

**CURRICULUM**

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**Community Agriculture Assistant  
(CAA)**



**Council for Technical Education and Vocational Training**  
**Curriculum Development Division**  
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## **Introduction**

This curriculum for community agriculture assistant is designed to produce lower level technical workforce equipped with knowledge and skills related to agriculture production and management occupation. It makes the trainees able to get opportunities for wage and self-employment in the related occupational field.

## **Aim**

To produce lower level agriculture workers (community agriculture assistants) able to provide agriculture services in the community being an entrepreneur/employee/self employed.

## **Objectives**

After the completion of the training program, the trainees will be able:

- To be familiar with agriculture production/management
- To be familiar with social mobilization
- To manage nursery, fertilizer, and pesticides
- To produce vegetable, fruits, ornamental, cereal, pulses, and cash crops / seeds
- To carry out sericulture, beekeeping, fish farming, and duck farming
- To market agricultural products
- To communicate with others and
- To be familiar with entrepreneur development

## **Course description**

This curriculum provides skills & knowledge necessary for community agriculture assistant. There will be both demonstration by instructors/trainers and opportunity by trainees to perform skills/tasks specified in this curriculum. Trainees will practice & learn skills using typical tools, materials, equipment & machines necessary for the program.

After successful completion of this program the trainees will be equipped with the knowledge and skills related to social mobilization; nursery, fertilizer, and pesticide management; vegetable, fruits, ornamental, cereal, pulses, and cash crops / seed production; sericulture, beekeeping, fish farming, and duck farming; agriculture product marketing; communication; and entrepreneur development.

## Course structure

| <b>Community agriculture assistant (CAA)</b> |   |            |             |           |            |            |           |            |
|--|---|------------|-------------|-----------|------------|------------|-----------|------------|
|  | Modules/Sub modules   | Nature     | Total hours |           |            | Full marks |           |            |
|  |   |            | Th          | Pr        | Tot        | Th         | Pr        | Tot        |
|  | <b>1. Introductory agriculture &amp; social mobilization</b>          | <b>T/P</b> | <b>15</b>   | <b>33</b> | <b>48</b>  | <b>5</b>   | <b>20</b> | <b>25</b>  |
|  | 1. Introduction to agriculture  |            | 5           | 5         | 10         |            |           |            |
|  | 2. Social mobilization  |            | 10          | 28        | 38         |            |           |            |
|  | <b>2. Nursery, fertilizer and pesticide management</b>                | <b>T/P</b> | <b>20</b>   | <b>52</b> | <b>72</b>  | <b>10</b>  | <b>40</b> | <b>50</b>  |
|  | 1. Nursery management   |            | 7           | 21        | 28         |            |           |            |
|  | 2. Fertilizer management  |            | 6           | 18        | 24         |            |           |            |
|  | <b>3. Pesticide management</b>  |            | <b>7</b>    | <b>13</b> | <b>20</b>  |            |           |            |
|  | <b>3. Horticulture, cereal, pulse, cash crops and seed production</b> | <b>T/P</b> | <b>32</b>   | <b>96</b> | <b>128</b> | <b>20</b>  | <b>80</b> | <b>100</b> |
|  | 1. Vegetable production   |            | 5           | 15        | 20         |            |           |            |
|  | 2. Fruits production  |            | 7           | 21        | 28         |            |           |            |
|  | 3. Ornamental plants production                                       |            | 7           | 21        | 28         |            |           |            |
|  | 4. Cereal, pulses, and cash crop Production                           |            | 5           | 15        | 20         |            |           |            |
|  | 5. Seed production  |            | 8           | 24        | 32         |            |           |            |
|  | <b>4. Sericulture, bee keeping, fish and duck farming</b>             | <b>T/P</b> | <b>22</b>   | <b>66</b> | <b>88</b>  | <b>20</b>  | <b>80</b> | <b>100</b> |
|  | 1. Sericulture  |            | 6           | 18        | 24         |            |           |            |
|  | 2. Beekeeping   |            | 5           | 15        | 20         |            |           |            |
|  | 3. Fish farming   |            | 6           | 18        | 24         |            |           |            |
|  | <b>4. Duck farming</b>  |            | <b>5</b>    | <b>15</b> | <b>20</b>  |            |           |            |
|  | <b>5. Marketing, communication and entrepreneur development</b>       | <b>T/P</b> | <b>21</b>   | <b>33</b> | <b>54</b>  | <b>5</b>   | <b>20</b> | <b>25</b>  |
|  | 1. Agricultural product marketing                                     |            | 6           | 6         | 12         |            |           |            |
|  | 2. Communication  |            | 8           | 8         | 16         |            |           |            |
|  | 3. Entrepreneur development   |            | 7           | 19        | 26         |            |           |            |
|  | Total:  |            | 110         | 280       | 390        | 60         |           | 300        |

**Duration**

The total duration of the course will be of 390 hours (three months).

**Target group**

All interested individuals in the field of agriculture with educational prerequisite of class eight pass.

**Group size**

Maximum of thirty

**Medium of instruction**

Nepali or English or both

**Pattern of attendance**

- 80% attendance in theory
- 90% in practical/ performance

**Focus of curriculum**

This curriculum emphasizes on competency /performance. 80% time is allocated for performance and only 20% for related technical knowledge. So the focus will be on performance of the specified competencies in the curriculum

**Entry criteria**

- Minimum of eight class pass or equivalent
- Minimum of 14 years of age
- Should pass entrance examination

**Follow up suggestions**

In order to assess the success of this program and collect feedbacks/ inputs for the revision of the curriculum a schedule of follow up is suggested as follows:

- First follow up: - Six months after the completion of the program
- Second follow up: - Six months after the completion of the first follow up
- Follow up cycle: - In a cycle of one year after the completion of the second follow up for five years

**Certificate**

The related training institute will provide the certificate of "Community Agriculture Assistant". Again, individuals who complete module (s) of the curriculum will receive a certificate of completion of the particular module(s).

**Grading**

- Distinction: passed with 80% or above
- First division: passed with 75% or above
- Second division: passed with 65% or above

- Third division: passed with 60% or above

### **Students evaluation**

- Continuous evaluation of the trainees' performance is to be done by the related instructor/ trainer to ensure the proficiency over each competency under each of the sub-module.
- Related technical knowledge learnt by trainees will be evaluated through written or oral tests.
- Trainees must secure minimum marks of 60% in an average of both theory and practical evaluations.
- There will be three internal evaluations and one final evaluation in each module.
- The entrance test will be conducted by the concerned training institute

### **Trainers qualification**

- I. Sc. Ag or equivalent in related field
- Good communicative and instructional skills
- Experience in related field

### **Trainer-trainees ratio**

- 1:10 for practical classes
- For theory, as per the class room situation

### **Suggestions for instructor**

#### **Suggestions for instruction**

- 1. Select objectives**
  - Write objectives of cognitive domain
  - Write objectives of psychomotor domain
  - Write objectives of affective domain
- 2. Select subject matter**
  - Study subject matter in detail
  - Select content related to cognitive domain
  - Select content related to psychomotor domain
  - Select content related to affective domain
- 3. Select instructional methods**
  - Teacher centered methods: like lecture, demonstration, questions answer inquiry, induction and deduction methods.
  - Student initiated methods like experimental, field trip/excursion, discovery, exploration, problem solving, and survey methods.
  - Interaction methods like discussion, group/team teaching, microteaching and exhibition.
  - Dramatic methods like role play and dramatization
- 4. Select Instructional method (s) on the basis of objectives of lesson plans and KAS domains**
- 5. Select appropriate educational materials and apply at right Time and place.**
- 6. Evaluate the trainees applying various tools to correspond the KAS domains**

7. Make plans for classroom / field work / workshop organization and management.
8. Coordinate among objectives, subject matter and instructional methods.
9. Prepare lesson plan for Theory and Practical classes.
10. Deliver /conduct instruction / program
11. Evaluate instruction/ program

### **Suggestion for the performance evaluation of the trainees**

1. Perform task analysis
2. Develop a detail task performance checklist
3. Perform continuous evaluation of the trainees by applying the performance checklist.

### **Suggestion for skill training**

Demonstrate performance

1. Demonstrate task performance in normal speed
2. Demonstrate slowly with verbal description of each and every step in the sequence of activity of the task performance using question and answer techniques.
3. Repeat 2 for the clarification on trainees demand if necessary
4. Perform fast demonstration of the task.

Provide trainees the opportunities to practice the task performance demonstration

1. Provide trainees to have guided practice
2. Create environment for practicing the demonstrated task performance
3. Guide the trainees in each and every step of task performance
4. Provide trainees to repeat and repeat as per the need to be proficient on the given task performance
5. Switch to another task demonstration if and only trainees developed proficiency in the task performance.

### **Other suggestions**

1. Apply principles of skill training
2. Allocate 20% Time for Theory classes and 80% Time for task performance while delivering instructions
3. Apply principles of adult learning
4. Apply principles of intrinsic motivation
5. Facilitate maximum trainees involvement in learning and task performance activities
6. Instruct the trainees on the basis of their existing level of knowledge, skills and attitude.

## Modules and sub modules

| <b>Module:1: Introductory agriculture &amp; social mobilization</b>  |   |  |     |             |      |           |  |    |    |    |    |     |    |
|--|---|--|-----|-------------|------|-----------|--|----|----|----|----|-----|----|
| <b>Description:</b> It deals with the knowledge and skills related to Introductory agriculture & social mobilization.  |   | <table border="1" style="float: right; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Time(hrs)</th> </tr> <tr> <td style="text-align: center;">Th</td> <td style="text-align: center;">15</td> </tr> <tr> <td style="text-align: center;">Pr</td> <td style="text-align: center;">33</td> </tr> <tr> <td style="text-align: center;">Tot</td> <td style="text-align: center;">48</td> </tr> </table> |     |             |      | Time(hrs) |  | Th | 15 | Pr | 33 | Tot | 48 |
| Time(hrs)  |   |  |     |             |      |           |  |    |    |    |    |     |    |
| Th   | 15  |  |     |             |      |           |  |    |    |    |    |     |    |
| Pr   | 33  |  |     |             |      |           |  |    |    |    |    |     |    |
| Tot  | 48  |  |     |             |      |           |  |    |    |    |    |     |    |
| <b>Objectives:</b> After its completion the trainees will be able:   |   | <ol style="list-style-type: none"> <li>1. To introduce agriculture occupation</li> <li>2. To be familiar with the concept of social mobilization</li> </ol>  |     |             |      |           |  |    |    |    |    |     |    |
| <b>Sub-modules:</b>  |   | <ol style="list-style-type: none"> <li>1. Introduction to agriculture</li> <li>2. Social mobilization</li> </ol>   |     |             |      |           |  |    |    |    |    |     |    |
| <b>Sub-module:1: Introduction to agriculture</b>   |   |  |     |             |      |           |  |    |    |    |    |     |    |
| <b>Description:</b> It deals with the knowledge and skills/tasks related to introductory agriculture. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge. |   | <b>Objective:</b> After its completion the trainees will be able:  |     |             |      |           |  |    |    |    |    |     |    |
| <b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:  |   | <ul style="list-style-type: none"> <li>• To introduce agriculture occupation</li> </ul>  |     |             |      |           |  |    |    |    |    |     |    |
|  |   | Th.( 5 hrs) + Pr.( 5 hrs) = Tot.( 10 hrs)  |     | Time( hrs ) |      |           |  |    |    |    |    |     |    |
| SN   | Tasks/skills  | Related technical knowledge  | Th. | Pr.         | Tot. |           |  |    |    |    |    |     |    |
| 1.   | Develop concept/ application skills of some agricultural terms          | <ul style="list-style-type: none"> <li>• Common ag. terms: cultivation, tillage, training, pruning, propagation, manuring, irrigation, cropping system, storage</li> </ul>   | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 2.   | Perform basic agricultural activities                                   | <ul style="list-style-type: none"> <li>• Basic ag. activities: field preparation (ploughing, digging, levelling), manuring, irrigation, intercultural operation (weeding, hoeing, earthing up), disease/pest management, harvesting, threshing</li> </ul>  | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 3.   | Develop concept on cultivation & management of common agriculture crops | <ul style="list-style-type: none"> <li>• Common crops: cereal crops(rice, maize, wheat), pulses (horsegram, black gram, lentil, chickpea, soyabean, cowpea), oilseed (groundnut, linseed, mustard, sunflower)</li> </ul>   | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 4.   | Prepare cropping plans  | <ul style="list-style-type: none"> <li>• Cropping plan: principle</li> </ul>   | 1   | 1           | 2    |           |  |    |    |    |    |     |    |



|   |   |  |             |          |           |
|---|---|--|-------------|----------|-----------|
|   |   | procedure and application  |             |          |           |
| 5.  | Develop concept of sericulture/ beekeeping                          | <ul style="list-style-type: none"> <li>Beekeeping: introduction, types of bees (male, female, workers), life cycle of bees, status in Nepal</li> </ul> | 1           | 1        | 2         |
| Total:  |   |  | <b>5</b>    | <b>5</b> | <b>10</b> |
| <b>Sub-module:2: Social mobilization</b>  |   |  |             |          |           |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to social mobilization. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>To be familiar with the concept of social mobilization</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |   |  |             |          |           |
|   | Th.( 10 hrs) + Pr.( 28 hrs) = Tot.( 38 hrs)                         |  | Time( hrs ) |          |           |
| SN  | Tasks/skills  | Related technical knowledge  | Th.         | Pr.      | Tot.      |
| 1.  | Observe the sites   | <ul style="list-style-type: none"> <li>Background information (Location, General Socio economic condition)</li> </ul>                                  | 1           | 3        | 4         |
| 2.  | Select community sites  | <ul style="list-style-type: none"> <li>Number of communities, target objectives</li> </ul>   | 1           | 3        | 4         |
| 3.  | Build rapport   | <ul style="list-style-type: none"> <li>Techniques , social environment</li> </ul>  | 1           | 3        | 4         |
| 4.  | Prepare village profile   | <ul style="list-style-type: none"> <li>Tools, keeping records</li> </ul>   | 1           | 3        | 4         |
| 5.  | Collect information from other organizations about their activities | <ul style="list-style-type: none"> <li>Targeted details about the organizations, keeping records</li> </ul>  | 1           | 3        | 4         |
| 6.  | Analyze current status of target group                              | <ul style="list-style-type: none"> <li>Target group identification, tools and methods, report writing</li> </ul>                                       | 1           | 3        | 4         |
| 7.  | Analyze historical cases  | <ul style="list-style-type: none"> <li>Tools and methods, report writing</li> </ul>  | 1           | 3        | 4         |
| 8.  | Conduct household survey  | <ul style="list-style-type: none"> <li>Data collection, checklist/questionnaires preparation, sampling methods, keeping records</li> </ul>             | 1           | 3        | 4         |
| 9.  | Conduct individual interview  | <ul style="list-style-type: none"> <li>Key informants, checklist/questionnaires preparation, sampling methods, keeping records</li> </ul>              | 1           | 1        | 2         |

|   |                         |  |   |     |      |
|---|-------------------------|--|---|-----|------|
| 10.   | Conduct group interview | <ul style="list-style-type: none"> <li>• Checklist/questionnaires preparation, time management, keeping records</li> </ul> | 1   | 3   | 4    |
| Total:  |                         |  | 10  | 28  | 38   |
| <b>Module:2: Nursery, fertilizer and pesticide management</b>   |                         |  |   |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills related to nursery, fertilizer and pesticide management.</p> <p><b>Objectives:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To manage nursery</li> <li>• To manage fertilizer</li> <li>• To manage pesticide</li> </ul> <p><b>Sub-modules:</b></p> <ol style="list-style-type: none"> <li>1. Nursery management</li> <li>2. Fertilizer management</li> <li>3. Pesticide management</li> </ol>   |                         |  |   |     |      |
| <b>Sub-module:1: Nursery management</b>   |                         |  |   |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to nursery management. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To manage nursery</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |                         |  |   |     |      |
|   |                         |  | Th.(7 hrs) + Pr.( 21 hrs) = Tot.( 28 hrs) |     |      |
|   |                         |  | Time( hrs )                               |     |      |
| SN  | Tasks/skills            | Related technical knowledge  | Th.                                       | Pr. | Tot. |
| 1.  | Collect seed            | • Types, variety, source   | 1   | 3   | 4    |
| 2.  | Treat seed              | • Method, chemicals, duration  | 1   | 3   | 4    |
| 3.  | Prepare nursery bed     | • Type (raised, flat, sunken beds), nursery bed layout   | 1   | 3   | 4    |
| 4.  | Make tunnel             | • Size, materials & their quality (plastic, bamboo, pegs), equipments, plastic house cultivation                           | 1   | 3   | 4    |
| 5.  | Sow / plant Seed        | • Planting distance, method, time of plantation  | 1   | 3   | 4    |
| 6.  | Grow seeding            | • Duration of growth, water requirement  | 1   | 3   | 4    |
| 7.  | Carryout propagation    | • Method (cutting, grafting, inarching) time   | 1   | 3   | 4    |
| Total:  |                         |  | 7   | 21  | 28   |
| <b>Sub-module:2: Fertilizer management</b>  |                         |  |   |     |      |
| <b>Description:</b> It deals with the knowledge and skills/tasks related to fertilizer  |                         |  |   |     |      |

|  |
|--|
| <p>management. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To manage fertilizer</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |
|--|

|        |                                  | Th.( 6 hrs) + Pr.( 18 hrs) = Tot.( 24 hrs)  | Time( hrs ) |     |      |
|--------|----------------------------------|---|-------------|-----|------|
| SN     | Tasks/skills                     | Related technical knowledge   | Th.         | Pr. | Tot. |
| 1.     | Make compost                     | • Materials, methods, type  | 1           | 3   | 4    |
| 2.     | Identify fertilizer              | • Name, nutrient composition  | 1           | 3   | 4    |
| 3.     | Calculate fertilizer requirement | • Mathematical calculation, dose, nutrient composition, area of requirement           | 1           | 3   | 4    |
| 4.     | Apply micro / macro nutrients    | • Nutrient category(major, macro and micro), nutrient status of soil, required amount | 1           | 3   | 4    |
| 5.     | Apply fertilizer                 | • Method , timing/splitting (basal & top dressing)                                    | 1           | 3   | 4    |
| 6.     | Store fertilizer                 | • Storage condition   | 1           | 3   | 4    |
| Total: |                                  |   | 6           | 18  | 24   |

### Sub-module:3: Pesticide management

|   |
|---|
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to pesticide management. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To manage pesticide</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |
|---|

|    |                                | Th.(7 hrs) + Pr.( 13 hrs) = Tot.( 20 hrs)  | Time( hrs ) |     |      |
|----|--------------------------------|--|-------------|-----|------|
| SN | Tasks/skills                   | Related technical knowledge  | Th.         | Pr. | Tot. |
| 1. | Identify pesticides            | • Name, chemical composition, limit of danger (colour, signs), type (contact or systemic)                      | 1           | 1   | 2    |
| 2. | Calculate quantity requirement | • Active ingredient (a.i.), dose, area of application, mathematical calculation (formula, unitary method etc.) | 1           | 3   | 4    |
| 3. | Prepare solution / dilution    | • Method   | 1           | 3   | 4    |
| 4. | Apply pesticides               | • Dose, waiting period, time   | 1           | 3   | 4    |

|        |                    |  |   |    |    |
|--------|--------------------|--|---|----|----|
|        |                    | of application, method, precaution measures  |   |    |    |
| 5.     | Store pesticide    | • Storage condition, precautions   | 1 | 1  | 2  |
| 6.     | Sell pesticide     | • government policies, name and type of pesticides, targeted pest, precautions, source(whole sellers, dealers and companies), market channel | 1 | 1  | 2  |
| 7.     | Maintain inventory | • Assets and liabilities   | 1 | 1  | 2  |
| Total: |                    |  | 7 | 13 | 20 |

### Module:3: Horticulture, cereal, pulse, cash crops and seed production

**Description:** It deals with the knowledge and skills related to vegetable, fruit, cereal, pulses, and cash crops as well as seed production.

**Objectives:** After its completion the trainees will be able:

- To produce vegetable crops
- To produce fruit crops
- To produce cereal crops
- To produce pulses crops
- To produce cash crops
- To produce seeds

**Sub-modules:**

1. Vegetable production
2. Fruit production
3. Ornamental plants production
4. Cereal, pulses, and cash crops production
5. Seed production

| Time(hrs) |     |
|-----------|-----|
| Th        | 32  |
| Pr        | 96  |
| Tot       | 128 |

#### Sub-module:1: Vegetable production

**Description:** It deals with the knowledge and skills/tasks related to vegetable crop production. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.

**Objective:** After its completion the trainees will be able:

- To produce vegetable crops

**Tasks:** To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:

| Th.( 5 hrs) + Pr.( 15 hrs) = Tot.( 20 hrs) |                      |  | Time( hrs ) |     |      |
|--|----------------------|--|-------------|-----|------|
| SN   | Tasks/skills         | Related technical knowledge                                  | Th.         | Pr. | Tot. |
| 1.   | Prepare soil         | • Field preparation (ploughing, digging, leveling), manuring | 1           | 3   | 4    |
| 2.   | Transplant seedlings | • Direct method of planting, time, method, planting distance | 1           | 3   | 4    |

|   |                             |   |             |     |      |
|---|-----------------------------|---|-------------|-----|------|
| 3.  | Carry out intercultural     | • Weeding, hoeing, earthing up, irrigation  | 1           | 3   | 4    |
| 4.  | Protect vegetable plant     | • Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic                             | 1           | 3   | 4    |
| 5.  | Harvest vegetable           | • Maturity judgment or maturity index, harvesting method, time of harvest   | 1           | 3   | 4    |
| Total:  |                             |   | 5           | 15  | 20   |
| <b>Sub-module:2: Fruit production</b>   |                             |   |             |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to fruit crop production. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To produce fruit crops</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |                             |   |             |     |      |
| Th.( 7 hrs) + Pr.( 21 hrs) = Tot.( 28 hrs)  |                             |   | Time( hrs ) |     |      |
| SN  | Tasks/skills                | Related technical knowledge   | Th.         | Pr. | Tot. |
| 1.  | Make plan                   | • Site (topography, soil, aspects, area)  | 1           | 3   | 4    |
| 2.  | Perform layout              | • Measurements, calculation, designing  | 1           | 3   | 4    |
| 3.  | Transplant fruit seedlings  | • Time of plantation, field preparation, fertilizer calculation and manuring, planting distance, irrigation (method and water requirement), pit digging | 1           | 3   | 4    |
| 4.  | Carryout intercultural      | • Weeding, hoeing, earthing up, irrigation, training& pruning, chemicals (for disease and pest) spraying  | 1           | 3   | 4    |
| 5.  | Protect fruit plant         | • Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic)                            | 1           | 3   | 4    |
| 6.  | Carryout training / pruning | • Training/pruning: methods and timing  | 1           | 3   | 4    |
| 7.  | Harvest fruit               | • Maturity index, method and  | 1           | 3   | 4    |

|  |                             | time of harvest  |             |     |      |
|--|-----------------------------|--|-------------|-----|------|
| Total:   |                             |  | 7           | 21  | 28   |
| <b>Sub-module:3: Ornamental plant production</b>   |                             |  |             |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to ornamental plants production. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To produce ornamental plants</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |                             |  |             |     |      |
| Th.( 7 hrs) + Pr.( 21 hrs) = Tot.( 28 hrs)   |                             |  | Time( hrs ) |     |      |
| SN   | Tasks/skills                | Related technical knowledge  | Th.         | Pr. | Tot. |
| 1.   | Identify ornamental plants  | • Scientific/English/common name/varieties and family, morphological character and habit, type   | 1           | 3   | 4    |
| 2.   | Make plans                  | • Site (topography, soil, aspects, area), designing  | 1           | 3   | 4    |
| 3.   | Carryout plantation         | • Time of plantation, field preparation, fertilizer calculation and manuring, planting distance, irrigation (method and water requirement) | 1           | 3   | 4    |
| 4.   | Carryout intercultural      | • Weeding, hoeing, irrigation, training& pruning, chemicals (for disease and pest) spraying  | 1           | 3   | 4    |
| 5.   | Protect plant               | • Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic)               | 1           | 3   | 4    |
| 6.   | Carryout training / pruning | • Training/pruning: methods (specific to plants) and timing  | 1           | 3   | 4    |
| 7.   | Harvest flower / plant      | • Maturity index, method and time of harvest   | 1           | 3   | 4    |
| Total:   |                             |  | 7           | 21  | 28   |
| <b>Sub-module:4: Cereal, pulses, and cash crops production</b>   |                             |  |             |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to cereal, pulses, and cash crops production. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p>   |                             |  |             |     |      |

| <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To produce cereal crops</li> <li>• To produce pulses crops</li> <li>• To produce crops crops</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p>   |                                    |  |             |     |      |
|--|------------------------------------|--|-------------|-----|------|
| Th.( 5 hrs) + Pr.( 15 hrs) = Tot.( 20 hrs)   |                                    |  | Time( hrs ) |     |      |
| SN   | Tasks/skills                       | Related technical knowledge  | Th.         | Pr. | Tot. |
|  | Prepare land                       | • Land preparation(ploughing, leveling, manuring)  | 1           | 3   | 4    |
|  | Sow / plant seed                   | • Time of plantation, planting distance, planting method (broadcast, line sowing, transplantation)                           | 1           | 3   | 4    |
|  | Carryout intercultural operation   | • Weeding, hoeing, irrigation  | 1           | 3   | 4    |
|  | Protect plant                      | • Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic) | 1           | 3   | 4    |
|  | Harvest crop                       | • Maturity index, method and time of harvest   | 1           | 3   | 4    |
| Total:   |                                    |  | 5           | 15  | 20   |
| <b>Sub-module:5: Seed production</b>   |                                    |  |             |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to seeds production. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To produce seeds</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |                                    |  |             |     |      |
| Th.(8 hrs) + Pr.( 24 hrs) = Tot.( 32 hrs)  |                                    |  | Time( hrs ) |     |      |
| SN   | Tasks/skills                       | Related technical knowledge  | Th.         | Pr. | Tot. |
| 1.   | Make plan                          | • Seed type (self or crossed), site (topography, soil, aspects, area)  | 1           | 3   | 4    |
| 2.   | Produce / receive foundation seeds | • Concept, source, method (if produced)  | 1           | 3   | 4    |
| 3.   | Prepare land                       | • Land preparation(ploughing, leveling, manuring)  | 1           | 3   | 4    |
| 4.   | Sow seed / plant                   | • Seed quality (purity,  | 1           | 3   | 4    |

|        |                                  |   |   |    |    |
|--------|----------------------------------|---|---|----|----|
|        |                                  | viability), planting distance, isolation distance, method   |   |    |    |
| 5.     | Carryout intercultural operation | • Weeding, hoeing, irrigation   | 1 | 3  | 4  |
| 6.     | Protect plants                   | • Pest/disease management (symptom identification, pest identification, method of protection (IPM/ IDM, chemicals or organic) | 1 | 3  | 4  |
| 7.     | Control quality                  | • Roughing, Inspection, moisture content  | 1 | 3  | 4  |
| 8.     | Harvest seeds                    | • Maturity index, time and method   | 1 | 3  | 4  |
| Total: |                                  |   | 8 | 24 | 32 |

#### Module:4: Sericulture, beekeeping, fish and duck farming

|   |   |           |  |    |    |    |    |     |    |
|---|---|-----------|--|----|----|----|----|-----|----|
| <p><b>Description:</b> It deals with the knowledge and skills related to sericulture, beekeeping, fish and duck farming.</p> <p><b>Objectives:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To develop sericulture</li> <li>• To develop beekeeping</li> <li>• To develop fish farming</li> <li>• To develop duck farming</li> </ul> <p><b>Sub-modules:</b></p> <ol style="list-style-type: none"> <li>1. Sericulture</li> <li>2. Beekeeping</li> <li>3. Fish farming</li> <li>4. Duck farming</li> </ol> | <table border="1"> <tr> <td colspan="2">Time(hrs)</td> </tr> <tr> <td>Th</td> <td>22</td> </tr> <tr> <td>Pr</td> <td>66</td> </tr> <tr> <td>Tot</td> <td>88</td> </tr> </table> | Time(hrs) |  | Th | 22 | Pr | 66 | Tot | 88 |
| Time(hrs)   |   |           |  |    |    |    |    |     |    |
| Th  | 22  |           |  |    |    |    |    |     |    |
| Pr  | 66  |           |  |    |    |    |    |     |    |
| Tot   | 88  |           |  |    |    |    |    |     |    |

#### Sub-module:1: Sericulture

|   |  |
|---|--|
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to sericulture. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To develop sericulture</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |  |
|---|--|

|    |                     | Th.(6 hrs) + Pr.( 18 hrs) = Tot.(24 hrs)  | Time( hrs ) |     |      |
|----|---------------------|---|-------------|-----|------|
| SN | Tasks/skills        | Related technical knowledge   | Th.         | Pr. | Tot. |
| 1. | Make plan           | • Structure designing   | 1           | 3   | 4    |
| 2. | Plan/ grow mulberry | • Site of mulberry cultivation (topography, soil, area), method of growing mulberry | 1           | 3   | 4    |
| 3. | Identify breed      | • Name, morphological   | 1           | 3   | 4    |



|   |                  |  |             |           |           |
|---|------------------|--|-------------|-----------|-----------|
|   |                  | characters   |             |           |           |
| 4.  | Rear silk worms  | • Time and method  | 1           | 3         | 4         |
| 5.  | Feed silk worms  | • Time, amount, feeding habit  | 1           | 3         | 4         |
| 6.  | Harvest cocoon   | • Time , method  | 1           | 3         | 4         |
| Total:  |                  |  | <b>6</b>    | <b>18</b> | <b>24</b> |
| <b>Sub-module:2: Beekeeping</b>   |                  |  |             |           |           |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to beekeeping. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To develop beekeeping</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p>     |                  |  |             |           |           |
| Th.(5 hrs) + Pr.( 15 hrs) = Tot.( 20 hrs)   |                  |  | Time( hrs ) |           |           |
| SN  | Tasks/skills     | Related technical knowledge  | Th.         | Pr.       | Tot.      |
| 1.  | Make plan        | • Structure for bee keeping, breed   | 1           | 3         | 4         |
| 2.  | Identify breeds  | • Name (Scientific and common) morphological characters(size, colour)            | 1           | 3         | 4         |
| 3.  | Rear bees        | • Cultivated areas, flowering seasons, type of crop/flower, distance for rearing | 1           | 3         | 4         |
| 4.  | Protect bees     | • Danger area identification (highly chemicals used cultivated area)             | 1           | 3         | 4         |
| 5.  | Extract honey    | • Method, precautions, time  | 1           | 3         | 4         |
| Total:  |                  |  | 5           | 15        | 20        |
| <b>Sub-module:3: Fish farming</b>   |                  |  |             |           |           |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to fish farming. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To develop fish farming</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |                  |  |             |           |           |
| Th.( 6 hrs) + Pr.( 18 hrs) = Tot.( 24 hrs)  |                  |  | Time( hrs ) |           |           |
| SN  | Tasks/skills     | Related technical knowledge  | Th.         | Pr.       | Tot.      |
| 1.  | Make Plan        | • Site (Topography, area, water availability, aspects), structure, designing     | 1           | 3         | 4         |
| 2.  | Manage fish pond | • Climate/weather  | 1           | 3         | 4         |

|   |                 |  |             |     |      |
|---|-----------------|--|-------------|-----|------|
|   |                 | condition(temperature, humidity), water condition (temperature, viscosity, sanitation), time of feeding, tools and equipments  |             |     |      |
| 3.  | Identify breeds | <ul style="list-style-type: none"> <li>Common/scientific name, morphological characters (size, colour, body shape etc.),</li> </ul>  | 1           | 3   | 4    |
| 4.  | Rear fish       | <ul style="list-style-type: none"> <li>Feeding behavior (carnivorous, herbivorous, omnivorous,/bottom or surface feeder), feeding ingredients, source of availability</li> </ul> | 1           | 3   | 4    |
| 5.  | Protect fish    | <ul style="list-style-type: none"> <li>Monitoring (time and method), feeding ingredients, temperature management, pond sanitation, symptoms of disease</li> </ul>                | 1           | 3   | 4    |
| 6.  | Harvest fish    | <ul style="list-style-type: none"> <li>Method</li> </ul>   | 1           | 3   | 4    |
| Total:  |                 |  | 6           | 18  | 24   |
| <b>Sub-module:4: Duck farming</b>   |                 |  |             |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to duck farming. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>To develop duck farming</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |                 |  |             |     |      |
| Th.( 5 hrs) + Pr.( 15 hrs) = Tot.( 20 hrs)  |                 |  | Time( hrs ) |     |      |
| SN  | Tasks/skills    | Related technical knowledge  | Th.         | Pr. | Tot. |
| 1.  | Make plan       | <ul style="list-style-type: none"> <li>Site (Topography, area, water availability, aspects), structure, designing</li> </ul>   | 1           | 3   | 4    |
| 2.  | Identify breeds | <ul style="list-style-type: none"> <li>Name of breeds, morphological characters</li> </ul>   | 1           | 3   | 4    |
| 3.  | Rear ducks      | <ul style="list-style-type: none"> <li>Rearing area</li> </ul>   | 1           | 3   | 4    |
| 4.  | Feed ducks      | <ul style="list-style-type: none"> <li>Feeding behaviour, feeding ingredients</li> </ul>   | 1           | 3   | 4    |
| 5.  | Protect ducks   | <ul style="list-style-type: none"> <li>Structure sanitation, symptoms of disease</li> </ul>  | 1           | 3   | 4    |
| Total:  |                 |  | 5           | 15  | 20   |

| <b>Module:5: Marketing, communication and entrepreneur development</b>   |   |   |   |             |      |           |  |    |    |    |    |     |    |
|--|---|---|---|-------------|------|-----------|--|----|----|----|----|-----|----|
| <p><b>Description:</b> It deals with the knowledge and skills related to marketing, communication, and entrepreneur development.</p> <p><b>Objectives:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>To market agricultural products</li> <li>To communicate with others</li> <li>To develop entrepreneurship skills</li> </ul> <p><b>Sub-modules:</b></p> <ol style="list-style-type: none"> <li>Agricultural product marketing</li> <li>Communication</li> <li>Entrepreneur development</li> </ol>  |   |   | <table border="1"> <thead> <tr> <th colspan="2">Time(hrs)</th> </tr> </thead> <tbody> <tr> <td>Th</td> <td>21</td> </tr> <tr> <td>Pr</td> <td>33</td> </tr> <tr> <td>Tot</td> <td>54</td> </tr> </tbody> </table> |             |      | Time(hrs) |  | Th | 21 | Pr | 33 | Tot | 54 |
| Time(hrs)  |   |   |   |             |      |           |  |    |    |    |    |     |    |
| Th   | 21  |   |   |             |      |           |  |    |    |    |    |     |    |
| Pr   | 33  |   |   |             |      |           |  |    |    |    |    |     |    |
| Tot  | 54  |   |   |             |      |           |  |    |    |    |    |     |    |
| <b>Sub-module:1: Agricultural product marketing</b>  |   |   |   |             |      |           |  |    |    |    |    |     |    |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to agricultural products marketing. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>To market agricultural products</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |   |   |   |             |      |           |  |    |    |    |    |     |    |
|  | Th.( 6 hrs) + Pr.( 6 hrs) = Tot.( 12 hrs) |   |   | Time( hrs ) |      |           |  |    |    |    |    |     |    |
| SN   | Tasks/skills                              | Related technical knowledge   | Th.   | Pr.         | Tot. |           |  |    |    |    |    |     |    |
| 1.   | Store agricultural product                | • Grading, storage condition (temp, RH, ventilation)                            | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 2.   | Season agricultural product               | • Perishability, method of handling   | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 3.   | Identify market                           | • Market information: price, demand, supply, market access                      | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 4.   | Manage transportation                     | • Means, facilities   | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 5.   | Promote sales                             | • Market policy, price promotion, place, product(type and quality), value chain | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| 6.   | Prepare packages                          | • Quality of both product and package, market availability                      | 1   | 1           | 2    |           |  |    |    |    |    |     |    |
| Total:   |   |   | 6   | 6           | 12   |           |  |    |    |    |    |     |    |
| <b>Sub-module:2: Communication</b>   |   |   |   |             |      |           |  |    |    |    |    |     |    |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to communication. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>To communicate with others</li> </ul>   |   |   |   |             |      |           |  |    |    |    |    |     |    |

| <b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:  |  |  |             |     |      |
|--|--|--|-------------|-----|------|
| Th.( 8 hrs) + Pr.( 8 hrs) = Tot.( 16 hrs)  |  |  | Time( hrs ) |     |      |
| SN   | Tasks/skills   | Related technical knowledge  | Th.         | Pr. | Tot. |
| 1.   | Write job application                                      | • Method, application format, language   | 1           | 1   | 2    |
| 2.   | Prepare resume   | • Format, language, self details   | 1           | 1   | 2    |
| 3.   | Communicate with senior                                    | • Social value, motivating factors (human ethics), characteristics of good communication | 1           | 1   | 2    |
| 4.   | Communicate with junior                                    | • Social value, job accountability, human ethics, characteristics of good communication  | 1           | 1   | 2    |
| 5.   | Deal with customers  | • Subject matter, human ethics   | 1           | 1   | 2    |
| 6.   | Communicate with other farm owners.                        | • Relationship, other views and knowledge  | 1           | 1   | 2    |
| 7.   | Request / purchase tool, supplies, materials and equipment | • Price, quality, uses, source   | 1           | 1   | 2    |
| 8.   | Fill up leave requisition form                             | • Language, idea of filling  | 1           | 1   | 2    |
| Total:   |  |  | 8           | 8   | 16   |
| <b>Sub-module:3: Entrepreneur development</b>  |  |  |             |     |      |
| <p><b>Description:</b> It deals with the knowledge and skills/tasks related to entrepreneur development. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that very task in a competent/ professional manner, and time allocation for the task and its related knowledge.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To develop entrepreneurship skills</li> </ul> <p><b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following tasks together with their related technical knowledge:</p> |  |  |             |     |      |
| Th.( 7 hrs) + Pr.( 19 hrs) = Tot.( 26 hrs)   |  |  | Time( hrs ) |     |      |
| SN   | Tasks/skills   | Related technical knowledge  | Th.         | Pr. | Tot. |
| 1.   | Develop entrepreneurial competencies                       | • Market information, govt. policies, market channel                                     | 1           | 3   | 4    |
| 2.   | Select / identify a project                                | • Scope, market demand, project formulation, project feasibility                         | 1           | 3   | 4    |
| 3.   | Manage an enterprise                                       | • Office establishment, staff selection, human resource management, market               | 1           | 3   | 4    |

|   |  |  |   |    |    |
|---|--|--|---|----|----|
|   |  | channel  |   |    |    |
| 4.  | Develop marketing skill  | <ul style="list-style-type: none"> <li>market strategies, market information, company policies, market channel</li> </ul>  | 1 | 3  | 4  |
| 5.  | Conduct promotional activities   | <ul style="list-style-type: none"> <li>Types (Training, advertisement, fair)</li> </ul>  | 1 | 3  | 4  |
| 6.  | Prepare a business plan / scheme   | <ul style="list-style-type: none"> <li>Inventory, budget allocation</li> </ul>   | 1 | 3  | 4  |
| 7.  | Develop communication skills   | <ul style="list-style-type: none"> <li>Type of communication : mass, individual, group and media</li> </ul>  | 1 | 1  | 2  |
| Total:  |  |  | 7 | 19 | 26 |
| <b>List of tools, materials and equipment</b> |  |  |   |    |    |
|   | <ul style="list-style-type: none"> <li>Kuto</li> <li>Kodalo</li> <li>Chuche/pate kuto</li> <li>Clod breaker/Dalletho</li> <li>Rake</li> <li>Khurpi</li> <li>Sickle</li> <li>Watering can</li> <li>Pipes, hand pump/ motor</li> <li>Shovel</li> <li>Insect catching net</li> <li>Insect collecting box</li> <li>Leveller</li> <li>Insecticides</li> <li>Fungicides</li> <li>Basket</li> <li>Manure/ compost</li> <li>Chemical fertilizer</li> </ul> | <ul style="list-style-type: none"> <li>Land</li> <li>Basila</li> <li>Sacks</li> <li>Dokos</li> <li>Bullock cart/ porter</li> <li>Other means of transport</li> <li>Oxen</li> <li>Local plough set</li> <li>Duster</li> <li>Sprayer</li> <li>Measuring cylinder</li> <li>Balance set</li> <li>Seeds</li> <li>Pegs</li> <li>Power tiller/ tractor</li> <li>Ropes</li> <li>Thatching materials</li> <li>Bamboo</li> </ul>                 |   |    |    |
| <b>Reading materials</b>                      |  |  |   |    |    |
|   | <ul style="list-style-type: none"> <li>Handbook of agriculture<br/><u>By:</u> Indian Council of Agricultural Research(ICAR)</li> <li>Modern techniques of raising field crops<br/><u>By:</u> Dr. Chnida Singh</li> <li>Cropping system <u>By:</u> B.N.Chatterjee, S. Maiti, and B.K. Mandal</li> <li>Fundamentals of horticulture<br/><u>BY:</u> Edimond-Senn-</li> </ul>  | <ul style="list-style-type: none"> <li>Vegetable crops<br/><u>By:</u> Rose, Som &amp; Kabir</li> <li>Plant propagation<br/><u>By:</u> Hortman, Kester &amp; David</li> <li>Nepalma Adharbhut tarkari kheta<br/><u>By:</u> UMN/N</li> <li>Balibiruwaka Satru ra Tiniharuka Rogtham<br/><u>By:</u> Prof. Dr. Fanindra Prasad Neaupane</li> <li>Beekeeping<br/><u>By:</u> L. R. Verma</li> <li>Sericulture and Silk production</li> </ul> |   |    |    |

|                   |  |   |  |
|-------------------|--|---|--|
|                   | <p>Andrews-halfacre</p> <ul style="list-style-type: none"> <li>• Fundamental of horticulture<br/><u>BY</u>: S.M. Shakya et. al.</li> <li>• Laboratory manual on vegetable production and ornamental horticulture<br/><u>BY</u>: S.M. Shakya et. al.</li> </ul> | <p><u>By</u>: Prabha Shekhar and Martin Hardingham</p> <ul style="list-style-type: none"> <li>• Trainers manual on tropical, subtropical and temperate fruits<br/><u>By</u>: Laxman Pun</li> <li>• Trainers manual on vegetable production<br/><u>By</u>: Laxman Pun</li> </ul>                     |  |
| <b>Facilities</b> |  |   |  |
|                   | <ul style="list-style-type: none"> <li>• Well equipped enough class/ office rooms</li> <li>• Demonstration farms for various crop species</li> <li>• Demonstration farms for various species of bee, duck, fish and silk worms</li> </ul>                      | <ul style="list-style-type: none"> <li>• Laboratory / library</li> <li>• OHP/computers/ pictures</li> <li>• Multimedia presentation set</li> <li>• Hostel/canteen /drinking water</li> <li>• Electricity</li> <li>• Field for cultivation practices</li> <li>• Transportation facilities</li> </ul> |  |