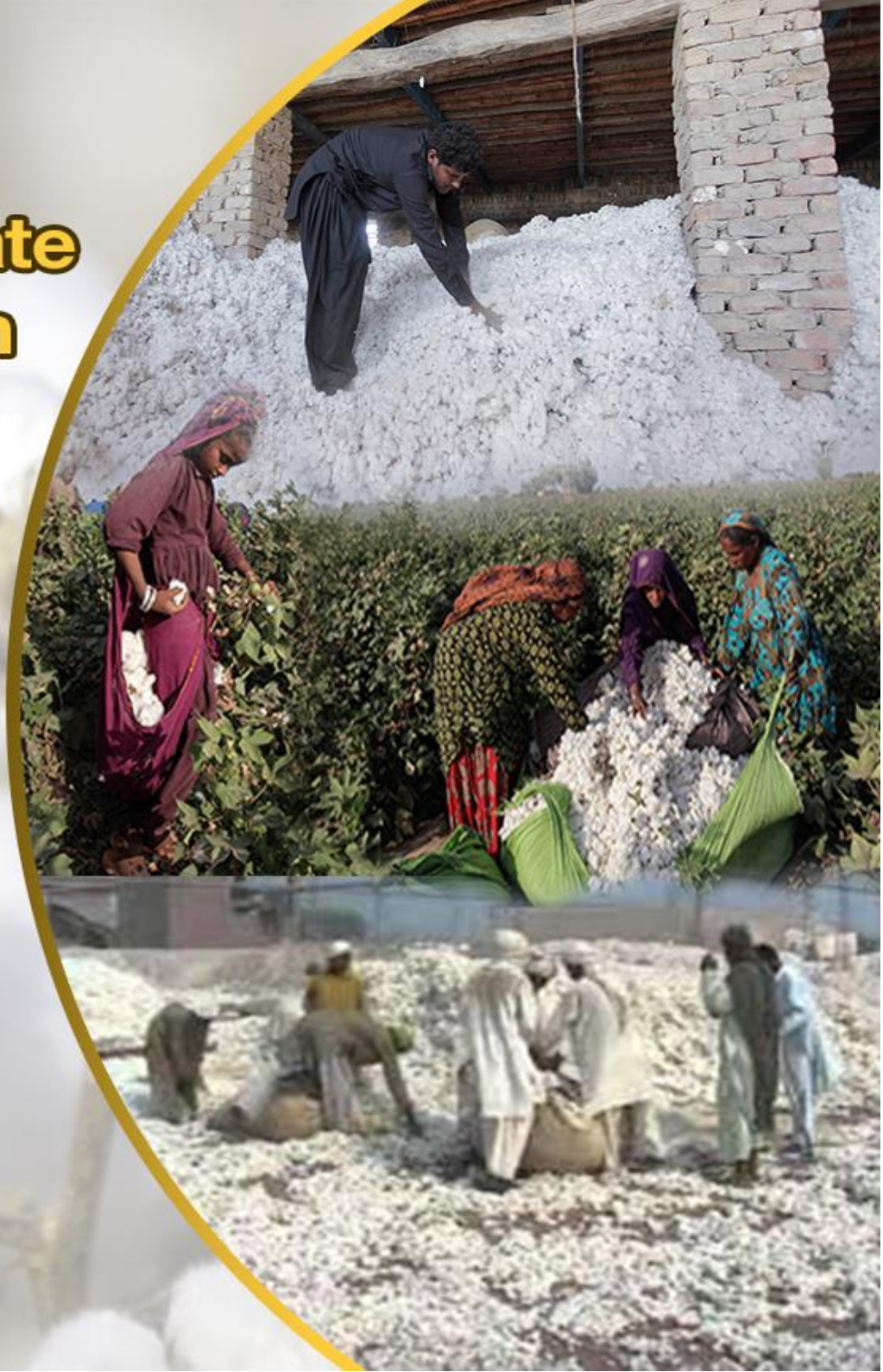


# National Vocational Certificate Level 1 in Crop Production (Cotton Picking)

CBT Curriculum



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## Table of Contents

1. INTRODUCTION .....	4
2. OVERVIEW ABOUT THE CURRICULUM FOR COTTON PICKING.....	11
3. TEACHING AND LEARNING GUIDE: COTTON PICKERS.....	13
3.1 PREPARATION FOR COTTON PICKING .....	13
3.2 COTTON PICKING FROM READY TO PICK BOWL .....	18
3.3 DRY THE PICKED COTTON.....	22
3.4 CLEAN THE PICKED COTTON .....	26
4. ASSESSMENT GUIDE .....	29
5. LIST OF TRAINING SPPLIES .....	51
6. LIST OF CONSUMABLE EQUIPMENT .....	53

## **1. Introduction**

Pakistan stands fourth in the production of cotton and third largest country in the export of raw cotton in the world. We witness around

1.3 million Farmers cultivating the crop across 4 million hectares which constitute 15 percent of the cultivated area in the country. About

7.3 percent of the value added in agriculture and 1.6 percent to GDP is attributed to cotton crop. Besides such high potential and prospective for the economy of Pakistan, there are serious quality related issues of cotton. We find around 8 percent trash in raw cotton in the country as against up to 0.78 percent in USA. FAO has identified Pakistan in the poor ranking as per international standards of cotton quality as there is existence of high impurity content and high counts of trash, contamination and moisture contents. These poor quality statistics are substantially linked to improper picking methods and adulteration of cotton with water and other material before, during and after picking of cotton.

### **1.1 Description of the structure, duration and distribution of course**

The course consists of four modules each of which has been further divided into some specific learning units. There is specific objective of each module in which separate time is allocated for theory and practical. In each module, the trainees would be trained regarding practical oriented skills for cotton picking, handling, storage and transportation. The course would be launched during the time period when picking process is started so as to impart practical knowledge to the learners. The curriculum contains a detailed list along with all the material which is required for practical exercises. The strength of class should not exceed 30 participants to carry out the practical work smoothly.

The duration of the course for the cotton pickers is of three months. There would be 5 days training period in each week



and every day the theory and practical time would be around 3-4 hours. As the course basically focuses on the practical teaching; thus the proportion of hours for the theory should be limited to less than 75 percent of the total time. The practical teaching is required for each module of cotton picking at the cotton fields.

The course contains four modules and at the end of the modules a short revision and assessment should be conducted. The summary revision should focus on the practical work and use of possible methods for the assessments. In each modular assessment, every trainee should be asked to practically demonstrate of what he/she has learnt during training in each learning unit of the module. A presentation and practical demonstration should be the core part of assessment. In this regard, the assessment at the end of each module should not be less than 3 hours. A final assessment would also be made at the completion of the course and a time of 6 hours is defined for this assessment. The absence of candidate should be regularised by allowing for re-attending the missing module. A minimum of 80 percent attendance in each module of the course should be mandatory.

The total hours of the course are 132 which are further bifurcated into theory and practical as 40 and 92 hours respectively. The total time also include assessment hours for each module, flexible hours and time for final assessment. The entry criteria for the candidate is a minimum age group  $\geq 16$  years. Though majority of the cotton pickers in the country are females, but the male trainees who are willing to join as cotton pickers expert will also be admitted with preference to those who are literate.

### **1.2 Purpose, specific characteristics and objectives of the training programme**

The fundamental purpose of the course is to bring Pakistan at par with international standards in terms of cotton picking and thus maintaining the quality of cotton lint. This purpose is to be achieved by giving both theoretical and practical training. By way of quality picking, proper handling, proper storage and proper transportation, the international

standards can be met. This is the way that Pakistan would be able to fetch fair and best international price of cotton in international markets and our cotton, yarn export would be strengthened.

During learning an interactive environment should be created. The teacher should be in close contact to the students and identify their special needs. There should be some flexibility in the implementation of daily contact hours with small breaks whenever required. A continuous training for up to 3 hours is not recommended. Similarly, during practical time, the schedule should not be highly tight. Creation of interest is the core of training as once it is created, the learners' response become marvelous and thus overall effectiveness of the course is improved.

The fundamental goal of this curriculum is to develop a comprehensive learning tool to train farmers, cotton pickers and respective farm managers for picking cotton as per recognized standard procedure so as to ensure the quality of fiber.

### **1.3 Skills development by action orientation and relevance of competencies**

The trainees would be developed by demonstrating them the actual way of picking and handling of cotton according to international standards. They would be shown pictures, charts, diagrams and video expressions. After some learning they are to do most of the work practically by themselves so that they could transmit the same to others in the professional life. The teacher should try to mitigate the gap between the literate and illiterate learners by focusing on the students having severe learning problems. The teacher should give advice and special support to the weak learners. It is generally recommended that if there is a serious learning problem for a trainee or there is issue of non-seriousness, it would be better for him/her to leave the course. There should be a permanent supervision of the trainees in addition to learner centered methods of training and learning support so as to invite their reasonable responses and thus minimize the dropout rate at the end of the course.

The course has been constituted in such a way that the trainees could attain complete skills and quality methods of

cotton picking according to international standards. The training is structured in such a way that the participants could be able to communicate effectively at grass root level. Moreover, a sense of responsibility would also be created among the trainees so that they could deliver effectively in their practical life.

#### **1.4 Entry level**

The incumbent in this training should be literate at good level. They have good back ground of farming particularly in the growing of cotton crop. They should be in the age bracket of 16 to 40 years of age. A little age relaxation can be granted to the potential candidates. Finally, they should be healthy and physically active to work continuously for hours in the cotton field. Preference would be given to those who are supervising a group of cotton pickers as farm managers.

#### **1.5 Minimum teaching qualification and medium of instruction**

The instructor of this course should be agriculture graduate. Preference should be given to those trainers who have been involved in such kind of courses for one year. It is also important to select that instructor who is proficient in local languages of the participants.

Medium of instruction should be national language – Urdu. The draft of curriculum should be translated into Urdu language. In addition to that, the teaching material would also be translated in the mother tongue (Urdu, Punjabi, Sariaki, Sindhi) to make it easily understandable for indigenious people.

#### **1.6 Laws and regulations; and suggested distribution of modules**

The instructor should be familiar with standard laws and regulations regarding health standards, reasonable working conditions, child labor, women and sexual harassment particularly among the communities where cotton picking is made.

Sometimes, there is law but there is lack of application. The instructor must guide the trainees regarding the true meaning and implementation of these laws (Provincial Cotton Control Act, modified version, 2001). The modules of this course have been developed in such a way that there is symmetric consistency across all such modules and their respective learning units. There is no knowledge and skill gap in the distribution of modules. The trainee would not be able to understand next module until he has mastery over the previous module.

### **1.7 Definition of the trade**

This trade accounts for the empowerment of cotton pickers, supervisors, farmers and farm managers in the shape of standard techniques for quality cotton picking and in such a way that Pakistan could meet international standards of cotton quality for fairly competing at global level.

### **1.8 Overall objectives of the course**

The core objective of this course is to enable the potential cotton pickers, managers and farmers to understand the key benefits of standard cotton picking as well as learn appropriate tools, techniques and precautions to undertake the process of picking. So, the aim of this course is to develop the fundamental knowledge, skill and competency among the trainees regarding preparation of cotton- picking, picking cotton from ready to pick bowl, drying and cleaning the picked cotton. The trainees of this course would learn the proper way of dressing, selection of ready to pick bowl, starting picking in rows and in appropriate time, and supervision of picking phenomenon if required. For each of these techniques, practical demonstration would be given. Moreover, all the precautionary measures would be introduced among the learners so that they could ensure appropriate picking and quality cotton at the end of the course.



## 1.9 Competencies gained after completion of course

After successful participation of all the modules of this course, the trainees would be able to:

- Work effectively in the cotton picking under all physical and socio-economic conditions.
- They would gain expertise regarding proper dressing during cotton picking, the actual time of picking and selection of ready to pick cotton.
- Start picking in appropriate rows and to supervise the cotton pickers if they get some management position.
- Identify picking cotton in its mature or complete form by separating the diseased cotton from contamination.
- Describe the benefits of filling the bag appropriately.
- Reduce deficiency and develop skill to pick cotton of good quality.
- Explain the moisture contents, which are very common in the picked cotton for either intentional to gain the weight or unconscious attempt for lack of knowledge regarding loss of fibre quality.
- Select the clean and dry place, to spread a sheet in that place, to unload picked cotton over that sheet and finally to protect cotton from rain, sand storms and other contamination.
- Detect and separate non-fibre foreign matter.
- Perform manual picking.

## 1.10 Worker Traits

It should be the part of competency standards that all the questions and observations which come in the mind of the trainee should be fully addressed with proper logic and example so that he could deliver the same in practical life. They must have all the record of training tools including reading material, charts, videos etc which could help them in future for completely observing the standard procedure. They should have a specimen of proper dress including gloves, mask and

cotton bag. In addition to this, the trainees would be able to take responsibility of this individual as well as national cause.

### **1.11 Opportunities for employment and career advancement**

A trained cotton picker would get benefits in various ways. The chief among these benefits is the availability of good jobs not only as direct cotton pickers but as Cotton Picking and Handling Supervisor or in-charge of cotton pickers. There is good level of optimism that the skills and competencies achieved in this course would help the cotton pickers to do their field work efficiently and effectively. Since this course is the new initiative in Pakistan, the trained pickers would get recognition in the field among the farming community of cotton belt and thus able to earn more wages as compared to their counter parts who are not appropriately trained. The main employment sectors would be as follows:

- a) Cotton farms
- b) Supervisor cotton pickers
- c) In-charge cotton pickers
- d) Self employment
- e) Trainer of cotton pickers

## 2 Overview about the Curriculum for cotton picking

The overview of the curriculum is given below:

Module title and aim	Learning units	Duration
<p><b>Module 1 “Preparation for cotton picking”</b></p> <p>The aim of this module is to develop the fundamental knowledge, skill and competency among the trainees regarding pre-picking preparation.</p>	<p>LU-1: Wear Proper Dress</p> <p>LU-2: Selecting ready to pick bowl</p> <p>LU-3: Start Picking in rows</p> <p>LU-4: Supervising the cotton pickers</p>	<p>8 hrs.</p> <p>18 hrs.</p> <p>16 hrs.</p> <p>8 hrs.</p> <p>50 hours</p>
<p><b>Module 2 “Cotton picking from ready to pick bowl”</b></p> <p>The aim of this module is to develop the basic knowledge, skill and competency among the trainees regarding parts of the complete cotton plant and cotton picking methodology when it is ready for picking.</p>	<p>LU-1: Pick the complete/matured cotton from bowls</p> <p>LU-2: Separate the diseased Cotton and contamination</p> <p>LU-3: Appropriate placement of picked cotton during picking</p> <p>LU-4: Fill the bag appropriately</p>	<p>30 hrs.</p> <p>20 hrs.</p> <p>10 hrs.</p> <p>15 hrs.</p> <p>75 hours</p>

<p><b>Module 3 “Dry the picked cotton”</b></p> <p>The aim of this module is to develop the fundamental knowledge, skill and competency among the trainees regarding post-picking precautions and techniques.</p>	<p>LU-1: Select clean and dry place</p> <p>LU-2: Place cotton sheet on dry place</p> <p>LU-3: Unload bags on cotton sheet</p> <p>LU-4: Protect cotton from rain and sand storm etc.</p>	<p>12 hrs</p> <p>08 hrs</p> <p>12 hrs</p> <p>10 hrs</p> <p>42 hours</p>
Module title and aim	Learning units	Duration
<p><b>Module 4 “Clean picked cotton”</b></p> <p>The aim of this module is to develop the basic knowledge, skill and competency among the trainees regarding cleaning of cotton after picking is completed.</p>	<p>LU-1: Detect non fiber foreign matter</p> <p>LU-2: Separate non fiber foreign matter</p>	<p>12 hrs</p> <p>12 hrs</p> <p>24 hours</p>

4 modules: 191 hours

Sessional Assessment/revision: 30 hours

Flexibility of hours: 8 hours Final

Assessment and revision : 12 hours

TOTAL HOURS: 241

### 3. Teaching and learning guide: Cotton pickers

#### 3.1 Module 1: Title: PREPARATION FOR COTTON PICKING

**Objective of the Module:** The aim of this module is to develop the fundamental knowledge, skill and competency among the trainees regarding pre-picking preparation

**Duration:** 50 hours : Theory 12.5 hours Practice: 37.5 hours



Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU-1:</b> Wear Proper Dress	<b>Trainee will be able to</b> 1. Realize the actual advantages of wearing scarf, gloves, mask, long gown and use of cotton bags.  2. Get convinced about the probable damage that can happen to quality of crop and picked cotton due to inappropriate	1. No difficulty in movement within the field.  2. The trainees can be demonstrated that improper dressing can pollute the picked cotton.  3. They can also be demonstrated in the field that there is less chance of mixing foreign elements (human hair, diseased cotton & non organic material) with the use of appropriate dress.	<b>Total</b> : 8 hrs  <b>Theory:</b> 2 hrs  <b>Practical:</b> 6 hrs	Pictures of diseased cotton and white cotton  Charts for demo of proper dress and foreign elements  Scarf, Gloves & gown, Cotton bags for picking for each	<b>Theory</b> Class Room  <b>Practical</b> Cotton Field

	and regional requirements in view.	(plastic bag, shoppers, poly pre-pine etc.) matters from white			
<b>LU-2: Selecting ready to pick bowl</b>	<p><b>The student will be able to</b></p> <p>1. Identify the inner and outer sides of the field to check percentage of opened cotton bowls.</p> <p>2. Recognize the fully matured (mostly fully opened: around 60 %) cotton bowls.</p> <p>3. Classify the cotton bowls, plants and plots having diseased or damaged</p>	<p>1. To have a round of the inner side of the field to identify the cluster of plants fully ripened cotton bowls for a true representation.</p> <p>2. Show them various qualities of picked cotton to make them identifying good picking or bad picking.</p> <p>3. Priority based ranking of plots.</p> <p>4. Go to field and pick 10 cotton bowls with or without ripening and diseased.</p>	<p><b>Total</b> : 18 hrs</p> <p><b>Theory:</b> 4.5hrs</p> <p><b>Practical:</b> 13.5 hrs</p>	<p>Samples of yellow Pictures of cotton crop damaged and crop.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>

<p><b>LU-3: Start Picking in rows</b></p>	<p><b>The learner will be able to</b></p> <p>1. Demonstrate the systematic way of walk of cotton pickers in such a sequence as no damage of immature bowls of plant is made.</p> <p>2. Get convinced of the benefits and better results of doing picking in rows.</p>	<p>1. The trainee is realized what happens to the quality of cotton if haphazard picking is pursued.</p> <p>2. It is practically shown that picking is to be done from bottom to top so as to avoid pollution of cotton.</p>	<p><b>Total</b> : 16 hrs</p> <p><b>Theory:</b> 4 hrs</p>	<p>Pictures of cotton fields.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
	<p>3. Realize the probable disadvantages or losses for not following the row wise sequence while picking seed cotton.</p> <p>4. Arrange the pickers in rows</p>	<p>3. A demonstration can also be given in the field regarding how the quality is deteriorated if cotton is picked other than the recommended way.</p> <p>4. Area specific techniques and advices can be given.</p>	<p><b>Practical:</b> 12 hrs</p>		

<p><b>LU-4:</b> Supervising the cotton pickers</p>	<p><b>The learner will be able to</b></p> <ol style="list-style-type: none"> <li>1. Guide the cotton pickers regarding appropriate way of picking.</li> <li>2. Monitor the field workers whether they follow the true procedure or not.</li> <li>3. Advise the pickers about all knowledge and information required for preparation of cotton picking.</li> </ol>	<ol style="list-style-type: none"> <li>1. Supervisor is himself/herself demonstrating to the workers the best way of preparation.</li> <li>2. Supervisor is himself/herself dressed up properly and show the cotton pickers how the rows are to be selected and ready to pick cotton bowls picked.</li> </ol>	<p><b>Total</b> : 8 hrs</p> <p><b>Theory:</b> 2 hrs</p> <p><b>Practical:</b> 6 hrs</p>	<p>Different categories of cotton fields</p> <p>Different varieties of cotton.</p> <p>PPEs as required</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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3.2 Module 2 Title: **COTTON PICKING FROM READY TO PICK BOWL**

Objective of the Module: **The aim of this module is to develop the basic knowledge, skill and competency among the trainees regarding parts of the complete cotton plant and cotton picking methodology when it is ready**

Duration: 75 hours Theory: 15 hours

Practice: 60 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU-1: Pick the complete/matured Cotton</b>	<p><b>Trainee will be able to</b></p> <ol style="list-style-type: none"> <li>1. Identify cotton plant along with its important parts.</li> <li>2. Differentiate the healthy and diseased cotton.</li> <li>3. Recognize the different diseases or to identify the probable damages that</li> </ol>	<ol style="list-style-type: none"> <li>1. Showing different parts (stick, shell and seed cotton) of plants to the trainees.</li> <li>2. Showing charts/pictures of various sizes of cotton plants and different parts including cotton bowl.</li> <li>3. Trainees would be demonstrated cotton field for showing them the healthy and diseased plants.</li> <li>4. The trainees are</li> </ol>	<p><b>Total</b> : 30 hrs</p> <p><b>Theory</b>: 6 hrs</p> <p><b>Practical</b> : 24 hrs</p>	<p>Pictures of diseases</p> <p>Pictures of opened and unopened bowls.</p> <p>Charts for demo of proper dress and foreign elements</p>	<p><b>Theory</b></p> <p>Class Room</p> <p><b>Practical</b></p> <p>Cotton Field</p>



	5. Get convinced that cotton picking is to be avoided just after rain fall.				
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<p><b>LU-2: Separate the diseased cotton and contamination</b></p>	<p><b>The student will be able to</b></p> <p>1. Recognize various forms of contamination (addition of leaves, stems, shell etc).</p> <p>2. Identify completely the reasons, and advantages of separating the diseased cotton.</p>	<p>1. Showing the students some pictures to identify the contaminated material which is added during picking.</p> <p>2. It is to be ensured that students themselves demonstrate in the field how they are skilled to separate diseased cotton and avoid contamination.</p>	<p><b>Total:</b> 20 hrs</p> <p><b>Theory:</b> 4 hrs</p> <p><b>Practical</b> : 16 hrs</p>	<p>A coloured chart showing various parts of cotton plants.</p> <p>Samples of yellowish cotton.</p> <p>Samples of healthy and damaged cotton.</p> <p>Pictures of cotton crop and damaged crop.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
<p><b>LU-3: Appropriate Placement of picked cotton</b></p>	<p><b>The student will be able to</b></p> <p>1. Exhibit for spreading the placed cotton on appropriate sheet instead of dumping cotton during picking.</p> <p>2. Realise the probable damages of dumping the cotton.</p>	<p>1. The trainees would demonstrate for placing the picked cotton during picking.</p> <p>2. Willingness and ability has to be generated through motivation to avoid harms.</p>	<p><b>Total:</b> 10 hrs</p> <p><b>Theory:</b> 2 hrs</p> <p><b>Practical</b> : 8 hrs</p>	<p>Pictures of dumping and spreading of cotton.</p> <p>Charts for demo of proper placement of cotton.</p> <p>Cotton sheet for the individual picker.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field Cotton sheet</p>

<p><b>LU-4: Fill the bag appropriately</b></p>	<p><b>Trainee will be able to</b></p> <ol style="list-style-type: none"> <li>1. Have skill of making the cotton filling bags filled with cotton appropriately according to the capacity of bags.</li> <li>2. Get skilled of the advantages of filling the bags appropriately.</li> </ol>	<ol style="list-style-type: none"> <li>1. Students would be able to choose the appropriate cotton bag for cotton picking.</li> <li>2. Students are to get practical attentiveness of the appropriate filling.</li> <li>3. Student can get the knowledge regarding different wastages in picking.</li> </ol>	<p><b>Total:</b> 15 hrs</p> <p><b>Theory:</b> 3 hrs</p> <p><b>Practical</b> : 12 hrs</p>	<p>Cotton filling bags Pictures of appropriate filled bags. Demonstration of real bags.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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### 3.3 Module 3: Title: **DRY THE PICKED COTTON**

Objective of the Module: **The aim of this module is to develop the fundamental knowledge, skill and competency among the trainees regarding post-picking arrangements**

Duration: 42 hours Theory: 10 hours Practice: 32 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU-1:</b> Select clean and dry place	<b>Trainee will be able to:</b>  1. Realize the importance of neat and dry place for inserting picked cotton.  2. Avoid putting the picked cotton under shadows of trees to further avoid the feathers, bits of birds.	1. The trainees would learn the criteria for neat and dry place.  2. The students would be demonstrated for the selection of higher place than normal.  3. Practically, it is to be shown how wet place and shadow areas affect the quality of seed cotton.	<b>Total:</b> 12 hrs  <b>Theory:</b> 3 hrs  <b>Practical:</b> 9 hrs	Pictures of dirty cotton and white cotton  Charts for demo of proper place and foreign elements	<b>Theory</b> Class Room  <b>Practical</b> Cotton Field

<p><b>LU-2:</b> Spread cotton sheet on dry place</p>	<p><b>The student will be able to</b></p> <ol style="list-style-type: none"> <li>1. Realize the importance of the specification of the cotton sheet.</li> <li>2. Take necessary measures for the selection of dry place.</li> <li>3. Publicise the measures for appropriate place to put the cotton sheet.</li> <li>4. Identify the probable ways and means of mixing of foreign elements in the seed cotton.</li> </ol>	<ol style="list-style-type: none"> <li>1. The students would understand the importance of cotton sheet.</li> <li>2. They would get the awareness of the criteria for dry place.</li> <li>3. The students would know the importance of the dry place.</li> <li>4. A practical demonstration is to be given to the learners how a heap of cotton is secured in the presence of sheet.</li> </ol>	<p><b>Total:</b> 8 hrs</p> <p><b>Theory:</b> 2 hrs</p> <p><b>Practical:</b> 6 hrs</p>	<p>Sample s of cotton sheet.</p> <p>Pictures of dry place.</p> <p>Demo for putting cotton sheet.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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<p><b>LU-3:</b> Unload bags on cotton sheet</p>	<p>The trainee will be able to</p> <ol style="list-style-type: none"> <li>1. Apply the use of cotton sheet at dry place.</li> <li>2. Identify the loaded bags and cotton sheet.</li> <li>3. Recognize the procedure of unloading the bags on cotton sheet.</li> <li>4. Use cotton bags or opened- vehicle for transportation to avoid contamination.</li> </ol>	<ol style="list-style-type: none"> <li>1. Get the knowledge of loaded bags and usefulness of the cotton sheet.</li> <li>2. A demonstration is to be provided to give the skill of unloading the filled bags on cotton sheet.</li> <li>3. Understand the importance of unloading the filled bags appropriately on cotton sheet.</li> </ol>	<p><b>Total:</b> 12 hrs</p> <p><b>Theory:</b> 3 hrs</p> <p><b>Practical:</b> 9 hrs</p>	<p>Pictures of loaded cotton bags.</p> <p>Pictures of cotton sheet.</p> <p>Demo charts of unloading.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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<p><b>LU-4:</b> Protect cotton from rain and sand storm etc.</p>	<p><b>The trainee will be able to</b></p> <ol style="list-style-type: none"> <li>1. Realize the probable damages of cotton by rain and sand storm.</li> <li>2. Apply the knowledge of the forecasting of rain and sand storms.</li> <li>3. Get skilled of the various methods for protecting cotton from rain and sand storm.</li> <li>4. Identify the usefulness of protected cotton.</li> </ol>	<ol style="list-style-type: none"> <li>1. Learn about the expected loss due to rain and sand storms for cotton.</li> <li>2. Be demonstrated with rain and sand storm affected cotton samples.</li> <li>3. Study the different safety measures for the protection of cotton from rain and sand storms.</li> </ol>	<p><b>Total:</b> 10 hrs</p> <p><b>Theory:</b> 2 hrs</p> <p><b>Practical:</b> 8 hrs</p>	<p>Pictures of affected cotton.</p> <p>Demo chart of safety measures.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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3.4 Module 4 Title: **CLEAN PICKED COTTON**

Objective of the Module: **The aim of this module is to develop the basic knowledge, skill and competency among the trainees regarding cleaning of cotton**

Duration: 24 hours Theory: 6 hours Practice: 18 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Require	Learning Place
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<p><b>LU-1:</b> Detect non fibre foreign matter</p>	<p><b>Trainee will be able to</b></p> <ol style="list-style-type: none"> <li>1. Select the appropriate time for picking i.e. during sun shine after 10 am, to avoid non fibre and other contents.</li> <li>2. Identify the variety of non fibre contents.</li> <li>3. Identify the presence of non fibre elements.</li> <li>4. Realize the harms of non fibre contents in cotton.</li> <li>5. Perform in drying the cotton as per standards.</li> </ol>	<ol style="list-style-type: none"> <li>1. Motivated that it is the easiest stage for the identification of non fibre elements.</li> <li>2. Demonstrated for the identification of non-fibre contents.</li> <li>3. Motivated the learners for the importance of detecting non-fibre foreign matter.</li> </ol>	<p><b>Total:</b> 12 hrs</p> <p><b>Theory:</b> 3 hrs</p> <p><b>Practical:</b> 9 hrs</p>	<p>Pictures of non fibre matters.</p> <p>Charts for demo of identification proper of foreign</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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<p><b>LU-2:</b> Separate non fibre foreign matter</p>	<p><b>The student will be able to</b></p> <ol style="list-style-type: none"> <li>1. Identify the non fibre foreign matters in cotton.</li> <li>2. Get skilled of various methods for removing the different types of non fibre contents i.e. Toffee rappers, shoppers, jutes link, (Orange, banana shell/chalky).</li> <li>3. Ensure the true disposal of picked non fibre material, so as to avoid remixing.</li> <li>4. Identify the probable harms of adulteration of non fibre foreign contents in the</li> </ol>	<ol style="list-style-type: none"> <li>1. Getting understanding of the expected benefits of separation of non-fibre contents.</li> <li>2. Demonstration for the identification</li> <li>3. Learn how to dispose the non-fibre elements at safe place.</li> </ol>	<p><b>Total:</b> 12 hrs</p> <p><b>Theory:</b> 3 hrs</p> <p><b>Practical:</b> 9 hrs</p>	<p>Specimens of non-fibre foreign elements.</p> <p>Sample of yellowish cotton.</p> <p>Sample of heated cotton.</p> <p>Pictures of cotton crop damage and damaged crop.</p>	<p><b>Theory</b> Class Room</p> <p><b>Practical</b> Cotton Field</p>
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## **4. Assessment Guide**

### **4.1 Difference between sessional and final assessment**

#### **a) Sessional Assessment**

The internal (teacher of the said course) is responsible to assess the student's class performance regarding class attendance, assignments (oral & written), practical demonstration and his attitude as well.

#### **b) Final Assessment**

The external body is responsible to supervise the final assessment of the students through the examination practically as well as theoretically.

### **4.2 Methods of assessment**

For the course of "cotton picking" the methods of assessment are classified into two groups:

#### **a) Direct Assessment**

The direct method is an effective way of assessment of cotton pickers and most advisable assessment to observe the candidates while doing the practical work. The examples of direct assessment are:

- Work performance (e.g, see as if the candidates are taking interest by raising questions)
- Demonstration (e.g, the learner would act in the field in the way he is trained)
- Presentation (e.g the trainee can present the work both theoretically as well as practically)
- Direct questioning (e.g individuals are questioned regarding various learning elements)
- Paper based tests (e.g an oral or verbal test may be conducted in different sessions)

## b) Indirect Assessment

The indirect method of assessment is an approach that evidence for the performance is gained indirectly. The examples of indirect assessments are:

- Work products (e.g, the candidates can display the actual cotton picked from the field by following all techniques and tools. A comparison of quality can be made of various cotton bags picked by different candidates)
- Workplace documents (e.g, various assignments can be given in which pictorial expressions can be displayed to evaluate the level of understanding of the candidates.

The application of indirect assessment is the secondary choice, because the work performance is not watched individually and it does not guarantee that the work product is carried out by the individual who is going to be assessed or by someone else.

## 4.3 Principles of Assessment

An assessment programme should be based on the five principles each of which has specific meaning relevant to the course:

- 1 **Fairness:** It means that there should be no advantage or disadvantage for the trainees to be assessed. The candidates having prior information should not be preferred to those who do not have prior information. Each candidate must feel that he is being treated in the same way as of his/her fellows.
- 2 **Validity:** The principle of validity exposes that a valid assessment assesses what it claims to assess.

For example, if cotton picking ability is assessed and certified, the assessment should involve a performance criterion which is directly related to the cotton picking activity.

**3 Reliability:** It shows that the assessment is consistent and reproducible. For instance, the similar work performance of drying the picked cotton as assessed by some particular assessor is expected to be assessed by the other assessors during other period of time, and there should not be substantial difference of assessment result.

**4 Flexibility:** The principle of flexibility means that the assessor should be flexible regarding the assessment methods. Some learners are comfortable in one way of assessment while others respond better if the assessment pattern is changed. Therefore, various options should be available to assess the trainee. For example, the assessor evaluates the candidates through different alternative methods of performance if a learner does not perform better in one method of output.

**5 Continuity:** The principle of continuity explains that the assessment criteria should be continuous with respect the module structure of the course. Within a single module and between two modules, there is regularity in the assessment process. For example firstly assess the trainees regarding identification, picking and then move towards drying the cotton etc. The presence of gap in the assessment across various learning units and learning modules cannot produce effective cotton pickers.

#### **4.4 Suggestion for Sessional Assessment**

The following suggestions are given for the sessional assessment of the students:

1. According to curricula 80 % marks must be given on the basis of practical performance
2. A specific weight age must be given on the basis of class participation, assignments and quiz tests, to create the self motivation of the trainees.

#### **4.5 Suggestion for Final Assessment**

Final assessment shall be in two parts: theoretical assessment and practical assessment. The final



assessment marks shall contribute to the final qualification. The final theoretical assessment shall consist of one 3-hour paper, consisting of multiple choice and short answer questions, covering all modules. Additionally, there should be some sort of distinction certification for the extra ordinary performing students.

The module-wise assessment scheme is given in the table below:

<b>MODULE 1</b>	<b>Theory</b>	<b>T i</b>	<b>Practical</b>	<b>Ti m</b>	<b>T h</b>	<b>Pr ac</b>
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<p><b>LU-1:</b>    Wear Proper</p>	<p><b>Trainee will be asked for:</b></p> <p>1. Actual advantages of wearing scarf, gloves, mask, long gown and use of cotton bags.</p> <p>2. The probable damage that can happen to quality of crop and picked cotton due to inappropriate dressing.</p> <p>3. Practically dress up keeping field related and regional requirements in view.</p>	<p>2 h r s</p>	<p><b>Trainee will be able to:</b></p> <p>1. Recognize that no difficulty in movement within the field.</p> <p>2. Demonstrate that improper dressing can pollute the picked cotton.</p> <p>3. Demonstrate in the field that there is less chance of mixing foreign elements (human hair, diseased cotton &amp; non organic material) with the use of appropriate dress.</p> <p>4. Segregate the diseased cotton and non organic (plastic bag, shoppers, poly pre-pine etc.) matters from white cotton to improve the quality.</p>	<p>6h rs</p>	<p>2 0</p>	<p>80</p>
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<p><b>LU-2:</b> Selecting ready to pick bowls</p>	<p>1. Identify the inner and outer sides of the field to check percentage of opened cotton bowls.</p> <p>2. Recognize the fully matured (mostly fully</p>	<p>4 . 5 h r s</p>	<p>1. To have a round of the inner side of the field to identify the cluster of plants fully ripened cotton bowls for a true representation.</p> <p>2. Recognize the various qualities of picked cotton to make</p>	<p>13 .5 hr s</p>	<p>2 0</p>	<p>80</p>
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	<p>3. Classification of the cotton bowls, plants and plots having diseased or damaged bowls.</p> <p>4. Competencies of identifying and picking good quality cotton from bowls without damaging the plant as well as immature (un-ripened) bowls.</p> <p>5. Minimization of the losses due to information of weather forecast in terms of picking so as to avoid expected damage of quality of cotton amidst rainfall/wind.</p>		<p>3. Identify the priority based ranking of plots.</p> <p>4. Go to field and pick 10 cotton bowls with or without ripening and diseased.</p> <p>5. Use mobile service for getting upcoming weather forecasts.</p> <p>6. Recognize that willingness and ability is to be generated by motivation and other required knowledge/skills.</p>			
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<p><b>LU-3:</b> Start Picking in rows</p>	<p>1. Demonstrate the systematic way of walk of cotton pickers in such a sequence as no damage of immature bowls of plant is made.</p> <p>2. The benefits and better results of doing picking in rows.</p>	<p>4 h r s</p>	<p>1. Realized what happens to the quality of cotton if haphazard picking is pursued.</p> <p>2. Practically show that picking is to be done from bottom to top so as to avoid pollution of cotton.</p>	<p>12 hr s</p>	<p>2 0</p>	<p>80</p>
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	<p>3. The probable</p> <p>4. Arranging the pickers in rows under the supervision of supervisor.</p> <p>5. Competencies in the proper planning of start of cotton picking</p>		<p>3. Demonstrate in the field regarding that how the quality is deteriorated if cotton is picked other than the recommended way.</p> <p>4. Use area specific techniques and advices can be given.</p> <p>5. To motivate the pickers to have understanding of start of picking cotton with the aid of standard</p>			
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<p><b>LU-4:</b> Supervising the cotton pickers</p>	<p>1. Guidelines of the cotton pickers regarding a r</p> <p>2. Monitor the field workers whether they follow the true procedure or not.</p> <p>3. Advice the pickers about all knowledge and information required for preparation of cotton picking.</p>	<p>2 h r s</p>	<p>1. Supervise himself/herself demonstrating to the workers the best way of preparation.</p> <p>2. Supervise himself/herself dressed up properly and show the cotton pickers how the rows are to be selected and ready to pick cotton bowls picked.</p>	<p>6 h r s</p>	<p>2 0</p>	<p>80</p>
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MODULE 2	Theory	T i	Practical	T i	T h	Practical
<b>LU-1:</b> Pick the complete/matured Cotton	<b>Trainee will be asked for:</b> 1. Identify the cotton plant along with its important parts.  2. Differentiate the healthy and diseased cotton.  3. Recognize the different diseases or to identify the probable damages that can attack the cotton plant in general and cotton bowl in	6  h r s	<b>Trainee will be able to:</b> 1. Show the different parts (stick, shell and seed cotton) of plants to the trainees.  2. Understand the charts/pictures of various sizes of cotton plants and different parts including cotton bowl.  3. Demonstrate in the cotton field for showing them the healthy and diseased plants.	2 4  h r s	2 0	80



<p><b>LU-2:</b> Separate the diseased cotton and contamination</p>	<p>1. Recognition of various forms of contamination (addition of leaves, stems, shell etc).</p>	<p>4 h r s</p>	<p>1. Recognize the pictures to identify the contaminated material which is added during picking.</p>	<p>1 6 h r s</p>	<p>2 0</p>	<p>80</p>
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	2. Identifying the completely reasons, and advantages of separating the diseased cotton		2. Ensure themselves and demonstrate in the field how they are skilled to separate diseased cotton and avoid contamination.			
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<p><b>LU-3:</b> Appropriate Placement of picked</p>	<p>1. Exhibit for spreading the placed cotton on appropriate sheet instead of dumping cotton during picking.</p> <p>2. Realise the probable damages of dumping the cotton during picking.</p> <p>3. Get convinced of the benefits of adequate placing the cotton during picking.</p>	<p>2 h r s</p>	<p>1. The trainees would demonstrate for placing the picked cotton during picking.</p> <p>2. Willingness and ability has to be generated through motivation to avoid harms.</p> <p>3. The trainees get convinced for the importance of spread cotton in open air on individual cotton sheet.</p>	<p>8 hrs</p>	<p>20</p>	<p>8 0</p>
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<p><b>LU-4:</b> Fill the bag appropriately</p>	<p>1. Skills of making the cotton filling bags filled with cotton appropriately</p> <p>2. Skills of the advantages of filling the bags appropriately</p> <p>3. Minimizing the wastage in cotton picking.</p>	<p>3 h r s</p>	<p>1. Choose the appropriate</p> <p>2. Get practical attentiveness of the appropriate filling.</p> <p>3. Get the knowledge regarding different wastages in picking.</p>	<p>12 hrs</p>	<p>20</p>	<p>8 0</p>
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MODULE 3	Theory	T i	Practical	T i	T h	Practical
LU-1: Select clean and dry place	<p><b>Trainee will be asked for:</b></p> <ol style="list-style-type: none"> <li>1. The importance of neat and dry place for inserting picked cotton.</li> <li>2. The awareness to avoid putting the picked cotton under shadows of trees to avoid</li> </ol>	3  h r s	<p><b>Trainee will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Learn the criteria for neat and dry place.</li> <li>2. Demonstrate for the selection of higher place than normal.</li> <li>3. Practically show that how wet place and shadow areas affect the quality</li> </ol>	9  h r s	2 0	80

<p><b>LU-2:</b> Place cotton sheet on dry place</p>	<ol style="list-style-type: none"> <li>1. The importance of the specification of the cotton sheet.</li> <li>2. Taking necessary measures for the selection of dry place.</li> <li>3. Publicising the measures for appropriate place to put the cotton sheet.</li> <li>4. Identify the probable ways and means of mixing of foreign elements in the seed cotton.</li> </ol>	<p>2 h r s</p>	<ol style="list-style-type: none"> <li>1. Understand the importance of cotton sheet.</li> <li>2. Get the awareness of the criteria for dry place.</li> <li>3. Know the importance of the dry place.</li> <li>4. Practical demonstrate that how a heap of cotton is secured in the presence of sheet.</li> </ol>	<p>6 h r s</p>	<p>2 0</p>	<p>80</p>
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<p><b>LU-3:</b> Unload bags on cotton sheet</p>	<ol style="list-style-type: none"> <li>1. Application of the use of cotton sheet at dry place.</li> <li>2. Identify the loaded bags and cotton sheet.</li> <li>3. The procedure of unloading the bags on cotton sheet.</li> <li>4. Awareness regarding using cotton bags or opened vehicle for transportation to avoid contamination.</li> </ol>	<p>3 h r s</p>	<ol style="list-style-type: none"> <li>1. Get the knowledge of loaded bags and usefulness of the cotton sheet.</li> <li>2. Demonstrate the skills of unloading the filled bags on cotton sheet.</li> <li>3. Understand the importance of unloading the filled bags appropriately on cotton sheet.</li> </ol>	<p>9 h r s</p>	<p>2 0</p>	<p>80</p>
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<p><b>LU-4:</b> Protect cotton from rain and sand storm etc.</p>	<p>1. The probable damages of cotton by rain and sand storm.</p> <p>2. Application of the knowledge of the forecasting of rain and sand storms.</p> <p>3. Skills of the various methods for protecting cotton from rain and sand storm.</p> <p>4. The usefulness of protected cotton</p> <p>.</p>	<p>2 h r s</p>	<p>1. Learn about the expected loss of rain and sand storms for cotton.</p> <p>2. Demonstrate with rain and sand storm affected cotton samples.</p> <p>3. Study the different safety measures for the protection of cotton from rain and sand storms.</p>	<p>8 h r s</p>	<p>2 0</p>	<p>80</p>
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MODULE 4	Theory	T i	Practical	T i	T h	Pract ical
<b>LU-1:</b> Detect non fibre foreign matter	<b>Trainee will be asked for:</b> <ol style="list-style-type: none"> <li>1. Selecting the appropriate time for picking i.e. during sun shine after 10 am, to avoid non fibre and other contents.</li> <li>2. Identify the variety of non fibre contents.</li> <li>3. Identify the presence of non fibre elements.</li> <li>4. Awareness of the harms of non fibre contents in cotton.</li> </ol>	3  h r s	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Get motivation that it is the easiest stage for the identification non fibre elements.</li> <li>2. Get demonstration for the identification of non-fibre contents</li> <li>3. Learn motivation for the importance of this step.</li> </ol>	9  h r s	2 0	80

<p><b>LU-2:</b> Separate non fibre foreign matter</p>	<p>1. Identification of the non fibre foreign matters in cotton.</p> <p>2. Skills of various methods for removing the different types of non fibre contents</p>	<p>3 h r s</p>	<p>1. Get understanding of the expected benefits of separation of non-fibre contents.</p> <p>2. Get demonstration for the identification and removal of non fibre elements from the</p>	<p>9 h r s</p>	<p>2 0</p>	<p>80</p>
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	<p>i.e. Toffee rappers, shoppers, link, (Orange, jutes bananashes)</p> <p>3. Ensuring the true disposal of picked non fibre material, so as to avoid remixing.</p> <p>4. The probable harms of adulteration of non fibre foreign contents in the cotton.</p>		<p>cotton.</p> <p>3. learn how to dispose the non-fibre elements at safe place.</p>			
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#### 4.6 Assessment Team

It is very important to have a good expert of people who are assessing the performance and competency of the candidate in each module of the course. The team should include both internal and external assessors who are fully equipped with the diversified skills of assessment. The internal assessor is the instructor while external assessor may be a qualified person nominated by TEVTA or NAVTTC or the organizing institute of the course. The external assessor must be familiar of what has been taught to the trainees and what kind of practical demonstrations have been given.

## 5. List of training equipment

S	Description	Quantity
01	Cotton sheet	30
02	Cotton bag	30
03	White board	01
04	Student chair & table	30
05	Complete Multi-media system	01
06	Teacher chair	01
07	Rostrum	01
08	Moisture checking device	03
09	First aid box	01
10	Hand Gloves	30
11	Scarf	30
12	Gowns	30
13	Chart showing various parts of cotton plants	05
14	Picture of appropriate filled bag	05

1 5	Pictures of dirty cotton and white cotton	0 5
1 6	Charts for demo of proper place and foreign elements	0 4
1 7	Samples of cotton sheet	1 0
1 8	Pictures of dry place	0 5
1 9	Demo for putting cotton sheet on Chart	0 2
2 0	Pictures of loaded cotton bags	0 5
2 1	Pictures of cotton sheet	0 5
2 2	Demo charts of unloading	0 5
2 3	Picture of affected cotton	0 5
2 4	Demo charts of safety measures charts	0 5
2 5	Picture of non fibre matters	0 5

## **6. List of consumable supplies**

1. Pens
2. Board markers
3. Workbooks
4. Handouts
5. Charts of proper dress & foreign elements
6. Pictures of diseased cotton & white cotton
7. Pictorial expressions of various cotton fields
8. Material used for demonstration.
9. Skin care products for cotton pickers
10. Specimen of cotton bags
11. Samples of yellowish cotton
12. Samples of healthy cotton
13. Picture of cotton field with well groomed crop and damaged crop
14. Sample of different varieties of cotton



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