FFS by FFS trainees (putting emphasis on CSA).</li> <li>3. Sharing of technologies and ideas to visitors by FFS trainees, especially SRI practices.</li> <li>4. Presentations of FFS participants on their experiences throughout the whole school session, emphasizing on why Climate Smart Agriculture becomes important in their farming, climate change effects on the crops, and Paddy grown by SRI practice in the Demo Plot which is resilient to weather changes because of proper crop and soil management practices.</li> <li>5. Contribution of opinions, ideas, comments and suggestions from visitors and recording of contributions.</li> </ol>
November (Third week)	Module 8	<ol style="list-style-type: none"> <li>1. Concept of cropping system and cropping patterns.</li> <li>2. Postharvest practices, storage of seeds/ grains (use of airtight zero fly hermetic bags), and postharvest losses of paddy.</li> <li>3. Harvesting of sample plot (6.6' x 6.6') in Demo Plot and calculation of per acre yield by yield component factors.</li> <li>4. Harvesting of the whole Demo Plot followed by threshing, and winnowing.</li> <li>5. Counting of total and effective tillers, and filled grains per panicle in specified plants.</li> <li>6. Varietal selection of green gram and varietal characteristics- farmer's preference is local variety Kyauk-Sane which has good market price.</li> <li>7. Growing of green gram in Demo Plot after paddy with zero tillage (seed soaking with specific of rhizobium inocula for green-gram and adoption of CA practice)(There will be two trials depending on the moisture content of the field: (1) direct broadcasting immediately after paddy harvest and then mulched with straw: (2) just opening of sowing lines, direct seeding in the lines and mulching by straw).</li> <li>8. Comparison of seed rates of their practice and improved practice.</li> <li>9. Recording of expenses in financial record book.</li> <li>10. Review on the individual's activity undertaken and analyzing the strengths and weakness.</li> <li>11. Production of individual's action plan to undertake at their farms.</li> <li>12. Open discussion on the whole training session of the day and recording of participants feedbacks.</li> </ol>
December	Module 9	<p style="text-align: center;"><b>Farming As A Business (FAAB)</b></p> <ol style="list-style-type: none"> <li>1. Group discussion on the following (Groups comprising of five participants). <ol style="list-style-type: none"> <li>1) What is agriculture as a business? 2) How can agriculture be done as a business? 3) What is the difference between food crop and cash crop? 4) Why intercropping can optimize output per acre?</li> </ol> </li> <li>2. Group presentations of their outputs and defending feedbacks from participants.</li> <li>3. Documentation of important points for further actions</li> <li>4. Group discussion on essentials of agriculture as a business (plans of production, keeping of financial record book, keeping the cash flow, knowing of cost of production, main cost drivers and alternatives).</li> </ol>

Month	Module	Subject and Competences
		<ol style="list-style-type: none"> <li>5. Discuss and explore the potential business opportunities for women and the most marginalized farmers to ensure their participation and equal benefits.</li> <li>6. Group presentations of their outputs and defending feedbacks from participants.</li> <li>7. Documentation of important points for further consideration.</li> <li>8. Group discussion on their understanding of the market system (role of brokers and traders, price variation in market systems, importance of linkages for market information, market prospects for a crop as recommended in value chain analysis).</li> <li>9. Group presentations of their outputs and defending feedbacks from participants.</li> <li>10. Determination of ways to improve market system to benefiting to individual farmers and documentation of important points for further actions.</li> <li>11. Presentations of individuals on their activities undertaken in between the FFS sessions.</li> <li>12. Production of individual's action plan.</li> <li>13. Open discussion on the whole training session of the day and recording of participants feedbacks.</li> </ol>
January	Module 10	<ol style="list-style-type: none"> <li>1. IPM for green gram and scouting of insect incidence.</li> <li>2. Broadcasting of sunn hemp in green gram plot before the crop harvest.</li> <li>3. Open discussion on the practices (opinion and comments from participants).</li> <li>4. Review on the activities undertaken by individuals and suggestions from participants.</li> <li>5. Production of individual's action plan.</li> </ol>
February	Module 11	<ol style="list-style-type: none"> <li>1. Harvesting of green gram.</li> <li>2. Comparison of yields between traditional and improved practices.</li> <li>3. Estimation of cost/benefit ratio from total costs of cultivation and possible incomes from crops.</li> <li>4. Discussion and planning on recommendations from Value Chain Analysis such as market information, linkages establishment with inputs/outputs market, financial institutions.</li> <li>5. Observation on the growth of sunn hemp.</li> <li>6. Review on the activities undertaken by individuals and suggestions from participants.</li> </ol>
March	Module 12	<p style="text-align: center;"><b>Graduation Day:</b></p> <ol style="list-style-type: none"> <li>1. Review on the whole FFS training session by participants and their awareness on CSA and its practices.</li> <li>2. Review on the awareness of participants on CA, GAP, IPM, and Agriculture as a Business.</li> <li>3. Development of plans of actions to undertake beyond FFS (strengthening of land management practices, caring of avocado and coffee plantation) (Yam harvest can be in January or February).</li> <li>4. Lessons learned from the FFS.</li> <li>5. Evaluation of training session by participants.</li> <li>6. Provision of Completion Certificate to participants.</li> <li>7. Ending of FFS successfully.</li> </ol>

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