

#### National Vocational & Technical Training Commission

5th Floor, Evacuee Trust Complex Sector F-5/1, Islamabad

Tel: +92 51 904404 Fax: +92 51 904404 Email: info@navttc.org

#### Author:

Dr. Khalid Mahmood (Director General Pakistan Seed Accreditation and Certification Authority Islamabad), Dr. Abdul Saboor (Dean faculty of Agri-economics Arid Agriculture University Rawalpindi)

#### Reviewed by:

Dr. Raimund Sobetzko (Team Leader, Component 2 TVET Reform Support Programme), Mr. Muhammad Naeem Akhtar (Deputy Team Leader Component 2 TVET Reform Support Programme), Mr. Ralf Strier (Senior International Technical Advisor, TVET Reform Support Program)

#### Layout and Design by:

Ms. Maria Arif (Freelance Consultant)

#### Date of approval by NCRC:

2nd -4th Oct 2013

#### **Date of Notification:**

1st Jan 2014, vide notification no F.2-1/2013-DD(VT)

This curriculum has been produced by the National Vocational & Technical Training Commission (NAVTCC) with the technical assistance of TVET Reform Support Programme, which is funded by the European Union, the Embassay of the Kingdom of the Netherland, Federal Republic of Germany and the Royal Norwegian Embassy. The Programme has been commissioned by the German Federal Ministry for Economic Cooperation and Development and is being implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

# **Table of contents**

Module-1: Preparation for Cotton Picking	3
Module-2: Cotton picking from ready to pick boll	5
Module-3: Dry the picked cotton	7
Module-4: Clean picked cotton	9
List of Machinery and Equipment	10
List of consumables	12

# **Competency Standards – Cotton Picking**

## **Module-1: Preparation for Cotton Picking**

**Overview:** These competency standards will ensure that the trainees will have the fundamental knowledge and skills to be competent in prepicking preparation

Competency Unit	Performance Criteria	Knowledge Criteria
A-1: Wear Proper Dress	P.1: Demonstrate and explain protective clothing for cotton picking and appropriate regional differences.	<ul> <li>K.1: Explain the actual advantages of wearing scarf, gloves, mask, long gown and use of cotton bags.</li> <li>K.2: Explain the life hazards due to use of chemicals.</li> <li>K3: Convincing the trainees about the probable damage that can happen to quality of crop and picked cotton due to inappropriate dressing.</li> </ul>
A-2: Select ready to pick boll	P.1: Classify the cotton bolls, plants and plots having diseased or damaged bolls using industry standard classifications  P.2: Identify and pick good quality cotton from bolls without damaging the plant as well as immature (unripened) bolls.  P.3: Describe or explain how losses can be minimised by using the weather forecast	<ul> <li>K.1: Explain the process of calculating the percentage of opened cotton bolls using the inner and outer sides of the field. Learn of the inner and outer sides of the field to check percentage of opened cotton bolls.</li> <li>K2: Explain the fully matured (mostly fully opened: around 60 %) cotton bolls.</li> <li>K3: Give knowledge to Explain potential damage to the quality of cotton due to climate variability.</li> </ul>
A-3: Start picking in rows	P.1: Demonstrate the systematic row wise way of walk and picking sequence of cotton pickers so there is no damage of immature bolls of plant.  P.2: Explain the disadvantages or losses that could	K.1: Explain the benefits and better results of doing picking in rows.  K.2: Explain the benefits of proper planning of start of cotton picking keeping the nature of field in view.

	occur for not following the row wise sequence while picking seed cotton.  P.3: Arrange the pickers in rows under the supervision of supervisor.	
A-4: Supervise the cotton pickers	P.1: Inspect / manage the cotton pickers regarding the required way of picking.  P.2: Arrange the pickers in rows under the supervision of supervisor  P.3: Demonstrate ways to monitor whether the field workers' follow the correct procedure or not.	K.1: Counselling the pickers about complete knowledge and information required for preparation of cotton picking.

#### Module-2: Cotton picking from ready to pick boll

**Overview:** These competency standards will ensure that the trainee will have the basic knowledge, skill and competency to be able to identify diseased and healthy cotton and to be able to separate them during picking

Competency Unit	Performance Criteria		Knowledge Criteria
<b>B-1</b> : Pick the complete/matured cotton from bolls	P.1: Inspect cotton plant along with its imposance according to industry standard classification P.2: Differentiate between healthy and cotton	ns.	<ul> <li>K.1: Explain the different diseases or identification of the probable damages that can attack the cotton plant in general and cotton boll in particular.</li> <li>K.2: Get skilled of cotton picking from bottom to top.</li> <li>K.3: Explain why cotton picking is to be avoided just after rain fall.</li> </ul>
<b>B-2</b> : Separate the diseased and contaminated cotton	P.1: Evaluate the standard reasons and ad of separating the diseased cotton.  P.2: Demonstrate methods industry processes of separation of foreign mate picking rather than after picking.	standard	K.1: Explain various forms of contamination (addition of leaves, stems, shell etc).
	P.1: Demonstrate the placement of appropriate sheet instead of dumping cotto picking according to industry standards.  P.2: Explain the probable damages of dum cotton during picking.	n during	K.1: Learning of the benefits of adequate placing of the cotton during picking.

<b>B-4:</b> Fill the bag appropriately	P.1: Minimize wastage in cotton picking.	K.1: Have skill of making the cotton filling bags filled with cotton appropriately according to the capacity of bags.
LU-4 Minimise wastage in cotton	P.1 Fill the bag appropriately by separating diseased material	K.2: Get skill of the advantages of filling the bags appropriately.
picking	P2 Fill the bag according to the capacity	

## Module-3: Dry the picked cotton

**Overview:** These competency standards will ensure that the trainees will have the required knowledge, skill and competency in post-picking precautions and techniques.

Competency Unit	Performance Criteria	Knowledge Criteria
C-1: Select a clean and dry place to unload picked cotton	P1 Identify a clean and dry place for storing the cotton according to standard characteristics of a clean, dry place  P.2: Establish precautions to avoid exposure of children and thus to minimize contaminations.	<ul><li>K.1: Explain the importance of neat and dry place for storing (or stacking or heaping) picked cotton.</li><li>K 2: avoid putting the picked cotton under shadows of trees to further avoid the feathers, bits of birds.</li></ul>
C-2: Prepare unload site	P.1: Gather necessary measures for the selection of dry place.  P-2 Place cotton sheet on selected dry place  P.3: Identify the probable ways and means of mixing of foreign elements in the seed cotton.  P-4 Establish procedures to control contamination	<ul><li>K.1: Apprehend the importance of the specification of the cotton sheet.</li><li>K.2: Publicise the measures for appropriate place to put the cotton sheet.</li></ul>
C-3: Unload bags on cotton sheet	P.1: Locate the use of cotton sheet at dry place.  P.2: Investigate cotton bags or opened-vehicle for transportation to avoid contamination.  P.3 Unload bags according to standard procedures	K.1: Identify the loaded bags and cotton sheet.  K.2: Know the procedure of unloading the bags on cotton sheet.

C-4: Protect cotton	P.1: Explain the use of the weather forecast to	K.1: Describe the probable damages of cotton by rain and sand
from rain and sand storm etc.	minimize the of damage from rain or sand storm etc	storm.
Storm Sto.	P2 Demonstrate appropriate methods of protecting	K.2: Describe the various methods for protecting cotton from rain
	the crop from bad weather	and sand storm.
		K.3: Explain the usefulness of protected cotton.
		- 1.151 1.15

## Module-4: Clean picked cotton

**Overview:** These competency standards will ensure that the trainees will have the knowledge, skill and competency to clean cotton after picking is completed.

Competency Unit	Performance Criteria	Knowledge Criteria
<b>D-1</b> : Detect non fiber foreign matter	P.1: Select the appropriate time for picking i.e. during sun shine after 10 am, to avoid non fibre and other contents.	K.1: Explain the harms of non fiber contents in cotton.  K2: Describe common types of non-fibre contents.
	P.2 Identify the presence of non-fibre elements. P.3: Describe the drying of cotton as per standards.	
D-2: Separate non-	P.1: Identify and separate the non-fibre foreign matter	K.1: Explain various methods for removing the different types of
fiber foreign matter	P.2: Ensure the disposal of picked non fibre material	non-fibre contents i.e. toffee rappers, shoppers, jutes link, (Orange, banana shell/chalky).
	according to standard industry procedures so as to avoid remixing.	K.2: Identify the probable harms of adulteration of non-fibre foreign contents in the cotton.

## **List of Machinery and equipment**

S. No.	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
15	Pictures of dirty cotton and white cotton	05

16	Charts for demo of proper place and foreign elements	04
17	Samples of cotton sheet	10
18	Pictures of dry place	05
19	Demo for putting cotton sheet on Chart	02
20	Pictures of loaded cotton bags	05
21	Pictures of cotton sheet	05
22	Demo charts of unloading	05
23	Picture of affected cotton	05
24	Demo charts of safety measures charts	05
25	Picture of non fibre matters	05

#### 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



# National Vocational & Technical Training Commission (NAVTTC)

5th Floor Evacuee Trust Complex Sector F-5/1, Islamabad.

T +92 51 904404

F +92 51 904404

E info@navttc.org

I http://www.navttc.org/