Trainer’s Guide

Tea Plantation Worker (South)

Qualifications Pack: Tea Plantation Worker
- SECTOR: AGRICULTURE
- SUB-SECTOR: Horticulture
- OCCUPATION: Plantation Crop Cultivation
- REFERENCE ID: AGR / Q 0204
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Welcome Note

Dear Trainer,

A Tea Plantation Worker is responsible to work in the Tea plantation on a given piece of land right from nursery preparation to harvesting and storage. Even though the tea plantation worker works under the direct monitoring of the supervisor there are certain standards of performance an individual must achieve when carrying out a function or task.

The National Occupational Standards specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. These Occupational Standards are applicable both in the Indian and global contexts.

As per these standards the tea plantation worker should work independently, be laborious and must have the ability to make operational decisions pertaining to his area of work. The trainee should gain clarity of work and should be result oriented. The trainee should also be able to demonstrate skills to use various tools in the tea plantation.

As a trainer you will need to guide and train the trainees on the following skills:

- **Knowledge and Understanding:** Adequate operational knowledge and understanding to perform the required task.
- **Performance Criteria:** Gain the required skills through hands on training and perform the required operations within the specified standards.
- **Professional Skills:** Ability to make operational decisions pertaining to the area of work.
- **Soft Skills:** To observe professional mannerisms and conduct during interaction with others.

The course is includes a participant handbook for the trainees and a trainer’s guide; assessment guide; session plan and syllabus for you. The course material also includes a few posters as a teaching aid in the classroom.

The assessment guide details the evaluation methodology. As a trainer you will evaluate the trainees’ performance and grade them based on the evaluation parameters given in the guide. The programme also includes field visits for the trainees where they will observe the procedure/operations and services of the tea garden visited. A case study has been included to develop the professional skills like decision making, analytical and critical thinking.

Along with the content for the domain knowledge the course also includes two booklets for trainee engagement activities; “Morning Energiser” and “Activities and Games”. Each day pick the activity recommended from the booklet “Morning Energiser” and spend about 10 minutes before starting the class. You will be able to energise the trainees to take on the day.

We hope you will be able to impart your knowledge with our help to make this programme a success and upskill the workers to the recommended standards.

All the best!
### Session Plan

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Tea Plantation Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Client</td>
<td>NSDC</td>
</tr>
<tr>
<td>Version No.</td>
<td>1.0</td>
</tr>
<tr>
<td>Version Update Date</td>
<td></td>
</tr>
<tr>
<td>Pre-requisites to Training</td>
<td></td>
</tr>
<tr>
<td></td>
<td>◆ 5th standard appeared or pass preferable;</td>
</tr>
<tr>
<td></td>
<td>◆ One year prior experience in field (crop) operations.</td>
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<tr>
<td>Training Outcomes</td>
<td></td>
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<tr>
<td></td>
<td>After completing this program, participants will be able to:</td>
</tr>
<tr>
<td></td>
<td>◆ Carry out ground level activities involved in a tea plantation right from nursery preparation to harvesting.</td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Module</td>
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<tr>
<td>--------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Internal Assessment</td>
</tr>
<tr>
<td>2</td>
<td>Ice Breaker</td>
</tr>
<tr>
<td>3</td>
<td>Interesting Facts about Tea</td>
</tr>
<tr>
<td>4</td>
<td>Soil and Agro-climatic</td>
</tr>
<tr>
<td></td>
<td>Requirement for Tea</td>
</tr>
<tr>
<td>5</td>
<td>Recap</td>
</tr>
<tr>
<td>6</td>
<td>Prepare Nucleus Area/</td>
</tr>
<tr>
<td></td>
<td>Multiplication Plot</td>
</tr>
</tbody>
</table>

**Objectives**

1. Assess the current knowledge on tea plantation of the trainees.
2. Introduce each other and build rapport with fellow trainees and the trainer.
3. State the interesting facts about tea.
4. State the type of soil and climatic conditions suitable for growing tea.
5. Revise the learning of the module “Introduction to Tea Plantation.”
6. Prepare nucleus area or multiplication plot for obtaining vegetative propagation (VP) cuttings.
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Module</th>
<th>Duration</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Nucleus Area/ Multiplication Area for Cuttings</td>
<td>1 hour</td>
<td>Trainer’s Guide, Tea plant specimens with nutrient deficiencies, Pruning knives, spraying nozzles</td>
</tr>
<tr>
<td>8</td>
<td>Caring of Nucleus Area</td>
<td>15 minutes</td>
<td>Trainer’s Guide</td>
</tr>
<tr>
<td>9</td>
<td>Nursery Bed Preparation in Tea Plantation</td>
<td>30 minutes</td>
<td>Trainer’s Guide, Poster</td>
</tr>
</tbody>
</table>

**Goals**

- Perform pruning, manuring, and plant protection activities for mother bushes.
- Revise the learnings of the module “Nucleus Area/Multiplication Area for Cuttings”.
- State the parameters for selection of site for raising tea nursery.
- State the methods of propagation.
- State the types of nursery practices in tea.
- Prepare polythene sleeves/bags for planting cuttings.

**Methodology**

- Trainer led Discussion
- Group Participation Quiz
- Trainer led Discussion
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Module</th>
<th>Session</th>
<th>Objectives</th>
<th>Methodology</th>
<th>Tools</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>Evaluation</td>
<td>Assessment - 4</td>
<td>◦ Test the trainees’ on knowledge and skills acquired on training, pruning and harvesting practices.</td>
<td>Theory</td>
<td>Trainer’s Guide</td>
<td>2 hours</td>
</tr>
<tr>
<td></td>
<td>Professional Skills</td>
<td>Case Study</td>
<td>◦ Make decisions pertaining to the concerned area of work;</td>
<td>Trainer led Discussion</td>
<td>Trainer’s Guide</td>
<td>2 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>◦ Plan and manage time effectively;</td>
<td>Activity</td>
<td>Participant Handbook</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>◦ Solve technical and operational problems on their own;</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>◦ Procure and maintain the required tools, material and equipment;</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>◦ Apply, analyze, and evaluate the information gathered as a guide to thought and action.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>Internal Assessment</td>
<td>Post-training Assessment</td>
<td>◦ Assess the post training knowledge of the trainees on tea plantation.</td>
<td>Theory Test</td>
<td>Trainer’s Guide</td>
<td>1 hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Assessment Guide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>Field Trip</td>
<td>Field Visit to a Tea Processing Unit</td>
<td>◦ To observe and understand the procedure of processing tea</td>
<td>Group Participation</td>
<td>Trainer’s Guide</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Module 6: Irrigation and Drainage

<table>
<thead>
<tr>
<th>Session</th>
<th>Resources Used</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recap</td>
<td>Trainer’s Guide</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Irrigation and Drainage</td>
<td>Trainer’s Guide, Participant Handbook, Poster</td>
<td>1 hour 30 minutes</td>
</tr>
<tr>
<td>Honesty</td>
<td>Trainer’s Guide</td>
<td>1 hour</td>
</tr>
<tr>
<td>Field Visit to a Tea Garden</td>
<td>Trainer’s Guide, Participant Handbook</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

Recap

Objective
After completing this session the trainees will be able to:
- recap the learnings of the session on “Integrated Nutrient Management”.

Say
- Let us reinforce the learning of the module “Integrated Nutrient Management” through a game.
- Here is a list of items on the board and some chits with some information/ description on it.
- Each group will get a chance to pick a chit in rotation.
- The task is to match the information/description in the chit picked to the correct item in the list.
- Each item identified correctly will be struck off from this list.
- Each group will get 2 minutes to discuss and answer.
- The scoring system will be: 10 points for answering correctly in round one; 5 points for a passed on chit.

Do
- Divide the class in to 3 groups.
- List the answers/items on the board:
- Jumble the chits and ask a participant from the first group to pick one chit.
- Allow the participant to discuss within the group and come up with the answer.
- If the answer is correct, ask the participant from the group to read out the information from the chit.
If the answer is incorrect pass on the chit to the next group.
If the groups are unable to respond with the correct answer, give out the correct answer.
Continue the game until all the chits have been used.
Item list and chits for the game:

<table>
<thead>
<tr>
<th>Item List (to be written on the board)</th>
<th>Information for the chits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ring, Half-moon, Broadcasting</td>
<td>Fertiliser application method</td>
</tr>
<tr>
<td>2. 4.5 and 5.5</td>
<td>Suitable soil pH for tea growing</td>
</tr>
<tr>
<td>3. Dolomite application</td>
<td>When soil pH is less than 4.5</td>
</tr>
<tr>
<td>4. FYM</td>
<td>Applied for sustained growth, productivity and replenish any deficiency in soil</td>
</tr>
<tr>
<td>5. Soil sample label details</td>
<td>Name of the garden, Section no., type of soil: top or sub-soil and purpose of soil testing.</td>
</tr>
<tr>
<td>6. Aluminium Sulphate</td>
<td>Applied when soil pH is more than 5.5</td>
</tr>
<tr>
<td>7. 1% to 2%</td>
<td>Recommended limit of organic matter in the soil</td>
</tr>
<tr>
<td>8. Fertiliser application</td>
<td>Start when plants produce two flushes of growth</td>
</tr>
<tr>
<td>9. Manual, Mechanical, Chemical</td>
<td>Weed control methods</td>
</tr>
</tbody>
</table>

Irrigation and Drainage

Objective
After completing this session the trainees will be able to:

- state the interaction effects of the soil type, level of the land and water availability on the crop growth and its yield;
- state the timing and method of irrigation and drainage appropriate for a given soil type and climatic condition;
- irrigate based on the soil type and land slope;
- maintain drainage system by regular cleaning and weeding.

Say

Irrigation

- The plants require moisture for its growth. This moisture comes mainly from rainfall but gets depleted when plants use it for its food preparation.
- Moisture is also lost through the process of transpiration. During the dry months, from October to March/April, evaporation exceeds rainfall. So irrigation becomes necessary.
There are three main types of irrigation:

- Flood irrigation: Channelise the natural water source to the plantation area.
- Sprinkler irrigation: Put up sprinklers at appropriate distances in the plantation area.
- Drip irrigation: Used in areas where water is scarce. Drips are permanently placed around the plants so that water drips directly into the root zone.

Here are a few dos and don’ts to be followed:

- Start irrigation when the soil remains dry for one and half week after the last rain.
- The interval between two irrigations should be lesser in case of sandy soil than of clayey soil.
- Stop irrigation depending on the commencement of rainfall.
- Do not interrupt irrigation schedule unless there is 3 to 4 cm of rainfall for two to three days continuously.
- While irrigation is done with sprinklers the distance between two sprinklers should be such that water from one sprinkler falls on the water of the other sprinkler.
- To maintain correct pressure, follow the direction given by the manufacturer.

Drainage

- Moisture is required for growth of tea plants, but too much of it is detrimental.
- Hence, it is required to drain out the excess water by constructing drains.
- The whole system of drainage is quite a complicated process, as it depends upon factors such as soil texture, slope of the land, annual rainfall, distance of the outfall from the section etc. Therefore, it is advisable to design a drainage system after proper survey and under the guidance of an expert.
- Drainage is necessary in plains and plateaus where water can stagnate.
- However, in slopes, where excess water runs off, drainage system may not be required.

Do

- Explain the different methods of irrigation.
- Illustrate with a diagram the sprinkler method spacing, based on throw and overlapping.

Say

- We have already seen in South India tea is planted in the slopes, hence the water runs off the slopes so there is no drainage system is required. So how do we conserve moisture and soil in slopes?
- Let us see some soil and moisture conservation methods generally adopted in South India.
- The dry spell in South India is during November to March/ April. In order to conserve the moisture especially in new planting/ replanting areas staggered trenches along the contours are created.
- Trenches are rectangular holes dug in the soil on the walking path between the rows of tea plants. The dimensions are generally 1 foot wide; 1.5 feet deep and 6 feet long. The space between two trenches is 6 feet.
After monsoon the soil accumulation is removed from the trenches and spread out in the fields. Sometimes these trenches are used to bury the pruning litters and new trenches are created for the next season.

To prevent soil erosion during monsoon months in the slopes; contour revetments, leader drains and contour drains are constructed.

Notes for Facilitation

- Do a quick recap by asking questions on irrigation and drainage system.

Honesty

Objective

After completing this session the trainees will be able to:

- imbibe values in life.

Do

- Read these stories on Honesty.

1. **The Honest Taxi Driver**
   - Here is a true story from a country called Philippines that happened in 1996.
   - There was a taxi driver in the Philippines.
   - A wealthy passenger forgot her cash and jewellery worth 34 lakhs of rupees in the taxi.
   - The taxi driver could have run away with the money and become rich.
   - But he chose to be honest. He went after his passenger and returned everything.
   - The rich woman rewarded the taxi driver. But he refused the reward. Everyone came to know of his honesty.
   - As a result the Philippine government sponsored his children’s education and bought him a brand new taxi.
   - Honesty ended the taxi driver’s suffering forever.

2. **From Business Tycoon to Jail Bird**
   - This is a true story of a businessman who started from scratch. His business empire expanded.
   - But he had built his business through dishonesty and fraud.
   - He did manage to collect enough wealth for his next few generations.
   - But did his wealth and happiness last long? How could it? When the foundation is rotten, can a building last long?
   - People came to know the truth. He has been jailed for 10 years.
3. **Gandhiji’s Experiments with Truth**
   - When Gandhiji was in his early teens, he had stolen stumps of cigarette thrown away by his uncle.
   - He began smoking for fun.
   - But one day he realized his mistake.
   - He was so full of sorrow that he wanted to commit suicide.
   - He later realized it was better to quit smoking than to end his life.
   - He felt that it would be better to face the truth that he had done something wrong than to deny it and kill himself.
   - Conclude the story by telling the audience.
   - Only a coward ends his life because he does not have the will power to face his mistake.

**Notes for Facilitation**
- Initiate a discussion in the class after narrating the stories.
- Let the trainees come up with their views.
- Ask them questions for which the replies can be “Yes” and “No”.
- Note down the questions under two headings: Y and N. Maximum number of “yes” under the heading “Y” and the maximum number of “no” under “N”.
- Ask those who have said “yes’ why they have said so.
- Do the same for those who have said “no”.

**Field Visit to a Tea Garden**

**Objective**
After completing this session the trainees will be able to:
- observe the irrigation and drainage system in the tea garden.

**Do**
- Take the class on a field visit to a tea garden nearby.
- Ask the trainees to observe the leaves of the tea plants and discuss the moisture content retained in the plant.
- Discuss the irrigation requirement, with respect to the moisture content; climate and season at that point of time.
- Check moisture level and discuss the irrigation requirement.
- Recall the dimension and space between drains/trenches.
- Discuss the existing conditions of the drains with regard to: size, slope and maintenance.
- Discuss any corrective measures that may be required for the existing drainage system in the tea garden.
Notes for Facilitation

- Ask the trainees to note down their observations during the field trip.