

# Curriculum

## For

# Community Agriculture Assistant

### Short term curriculum

(Competency based)



Council for Technical Education and Vocational Training

**Curriculum Development Division**

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## Table of contents

Introduction .....	3
Aim .....	3
Objectives .....	3
Course description.....	3
Duration .....	3
Target group .....	3
Group size .....	3
Medium of Instruction .....	3
Pattern of attendance .....	3
Focus on curriculum .....	3
Entry criteria .....	3
Follow up suggestions .....	4
Certificate Awarded .....	4
Grading System .....	4
Students' evaluation .....	4
Trainers qualification .....	4
Trainer-trainees ratio .....	4
Suggestions for instructor .....	4
Suggestions for instruction .....	4
Suggestion for the performance evaluation of the trainees .....	5
Suggestion for skill training.....	5
Other suggestions .....	5
Course structure .....	6
Module:1: Introductory agriculture & social mobilization .....	7
Sub-module:1.1: Introduction to agriculture .....	7
Sub-module:1.2: Social mobilization .....	8
Module:2: Soil, Nursery, fertilizer and pesticide management .....	9
Sub-module:2.1: Nursery management .....	9
Sub-module:2.2: Soil/Fertilizer management .....	10
Sub-module:2.3: Pesticide management .....	11
Module:3: Horticulture, agronomical crops, post harvest and seed production.....	13
Sub-module:3.1: Vegetable production .....	13
Sub-module:3.2: Fruit production .....	14
Sub-module:3.3: Ornamental plant production .....	15
Sub-module:3.4: Cereal, pulses, and cash crops production .....	16
Sub-module:3.5: Post harvest agriculture .....	17
Sub-module:3.6: Seed production .....	18
Module:4: Mushroom, Sericulture, beekeeping, fish and duck farming .....	21
Sub-module:4.1: Mushroom .....	22
Sub-module:4.2: Beekeeping(Apiculture) .....	22
Sub-module:4.3: Fish farming(Pisciculture).....	23
Sub-module:4.4: Sericulture .....	23
Sub-module:4.5: Duck farming .....	25
Module:5: Marketing, communication and entrepreneur development .....	26
Sub-module:5.1: Agricultural product marketing .....	26
Sub-module:5.2: Communication .....	27
Sub-module:5.3: Entrepreneur development .....	28
Reading materials .....	29
List of tools, materials and equipment .....	30
Facilities .....	29

**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.

**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 16 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 Awarded:**

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 System:**

- 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:**

1. Demonstrate performance
2. Demonstrate task performance in normal speed
3. Demonstrate slowly with verbal description of each and every step in the sequence of activity of the task performance using question and answer techniques.
4. Repeat 2 for the clarification on trainees demand if necessary
5. 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.

# Course structure

## Community agriculture assistant (CAA)

Modules/Sub modules	Nature	Total hours		
		Theory	Practical	Total
<b>1. Introductory agriculture &amp; social mobilization</b>	T/P	<b>12</b>	<b>16</b>	<b>28</b>
1.1 Introduction to agriculture		4	3	7
1.2 Social mobilization		8	13	21
<b>2. Soil, nursery, fertilizer and pesticide management</b>	T/P	<b>14</b>	<b>51</b>	<b>71</b>
2.1 Nursery management		3	20	23
2.2 Soil/Fertilizer management		9	20	29
2.3 Pesticide management		2	11	13
<b>3.Horticulture, agronomical crops, post-harvest and seed production</b>	T/P	<b>37</b>	<b>107</b>	<b>144</b>
3.1 Vegetable production		4	15	19
3.2 Fruits production		4	13	17
3.3 High-tech technology for vegetable production		3	15	18
3.4 Ornamental plants production		3	14	17
3.5 Cereals, pulses and cash crop production		5	6	11
3.6 Post harvest in Agriculture		4	11	15
3.7 Seed production		6	12	18
3.8 Insect pest and disease management		3	7	10
3.9 Farm mechanization		5	14	19
<b>4.Mushroom, sericulture, bee keeping, cattle, goat, fish and duck farming</b>	T/P	<b>32</b>	<b>74</b>	<b>106</b>
4.1 Mushroom		3	10	13
4.2 Beekeeping (Apiculture)		5	11	16
4.3 Fish farming (Pisciculture)		6	10	16
4.4 sericulture		7	4	11
4.5 Duck farming		2	10	12
4.6 Cattle farming		5	17	22
4.7 Goat farming		7	9	16

<b>5. Marketing, communication and entrepreneur development</b>	T/P	<b>25</b>	<b>22</b>	<b>47</b>
5.1 Agricultural product marketing		6	6	12
5.2 Communication		8	8	16
5.3 Entrepreneur development		8	11	19
<b>Total</b>		<b>117</b>	<b>273</b>	<b>390</b>

## Modules and sub modules

<b>Module:1: Introductory agriculture &amp; social mobilization</b>									
<p><b>Description:</b> It deals with the knowledge and skills related to Introductory agriculture &amp; social mobilization.</p> <p><b>Objectives:</b> After its completion the trainees will be able:</p> <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> <p><b>Sub-modules:</b></p> <ol style="list-style-type: none"> <li>1. Introduction to agriculture</li> <li>2. Social mobilization</li> </ol>	<table border="1"> <tr> <th colspan="2">Time (hrs)</th> </tr> <tr> <td>Th</td> <td>12</td> </tr> <tr> <td>pr</td> <td>16</td> </tr> <tr> <td>Tot</td> <td>28</td> </tr> </table>	Time (hrs)		Th	12	pr	16	Tot	28
Time (hrs)									
Th	12								
pr	16								
Tot	28								
<b>Sub modules 1.1 Introduction to Agriculture</b>									
<p><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.</p> <p><b>Objective:</b> After its completion the trainees will be able:</p> <ul style="list-style-type: none"> <li>• To introduce agriculture occupation</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.( 4 hrs) + Pr.( 3 hrs) = Tot.( 7 hrs)	<b>Time (hrs)</b>		
			<b>Th</b>	<b>Pr</b>	<b>Total</b>
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			

<b>1</b>	Introduce Agriculture with their branches	Definition, scope importance	<b>1</b>	-	<b>1</b>
<b>2</b>	Define common agricultural terms	Common agriculture terms: cultivation, tillage, training, pruning, propagation, manuring, irrigation, cropping system, cropping intensity	<b>1</b>	-	<b>1</b>
<b>3</b>	Perform basic agricultural activities	Basic ag. activities: field preparation (ploughing, digging, levelling), manuring, irrigation, intercultural operation (weeding, hoeing, earthing up), disease/pest management, harvesting, threshing	<b>1</b>	<b>2</b>	<b>3</b>
<b>4</b>	Develop concept on cultivation & management of common agriculture crops	Requirements of soil, climate and other factors for cultivation of common crops: cereal crops(rice, maize, wheat, buckwheat, finger millet, barley), pulses (horse gram, black gram, lentil, chickpea, mung bean, soya bean, cowpea), oilseed (groundnut, linseed, mustard, sunflower)	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total</b>			<b>4</b>	<b>3</b>	<b>7</b>

<b>Sub-module:1.2: Social mobilization</b>					
<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.					
<b>Objective:</b> After its completion the trainees will be able:					
<ul style="list-style-type: none"> <li>To be familiar with the concept of social mobilization</li> </ul>					
<b>Tasks:</b> To fulfill the objective the trainees are expected to get proficiency on the following taskstogether with their related technical knowledge:					

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.( 8 hrs) + Pr.( 13 hrs) = Tot.(22 hrs)			
<b>1</b>	Introduction to Social Mobilization	Definition, concept, scope and importance	<b>1</b>	-	<b>1</b>
<b>2</b>	Select community sites	Background information (Location, General Socio economic condition)	<b>1</b>	<b>2</b>	<b>3</b>



		<ul style="list-style-type: none"> <li>• Number of communities, target objectives</li> <li>• Rapport building</li> </ul>			
<b>3</b>	Prepare village Profile	Techniques , social environment • Tools for keeping records	<b>1</b>	<b>1</b>	<b>2</b>
<b>4</b>	Prepare local entrepreneur Profile	Techniques , • Tools for keeping records of entrepreneur	-	<b>2</b>	<b>2</b>
<b>5</b>	Collect information from others organizations about their activities	Targeted details about the organizations, keeping records • Analysis of current status of target group • Target group identification, tools and methods, report writing	<b>1</b>	<b>2</b>	<b>3</b>
<b>6</b>	Conduct household survey	Data collection, checklist/questionnaires preparation, sampling methods, keeping records • Historical analysis of household (Tools and methods, report writing)	<b>1</b>	<b>1</b>	<b>2</b>
<b>7</b>	Conduct individual interview	Key informants, checklist/questionnaires preparation, sampling methods, keeping records	<b>1</b>	<b>1</b>	<b>2</b>
<b>8</b>	Conduct group interview	Checklist/questionnaires preparation, time management, keeping records	<b>1</b>	<b>2</b>	<b>3</b>
<b>9</b>	Prepare cropping calendar	Cropping plan: principle procedure and Application	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total</b>			<b>8</b>	<b>13</b>	<b>21</b>

<b>Module:2: Soil, nursery, fertilizer and pesticide management</b>									
<b>Description:</b> It deals with the knowledge and skills related to nursery, fertilizer and pesticide management.									
<b>Objectives:</b> After its completion the trainees will be able:									
<ul style="list-style-type: none"> <li>• To improve soil quality</li> <li>• To manage nursery</li> <li>• To manage fertilizer</li> <li>• To manage pesticide</li> </ul>	<table border="1"> <thead> <tr> <th colspan="2">Time(hrs)</th> </tr> </thead> <tbody> <tr> <td>Th</td> <td>14</td> </tr> <tr> <td>Pr</td> <td>51</td> </tr> <tr> <td>Tot</td> <td>65</td> </tr> </tbody> </table>	Time(hrs)		Th	14	Pr	51	Tot	65
Time(hrs)									
Th	14								
Pr	51								
Tot	65								
<b>Sub-modules:</b>									
<ol style="list-style-type: none"> <li>1. Nursery management</li> <li>2. Soil/fertilizer management</li> <li>3. Pesticide management</li> </ol>									
<b>Sub-module:2.1: Nursery management</b>									

**Description:** 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.

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

- To manage nursery

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.(3 hrs) + Pr.( 20 hrs) = Tot.( 23 hrs)			
<b>1</b>	Introduce Nursery	Definition, concept, scope importance	<b>1</b>	<b>-</b>	<b>1</b>
<b>2</b>	Select site for nursery	Criteria for site selection	<b>-</b>	<b>1</b>	<b>2</b>
<b>3</b>	Collect seed	Types, variety, source	<b>-</b>	<b>2</b>	<b>2</b>
<b>4</b>	Treat soil/seed	Methods, chemicals, duration	<b>1</b>	<b>3</b>	<b>4</b>
<b>5</b>	Prepare nursery bed	Type ( raised, flat, sunken beds), nursery bed layout	<b>-</b>	<b>5</b>	<b>5</b>
<b>6</b>	Make tunnel	Size, materials & their quality (plastic, bamboo, pegs), equipments, raising seedling	<b>1</b>	<b>3</b>	<b>4</b>
<b>7</b>	Sow/plant seed	Planting distance, method, time of plantation	<b>-</b>	<b>3</b>	<b>3</b>
<b>8</b>	Grow seedling	Duration of growth, water requirement, weed, disease and pest management	<b>-</b>	<b>1</b>	<b>1</b>
<b>9</b>	Carryout Propagation	Types (sexual and asexual) and method (cutting, grafting, budding and layering), appropriate time	<b>-</b>	<b>2</b>	<b>2</b>
<b>Total</b>			<b>3</b>	<b>20</b>	<b>23</b>

### **Sub-module:2.2: Soil/Fertilizer management**

**Description:** It deals with the knowledge and skills/tasks related to fertilizer 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.

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

- To improve soil quality
- To manage fertilizer

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

		Th.( 9 hrs) + Pr.( 20 hrs) = Tot.( 29 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce Soil	Definition of soil • Physical, Biological and Chemical composition of soil • Soil depth/profile • Importance of top soil	1	-	1
2	Determine Soil texture by feeling method	Types of soil texture and their importance	1	-	1
3	Apply integrated soil management practices	Role of organic and inorganic manure and fertilizer	1	-	1
4	Take soil sample	Importance and methods of sampling	-	1	1
5	Determine Soil PH	Definition of soil PH Method of PH determination	-	2	2
6	Apply soil erosion control	Definition, concept, types and control of soil erosion • SALT method (sloping agriculture lands technology)	1	-	1
7	Identify common deficiency symptoms of fertilizer	Deficiency symptoms of major nutrients (N.P.K.)	-	1	1
8	Explain importance of organic manure	Importance of compost/FYM/Green Manure/ Vermi compost/Bokasi	1	-	1
9	Determine quality of chemical fertilizer by local method	Local methods of quality determination	-	1	1
10	Introduce manure/ fertilizer	Types, advantage and disadvantage,	-	1	1
11	Prepare compost	Materials, methods, type	1	2	3
12	Vermicompost preparation	Materials, Methods, harvesting of vermicompost	1	6	7
13	Improve FYM	FYM methods of improvement	-	2	2
14	Identify common fertilizer	Name, nutrient composition	-	1	1
15	Calculate fertilizer requirement	Mathematical calculation, dose, nutrient composition, area of requirement	1	-	1
16	Apply micro/macro nutrients	Nutrient category • Source of micro nutrient. • Required amount	-	1	1
17	Apply fertilizer	Method, timing	1	1	2
18	Store inorganic fertilizer	Storage condition	-	1	1

<b>19</b>	Test soil	(pH, N, P and K) through spectro-photometer, Flame photometer	<b>2</b>	<b>8</b>	<b>10</b>
<b>Total</b>			<b>9</b>	<b>20</b>	<b>29</b>

### Sub-module:2.3: Pesticide management

**Description:** 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.

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

- To manage pesticide

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.(2 hrs) + Pr.( 11 hrs) = Tot.(13 hrs)			
<b>1</b>	Introduce pesticide	Types, concept, advantage and disadvantage	<b>1</b>	<b>-</b>	<b>1</b>
<b>2</b>	Identify common pesticides	Name, chemical composition, limit of danger (colour, signs), mode of action (contact or systemic)	<b>-</b>	<b>1</b>	<b>1</b>
<b>3</b>	Prepare botanicals pesticide from local materials	Identification of common plants and materials for botanical preparation <ul style="list-style-type: none"> <li>• Importance of pesticide</li> <li>• Locally available bio-pesticide</li> <li>• Proportion of materials</li> <li>• Application of bio-pesticide</li> </ul>	<b>-</b>	<b>2</b>	<b>2</b>
<b>4</b>	Calculate quantity requirement of pesticide	Label reading <ul style="list-style-type: none"> <li>• Active ingredient (a.i.), dose, area of application, mathematical calculation (formula, unitary method etc.)</li> </ul>	<b>-</b>	<b>2</b>	<b>2</b>
<b>5</b>	Prepare solution/ dilution	Ratio of preparation <ul style="list-style-type: none"> <li>• Precaution</li> </ul>	<b>-</b>	<b>2</b>	<b>2</b>
<b>6</b>	Apply pesticides	Dose, waiting period, time of application, method, precaution measures	<b>-</b>	<b>2</b>	<b>2</b>
<b>7</b>	Store pesticide	Storage condition, precautions	<b>-</b>	<b>1</b>	<b>1</b>
<b>8</b>	Explain pesticide rules	government policies, name and type of pesticides, targeted pest, precautions, bonded pesticides, source(whole sellers, dealers and companies), market channel	<b>1</b>	<b>-</b>	<b>1</b>

9	Apply traps for against pest	Types of traps • Types of different pheromone traps, targeted insect/pest	-	1	1
<b>Total</b>			<b>2</b>	<b>11</b>	<b>13</b>

### Module:3: Horticultural, agronomical crops, post harvest 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 ornamental plants
- To produce cereal crops
- To produce pulses crops
- To produce cash crops
- To handle harvested products
- 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	37
Pr	107
Tot	144

#### Sub modules 3.1 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.( 4 hrs) + Pr.( 15 hrs) = Tot.( 19 hrs)	<b>Time (hrs)</b>		
			<b>Th</b>	<b>Pr</b>	<b>Total</b>
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			

<b>1</b>	Explain importance of vegetable production	Types, concept, scope and importance	<b>1</b>	-	<b>1</b>
<b>2</b>	Select seed/variety	Criteria for selection of seed and varieties according to soil, climate and other factors		<b>1</b>	<b>1</b>
<b>3</b>	Prepare soil	Field preparation (ploughing, digging, leveling), manuring		<b>4</b>	<b>4</b>
<b>4</b>	Identify major vegetables	Cole, solanaceous, root, leafy, cucurbits, leguminous and bulb crops	<b>1</b>	-	<b>1</b>
<b>5</b>	Transplant seedling	Direct method of planting, time, method, planting distance	-	<b>3</b>	<b>3</b>
<b>6</b>	Carryout intercultural	Weeding, hoeing, earthing up, irrigation, top dressing	-	<b>3</b>	<b>3</b>
<b>7</b>	Protect vegetable plant	Pest/disease management (symptom identification, pest identification, method of protection(IPM/ICM/ IPNS/IDM, chemicals or organic	<b>1</b>	<b>2</b>	<b>3</b>
<b>8</b>	Harvest vegetable	Maturity judgment or maturity index, harvesting method, time of harvest	<b>1</b>	<b>1</b>	<b>2</b>
<b>9</b>	Prepare fresh vegetable for sale	Market demand • Price value of well prepared fresh vegetable • Consumers choice	-	<b>1</b>	<b>1</b>
<b>Total</b>			<b>4</b>	<b>15</b>	<b>19</b>

### Sub-module:3.2: Fruit production

**Description:** 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.

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

- To produce fruit crops

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

		Th.( 4 hrs) + Pr.( 13 hrs) = Tot.( 17 hrs)	<b>Time (hrs)</b>		
			<b>Th</b>	<b>Pr</b>	<b>Total</b>
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			
<b>1</b>	Introduce fruit production	Types, concept, scope and importance	<b>1</b>	-	<b>1</b>

2	Introduce Major fruits crop at local area	Tropical, subtropical and temperate fruits	1	-	1
3	Make plan	Site (topography, soil, aspects, area)	-	2	2
4	Perform Layout	Measurements, calculation, planting system and methods	-	2	2
5	Transplant fruit sampling	Time of plantation, field preparation, fertilizer calculation and manuring, planting distance, irrigation (method and water requirement), pit digging	-	2	2
6	Carryout intercultural	Weeding, hoeing, earthing up, irrigation, training& pruning, mulching, Mulching, chemicals (for disease and pest) spraying/manuring	-	2	2
7	Prepare Bordeaux mixture/paste/paints	Preparation methods and application	-	2	2
8	Protect fruit plant	Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic)	1	1	2
9	Carryout training/pruning	Training/pruning: methods and timing	-	2	2
10	Harvest fruit	Maturity index, method and time of harvest	1	-	1
11	Produce sapling(berna) through vegetative propagation	Grafting, Budding, cutting, layering, tissue culture	2	10	12
<b>Total</b>			<b>4</b>	<b>13</b>	<b>17</b>

### Sub-module:3.3: Ornamental plant production

**Description:** 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.

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

- To produce ornamental plants

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

		Th.( 3 hrs) + Pr.( 14 hrs) = Tot.( 17 hrs)	<b>Time (hrs)</b>		
			<b>Th</b>	<b>Pr</b>	<b>Total</b>
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			

<b>1</b>	Introduce Ornamental plants	Types, concept, scope and importance	<b>1</b>	<b>-</b>	<b>1</b>
<b>2</b>	Identify ornamental plants	Scientific/English/common name/varieties and family, morphological character and habit, type	<b>-</b>	<b>1</b>	<b>1</b>
<b>3</b>	Make plan	Site (topography, soil, aspects, area), designing		<b>2</b>	<b>2</b>
<b>4</b>	Carryout plantation	Time of plantation, field preparation, fertilizer calculation and manuring, planting distance, irrigation (method and water requirement)	<b>-</b>	<b>2</b>	<b>2</b>
<b>5</b>	Carryout intercultural operation	Weeding, hoeing, irrigation, top dressing, training& pruning, chemicals (for disease and pest) spraying	<b>-</b>	<b>2</b>	<b>2</b>
<b>6</b>	Protect plant	Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic)	<b>-</b>	<b>2</b>	<b>2</b>
<b>7</b>	Carryout training/pruning	Training/pruning: methods (specific to plants) and timing	<b>1</b>	<b>2</b>	<b>3</b>
<b>8</b>	Harvest flower/plant	Maturity index, method and time of Harvest, decorate flower, prepare boque	<b>1</b>	<b>3</b>	<b>4</b>
<b>Total</b>			<b>3</b>	<b>14</b>	<b>17</b>

### **Sub-module:3.4: Cereal, pulses, and cash crops production**

**Description:** 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.

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

- To produce cereal crops
- To produce pulses crops
- To produce 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.( 6 hrs) = Tot.( 11 hrs)	Time (hrs)		
			Th	Pr	Total
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			
<b>1</b>	Introduce cereal, pulses and cash crops	Types, concept, scope and importance	<b>1</b>	<b>-</b>	<b>1</b>



<b>2</b>	Prepare Land	Land preparation( Ploughing, leveling, manuring)	<b>1</b>	<b>1</b>	<b>2</b>
<b>3</b>	Sow seeds/transplant seedling	Time of plantation, planting distance, planting method (broadcast, line sowing, transplantation)	-	<b>1</b>	<b>1</b>
<b>4</b>	Carryout intercultural operation	Weeding, hoeing, irrigation, top dressing	<b>1</b>	<b>2</b>	<b>3</b>
<b>5</b>	Protect plant	Pest/disease management (symptom identification, pest identification, method of protection(IPM/ IDM, chemicals or organic)	<b>1</b>	<b>1</b>	<b>2</b>
<b>6</b>	Harvest crop	Maturity index, method and time of harvest	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total</b>			<b>5</b>	<b>6</b>	<b>11</b>

### Sub-module:3.5: Post harvest Agriculture

**Description:** It deals with the knowledge and skills/tasks related to post harvest 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.

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

- To handle harvested Agricultural products
- To store harvested Agricultural products

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.( 4 hrs) + Pr.( 11 hrs) = Tot.( 15 hrs)			
<b>1</b>	Introduce post harvest technology	Definition, scope and importance	<b>1</b>	-	<b>1</b>
<b>2</b>	Handled harvest product	Harvesting time/methods, cleaning, sorting, grading, waxing, packaging, labeling, transportation and distribution	<b>1</b>	-	<b>1</b>
<b>3</b>	Process/preserve product	Types (Drying, caning, freezing, fermentation) and Product preparation methods (Jam, Jelly, Marmalades, Ketchup, Pickle, Chips)	<b>1</b>	<b>10</b>	<b>11</b>

<b>4</b>	Store product	Types and method	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total</b>			<b>4</b>	<b>11</b>	<b>15</b>

### **Sub-module:3.6: Seed production**

**Description:** 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.

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

- To produce seeds

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

		Th.( 6 hrs) + Pr.( 12 hrs) = Tot.( 18 hrs)	Time (hrs)		
			Th	Pr	Total
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			
<b>1</b>	Introduce Seed production	Definition, scope and importance, seed certification	<b>1</b>	-	<b>1</b>
<b>2</b>	Make plan	Seed type (self or crossed), site (topography, soil, aspects, area)	-	<b>1</b>	<b>1</b>
<b>3</b>	Take seed sample	Importance of seed sampling	-	<b>2</b>	<b>2</b>
<b>4</b>	Treat seed	Definition, importance and types	-	<b>2</b>	<b>2</b>
<b>5</b>	Perform germination test	Importance of germination test	-	<b>2</b>	<b>2</b>
<b>6</b>	Produce /receive foundation seeds	Concept, source, method (if produced)	<b>1</b>		<b>1</b>
<b>7</b>	Prepare land	Land preparation (ploughing, leveling, manuring)	<b>1</b>	<b>1</b>	<b>2</b>
<b>8</b>	Sow seed/plant	Seed quality (purity, viability), planting distance, isolation distance, method		<b>1</b>	<b>1</b>
<b>9</b>	Carryout intercultural operation	Weeding, hoeing, irrigation, top dressing	-	<b>2</b>	<b>2</b>
<b>10</b>	Protect plants	Pest/disease management (symptom identification, pest identification, method of protection (IPM/ IDM, chemicals or organic)	<b>1</b>	-	<b>1</b>
<b>11</b>	Perform roughing	Control quality, inspection, moisture content	-	<b>2</b>	<b>2</b>
<b>12</b>	Maintain isolation	Concept, importance, distance	<b>1</b>	-	<b>1</b>
<b>13</b>	Harvest seed	Maturity index, time and method (threshing, curing, cleaning, drying)	<b>1</b>	-	<b>1</b>
<b>Total</b>			<b>6</b>	<b>12</b>	<b>18</b>

### Sub modules 3.7: High-tech technology for vegetable production

**Description:** It deals with the knowledge and skills/tasks related to vegetable production under different types of plastic and net house. 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 under protected structure

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.( 3 hrs) + Pr.( 15hrs) = Tot.( 18 hrs)			
1	Introduce structure	Types, concept, scope and importance	1	-	1
2	Prepare green house 500sq m	Materials, methods, crops grown	1	2	3
3	Prepare high and low tunnel	Materials, method, size, crops grown	1	2	3
4	Prepare plastic house	Materials, method, size, crops grown	-	2	2
5	Prepare net house	Materials, method, size, crops grown	-	2	2
6	Install hydroponic system	Materials, method, crops grown	-	2	2
7	Spread Mulching plastic	Methods, types, timing	-	2	2
8	Install irrigation	Types, methods, timing		3	3
<b>Total</b>			<b>3</b>	<b>15</b>	<b>18</b>

### Sub modules 3.8: Insect pest and disease management

**Description:** It deals with the knowledge and skills/tasks related to insect pest and disease 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.

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

- To control insect pest and disease

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

		Th.( 3 hrs) + Pr.( 7 hrs) = Tot.( 10 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce insect pest and disease	Definition, scope and importance	1	-	1
2	Identify major insect pest and disease	Types, appearance, damage nature	1	2	3
3	Prepare Jholmol	Materials, method, uses	-	2	2
4	Prepare Bordeaux mixture/paste/panit	Materials, method, uses	-	2	2
5	Apply control method	IPM, Cultural,	1	1	2
<b>Total</b>			<b>3</b>	<b>7</b>	<b>10</b>

### Sub modules 3.9: Farm Mechanization

**Description:** It deals with the knowledge and skills/tasks related to tools and equipment. 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 operate agriculture tools and equipment

**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.( 14 hrs) = Tot.( 19 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce with tools and equipment	concept, scope and importance	2	-	2
2	Operate laser land leveler	Principles, methods, materials	1	2	3
3	Operate power tiller	Principles, methods, materials	-	4	4
4	Operate paddy transplanter	Principles, methods, materials	1	2	3
5	Operate reaper	Principles, methods, materials	1	2	3
6	Operate ridge maker	Principles, methods, materials		2	2
7	Operate weeding machine	Principles, methods, materials		2	2

<b>Total</b>	<b>5</b>	<b>14</b>	<b>19</b>
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### **Module:4: Mushroom, sericulture, beekeeping, cattle, goat, fish and duck farming**

**Description:** It deals with the knowledge and skills related to **Mushroom**, sericulture, beekeeping, cattle, goat, fish and duck farming.

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

- To produce mushroom
- To develop sericulture
- To rear bee
- To produce fish farming
- To rear duck

Time (hrs)	
Th	32
Pr	74
Tot	106

**Sub-modules:**

1. Mushroom
2. Sericulture
3. Beekeeping
4. Fish farming
5. Duck farming

#### **Sub modules 4.1 Mushroom**

It deals with the knowledge and skills/tasks related to mushroom. Each task consists of terminal performance objective, minimum related technical knowledge necessary to carry out that every 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 mushroom

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.( 3 hrs) + Pr.( 10 hrs) = Tot.( 13hrs)			
<b>1</b>	Introduce Mushroom	Definition, types,scope and importance	<b>1</b>	<b>-</b>	<b>1</b>
<b>2</b>	Make plan	Structure designing and material selection	<b>1</b>	<b>2</b>	<b>3</b>
<b>3</b>	Cultivate mushroom	Methods of cultivation	<b>-</b>	<b>6</b>	<b>2</b>
<b>4</b>	Protect mushroom	Identification and management insect pest	<b>1</b>	<b>1</b>	<b>2</b>
<b>5</b>	Harvest mushroom	Times, method	<b>-</b>	<b>1</b>	<b>1</b>
<b>Total</b>			<b>3</b>	<b>10</b>	<b>13</b>

### Sub-module:4.2: Beekeeping (Apiculture)

**Description:** 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.

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

- To rear bee

**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.( 11 hrs) = Tot.( 22 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce Apiculture	Definition, types of honey bees, scope and importance	1	-	1
2	Identify species	Name (Scientific and common) morphological characters(size, colour)	1	2	3
3	Rear bees	Methods of bee rearing, care and management	1	3	4
4	Protect bees	Danger area identification (highly chemicals used cultivated area), disease predictors, parasites	1	3	4
5	Extract honey	Method, precautions, time	1	3	4
<b>Total</b>			<b>5</b>	<b>11</b>	<b>16</b>

### Sub-module:4.3: Fish farming (Pisciculture)

**Description:** 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.

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

- To develop fish farming

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

		Th.( 6 hrs) + Pr.( 10 hrs) = Tot.( 16 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce Pisciculture	Definition, scope and importance	1	-	1

2	Make plan	Site (Topography, area, water availability, aspects), structure, designing	1	1	2
3	Manage fish pond	Climate/weather condition(temperature, humidity), water condition (temperature, viscosity, sanitation), time of feeding, tools and equipments	1	1	2
4	Identify species	Common name, morphological characters (size, colour, body shape etc.),	1	2	4
5	Rear fish	Feeding behavior (carnivorous, herbivorous, omnivorous./bottom or surface feeder), feeding ingredients, source of availability	1	2	4
6	Protect fish	Monitoring (time and method), feeding ingredients, temperature management, pond sanitation, symptoms of disease and parasite and management	1	2	4
7	Harvest fish	Harvesting methods	-	2	2
8	Perform bio-floc	Definition, installation, and cultivation	2	8	10
<b>Total</b>			<b>6</b>	<b>10</b>	<b>16</b>

#### **Sub-module:4.4: Sericulture**

**Description:** 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.

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

- To develop sericulture

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.( 7 hrs) + Pr.( 4 hrs) = Tot.( 11 hrs)			
1	Introduce sericulture	Definition, scope and importance	1	-	1
2	Make plan	Structure designing	2		2
3	Cultivate mulberry	Site of mulberry cultivation (topography, soil, area), method of growing mulberry	1	2	3
4	Identify species	Name, morphological characters	1	1	2

<b>5</b>	Rear silkworms	Time and method		<b>1</b>	<b>1</b>
<b>6</b>	Feed silkworms	Time, amount, feeding habit	<b>1</b>		<b>1</b>
<b>7</b>	Harvest cocoon	Time, method of harvesting	<b>1</b>		<b>1</b>
<b>Total</b>			<b>7</b>	<b>4</b>	<b>11</b>

#### **Sub-module:4.5: Duck farming**

**Description:** 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.

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

- To develop duck farming
- 

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

		Th.( 2 hrs) + Pr.( 10 hrs) = Tot.( 12 hrs)	Time (hrs)		
			Th	Pr	Total
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			
<b>1</b>	Introduce duck farming	Definition, scope and importance	<b>1</b>	-	<b>1</b>
<b>2</b>	Make plan	Site (Topography, area, water availability, aspects), structure, designing	<b>1</b>	<b>2</b>	<b>3</b>
<b>3</b>	Identify breeds	Name of breeds, morphological characters	-	<b>2</b>	<b>2</b>
<b>4</b>	Rear duck	Rearing area/methods	-	<b>2</b>	<b>2</b>
<b>5</b>	Feed ducks	Feeding behavior, feeding ingredients/ feeding methods	-	<b>2</b>	<b>2</b>
<b>6</b>	Protect ducks	Sanitation, symptoms of disease and management	-	<b>2</b>	<b>2</b>
<b>Total</b>			<b>2</b>	<b>10</b>	<b>12</b>

#### **Sub modules 4.6: Cattle farming**

**Description:** It deals with the knowledge and skills/tasks related to cattle 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.

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

- To develop cattle farming

**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.( 17 hrs) = Tot.( 22 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce cattle farming	Definition, scope and importance	1	-	1
2	Make plan	Site (Topography, area, water availability, aspects), structure, designing	-	2	2
3	Identify breeds	Name of breeds, morphological characters	-	2	2
4	Select grass	Types, growing season,	-	2	2
5	Rear cattle	Rearing area/methods, tagging	1	2	3
6	Feed cattle	Feeding behavior, feeding ingredients/ feeding methods	1	2	3
7	Apply vaccine	Name, types, time, method	-	2	2
8	Prepare hay and silage	Materials, method, storage	1	5	6
9	Explain insurance rules	Government Policies	1	-	1
<b>Total</b>			<b>5</b>	<b>17</b>	<b>22</b>

### Sub modules 4.7: Goat farming

**Description:** It deals with the knowledge and skills/tasks related to goat 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.

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

- To develop goat farming

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

		Th.( 7 hrs) + Pr.( 9 hrs) = Tot.( 16 hrs)	Time (hrs)		
			Th	Pr	Total
S.N	Task/skills	Related technical knowledge			
1	Introduce goat farming	Definition, scope and importance	1	-	1
2	Make plan	Site (Topography, area, water availability, aspects), structure, designing	-	1	2
3	Identify breeds	Name of breeds, morphological characters	-	1	2
4	Select grass	Types, growing season,	-	2	2
5	Rear goat	Rearing area/methods, tagging	1	2	3

6	Feed to goat	Feeding behavior, feeding ingredients/ feeding methods	1	1	3
7	Apply vaccine	Name, types, time, method	-	1	2
8	Explain insurance rules	Government Policies	1	-	1
9	Identify diseases of goat	Infectious and non infectious	1	1	2
10	Cultivate fodder for goat	Annual and perennial grass	1	-	3
<b>Total</b>			<b>7</b>	<b>9</b>	<b>16</b>

### Module:5: Marketing, communication and entrepreneur development

**Description:** It deals with the knowledge and skills related to marketing, communication, and entrepreneur development.

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

- To market agricultural products
- To communicate with others
- To develop entrepreneurship skills

**Sub-modules:**

1. Agricultural product marketing
2. Communication
3. Entrepreneur development

Time (hrs)	
Th	22
Pr	25
Tot	47

#### Sub modules 5.1 Agricultural product marketing

**Description:** 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.

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

- To market agricultural products

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

S.N	Task/skills	Related technical knowledge	Time (hrs)		
			Th	Pr	Total
		Th.( 6 hrs) + Pr.( 6 hrs) = Tot.( 12 hrs)			
1	Store Agricultural product	Grading, storage condition (temp, RH, ventilation)	1	1	2
2	Season agricultural product	Perishability, method of handling	1	1	2

<b>3</b>	Identify market	Market information: price, demand, supply, market access	<b>1</b>	<b>1</b>	<b>2</b>
<b>4</b>	Manage transportation	Means, facilities	<b>1</b>	<b>1</b>	<b>2</b>
<b>5</b>	Promote sale	Market policy, price promotion, place, product(type and quality), value chain	<b>1</b>	<b>1</b>	<b>2</b>
<b>6</b>	Prepare packages	Quality of both product and package, market availability	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total</b>			<b>6</b>	<b>6</b>	<b>12</b>

<b>Sub-module:5.2: Communication</b>					
<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.					
<b>Objective:</b> After its completion the trainees will be able:					
<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)	<b>Time (hrs)</b>		
			<b>Th</b>	<b>Pr</b>	<b>Total</b>
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			
<b>1</b>	Write job application	Method, application format, language	<b>1</b>	<b>1</b>	<b>2</b>
<b>2</b>	Prepare resume	• Format, language, self details	<b>1</b>	<b>1</b>	<b>2</b>
<b>3</b>	Communicate with senior	Social value, motivating factors (human ethics), characteristics of good communication	<b>1</b>	<b>-</b>	<b>1</b>
<b>4</b>	Communicate with junior	Social value, job accountability, human ethics, characteristics of good communication	<b>1</b>	<b>1</b>	<b>2</b>
<b>5</b>	Deal with customer	Subject matter, human ethics	<b>1</b>	<b>1</b>	<b>2</b>
<b>6</b>	Communicate with other farm owners	Relationship, other views and knowledge	<b>1</b>	<b>1</b>	<b>2</b>
<b>7</b>	Request / purchase tool, supplies, materials and equipment	Price, quality, uses, source	<b>-</b>	<b>1</b>	<b>1</b>
<b>8</b>	Fill up leave	Language, idea of filling	<b>1</b>	<b>1</b>	<b>2</b>

	requisition form				
<b>9</b>	Communicate with individual, group and mass.	Farm visit • Format of poster, pamphlet, leaf let, broacher etc	<b>1</b>	<b>1</b>	<b>1</b>
<b>Total</b>			<b>8</b>	<b>8</b>	<b>16</b>

<b>Sub-module:5.3: 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.( 8 hrs) + Pr.( 11 hrs) = Tot.( 19 hrs)	<b>Time (hrs)</b>		
			<b>Th</b>	<b>Pr</b>	<b>Total</b>
<b>S.N</b>	<b>Task/skills</b>	<b>Related technical knowledge</b>			
<b>1</b>	Develop entrepreneurial competencies	Market information, govt. policies, market channel	<b>1</b>	-	<b>1</b>
<b>2</b>	Select/identify a project	Scope, market demand, project formulation, project feasibility	<b>1</b>	<b>2</b>	<b>3</b>
<b>3</b>	Manage an enterprise	Office establishment, staff selection, human resource management, market channel	<b>2</b>	-	<b>2</b>
<b>4</b>	Develop marketing skill	market strategies, market information, company policies, market channel	<b>1</b>	<b>2</b>	<b>3</b>
<b>5</b>	Conduct promotional activities	Types (Training, advertisement, fair)	<b>1</b>	<b>2</b>	<b>3</b>
<b>6</b>	Prepare a business plan/scheme	Inventory, budget allocation	<b>1</b>	<b>5</b>	<b>6</b>
<b>7</b>	Develop communication skill	Type of communication: mass, individual, group and media	<b>1</b>	-	<b>1</b>
<b>Total</b>			<b>8</b>	<b>11</b>	<b>19</b>

Reading materials	
<p>Handbook of agriculture By: Indian Council of Agricultural Research(ICAR)</p> <ul style="list-style-type: none"> <li>• Modern techniques of raising field crops By: Dr. Chnida Singh</li> <li>• Cropping system By: B.N.Chatterjee, S. Maiti, and B.K. Mandal</li> <li>• Fundamentals of horticulture By: Edimond-Senn-Andrews-halfacre</li> <li>• Fundamental of horticulture By: S.M. Shakya et. al.</li> <li>• Laboratory manual on vegetable production and ornamental horticulture By: S.M. Shakya et. al. And communication Center</li> <li>• Krishi Diary By: Agriculture Information</li> </ul>	<p>Vegetable crops By: Rose, Som &amp; Kabir</p> <ul style="list-style-type: none"> <li>• Plant propagation</li> <li>• By: Hortman, Kester &amp; David</li> <li>• Nepalma Adharbhut tarkari kheti By: UMN/N</li> <li>• Balibiruwaka Satru ra Tiniharuka Rogtham By: Prof. Dr. Fanindra Prasad Neaupane</li> <li>• Beekeeping By: L. R. Verma</li> <li>• Sericulture and Silk production By: Prabha Shekhar and Martin Hardingham</li> <li>• Trainers manual on tropical, subtropical and temperate fruits By: Laxman Pun</li> <li>• Trainers manual on vegetable production By: Laxman Pun</li> <li>• Training Mannual By: Central Agriculture Training Center</li> </ul>
Facilities	
<p>Well equipped enough class/ office rooms</p> <ul style="list-style-type: none"> <li>• Demonstration farms for various crop species</li> <li>• Demonstration farms for various species of mushroom, bee, duck, fish and silk worms</li> </ul>	<p>Laboratory / library</p> <ul style="list-style-type: none"> <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>

# Tools and Equipment

## List of Tools and Equipments for 20 Students

S.N	Tools/Equipment	Total Number
1	Kuto	10 pcs
2	Kodalo	10 pcs
3	Plow	1 pc
4	Doko	2 pcs
5	Hand sprayer	1 pc
6	Rope	1 role
7	Sickle	10 pcs
8	Thresher	1 pc
9	Location map	1 pc
10	Measuring tape	2 pcs
11	Hammer	5 pcs
12	Handsaw	5 pcs
13	Rose Can (Hajari)	5 pcs
14	Knife (Budding, Grafting)	20 pcs
15	Scature	10 pcs
16	Rootex (1,2,3)	3 dabba
17	Grafting Tape	3 role
18	Soil sample agar	5 pcs
19	pH meter	2 pcs
20	Calculator	5 pcs
21	Plastic drum (150 Ltr capacity)	2 pcs
22	Bucket (20 leter)	10 pcs
23	Measuring cylinder	10 pcs
24	Pheromone trap	5 pcs
25	Pick	1 pc
26	Sabel	5 pc
27	Planting board	2 pc
28	Refrigerator	1 pc
29	Stove	1pc
30	Packing bottles (250 ml)	20 pcs
31	Peeling machine	2 pcs
32	Seed sampler	3 pcs
33	Petri dish	20 pcs
34	Seed germinator	1 pc
35	Forceps	10 pcs
36	Plastic bag	50 pcs
37	Mushroom seed bottle	5 pcs
38	Drum for heating 100 Liter	1 pc
39	Bee hive	1 pc
40	Apron	2 pcs
41	Smoker	5 pcs

42	Honey Extractor (Small)	1 set
43	Cast net	1 pcs