Model Curriculum

QP Name: Bale Press Operator

QP Code: TSC/Q0904

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

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Table of Contents

Training Parameters

Sector	Textile
Sub-Sector	Spinning
Occupation	Spinning Preparatory
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8159.03
Minimum Educational Qualification and Experience	Basic Literacy and Numeracy with 0-6 Months of experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	19.05.2021
Next Review Date	19.05.2026
NSQC Approval Date	
QP Version	2.0
Model Curriculum Creation Date	19.05.2021
Model Curriculum Valid Up to Date	19.05.2026
Model Curriculum Version	1.0
Minimum Duration of the Course	300 Hours
Maximum Duration of the Course	300 Hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Prepare ginned cotton for pressing operations.
- Carry out pressing and packaging of cotton bales.
- Maintain work area, tools and machines as per guidelines.
- Follow greening and energy conservation activities as per guidelines.
- Describe the importance of health, safety and security at workplace.
- Communicate and work effectively in a team.
- Comply with organizational and industry standards.

Compulsory Modules

The table lists the modules, their duration and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	**03:00**	**01:00**			**04:00**
Module 1: Introduction to ginning mills and objectives of bale press machine operation	03:00	01:00			04:00
TSC/N0906: Undertake pressing of ginned cotton **Version 2.0** **NSQF Level – 4**	**61:00**	**155:00**			**216:00**
Module 2: Carry out pressing of ginned cotton	61:00	155:00			216:00
TSC/N9015: Follow machine, safety & organizational guidelines in textile sector **Version 1.0** **NSQF Level – 4**	**19:00**	**46:00**			**65:00**
Module 3: Maintaining the work area, tools and machines	02:00	06:00			08:00
Module 4: Greening and energy conservation in textile sector	02:00	06:00			08:00
Module 5: Health, safety and emergency response at workplace	09:00	23:00			32:00

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Module 6: Organizational standards and policies	06:00	11:00			17:00
TSC/N9016:Follow teamwork, adaptability and communication guidelines in textile sector Version 1.0 NSQF Level – 4	**05:00**	**10:00**			**15:00**
Module 7: Teamwork, trust and communication	03:00	07:00			10:00
Module 8: Adaptability	02:00	03:00			05:00
Total Duration	**88:00**	**212:00**			**300:00**

Module Details

Module 1: Introduction to ginning mill and objectives of bale press machine operation

Bridge Module

Terminal Outcomes:

- Discuss the role of ginning mills in the textile value chain.
- Discuss the process and product flow in the ginning mills.
- Discuss the objectives of the bale pressing machine.

Duration: ***03:00***	**Duration**: ***01:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the objectives of skill development programs. • Discuss the role of ginning mills in the textile value chain. • Discuss the raw material, final product and process flow in a typical ginning mill. • Describe the functions of the bale pressing machine. • Classify the types of bale pressing with reference to technology and process. • Explain the position of a bale press operator in ginning mill and type of role to play.	• Illustrate the process flow in a typical ginning mill. • Label the parts of a bale pressing machine.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment, and Other Requirements	
Cotton lint – 1700 Kgs, process flow chart from ginning and blow room to finishing department, sample tools and accessories for bale pressing operation, standalone conveyor, seating arrangement for 25 people, chalk, poster with parts of bale pressing machine labelled, signboards, sample logbooks, and formats.	

Module 2: Carry out pressing of ginned cotton

Mapped to TSC/N0906, v2.0

Terminal Outcomes:

- Explain the various stages of bale pressing operation with dos and don'ts.
- Demonstrate the steps involved in preparing bale pressing machine for operation.
- Demonstrate the steps involved in preparing the cotton bales for final packing operation.

Duration: *61:00*	**Duration: *155:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the roles and responsibilities of a bale pressing operator. • Describe the potential hazards associated with the bale pressing machines and the safety precautions. • Classify different types of bale pressing machines by their working principles. • Explain the function of various parts of the bale pressing machine. • Discuss the common machine faults during Bale pressing and respective troubleshooting method. • Explain the importance of following standard bale weight and dimensions. • Distinguish between the different types of waste generated and their disposal methods in the ginning mill. • Discuss the pressing process including the production instructions, moisture range, conveyor systems, electric connections, tying tools, piston pressure, transfer, storage, labelling methods and repercussions of non-compliance of process. • Discuss the various processes associated with setting of bale pressing machine according to manufacturing and production requirements. • Discuss the process of reporting production deviations, abnormalities as per the instruction.	• Demonstrate the steps to check the bale pressing machine and material for faults prior to production. • Perform the steps to maintain the prescribed moisture range in the ginning mill throughout the process. • Demonstrate steps to get the required tools and equipment necessary to carry out the assigned tasks. • Demonstrate the method for starting and stopping of bale pressing machine as per SOP. • Demonstrate steps to set the bale pressing machine for production requirement. • Demonstrate how to operate and troubleshoot the allotted bale pressing machine. • Exhibit the steps involved to tie, pack and label the pressed bales as per instructions. • Demonstrate how to operate the conveyor, transport and store the pressed bales as per the instruction. • Perform steps to prepare a sample report for logging in production records and issues faced in the shift.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Bale pressing machine, cotton lint – 1700 Kgs, process flow chart from ginning, blow room to finishing department, sample tools and accessories for bale pressing operation, conveyor, seating arrangement for 25 people, chalk, poster with parts of bale pressing machine labelled, signboards, sample logbooks, and formats.	

Module 3: Maintaining the work area, tools and machines

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Demonstrate the process involved for up keeping ginning department and allotted accessories.
- Explain the importance of maintaining tools and equipment in the ginning mill.

Duration: *02:00*	**Duration: *06:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Differentiate between various types of tools used for cleaning and maintenance. • Explain the objectives of each maintenance and cleaning tool used in bale pressing operation. • Discuss the significance of safe handling procedure of each tool and equipment used in the ginning department. • Decode the written instructions on the allocated machines and state their relevance. • Discuss the significance of minimizing the wastage of material, effort and time. • Prepare a draft schedule for cleaning and waste collection for the assigned job role. • List the available types of material handling equipment and handling methods used in ginning department.	• Demonstrate the handling procedure of raw materials, tools and machines. • Identify the appropriate tools and equipment for the assigned tasks. • Demonstrate the scheduled cleaning of machines and equipment. • Check and report the condition of machine guards in the allotted bale pressing machine.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Bale pressing machine in running production condition, ancillaries, material handling equipment and tool kits of operational, cleaning and maintenance activities, PPE, seating arrangement for 25 people.	

Module 4: Greening and energy conservation in textile sector

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Classify the recyclable, non-recyclable and hazardous wastes in the ginning department.
- Optimize usage of material and resources at work place.

Duration: *02:00*	**Duration: *06:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the concepts of pollution control, soil conservation, waste management, recycle, forest conservation, global warming, organic products, etc. • List the different sources of energy. • Discuss the impact of using non-biodegradable materials on the environment. • Evaluate the different ways to conserve energy in a ginning factory. • Discuss the significance of conserving environment and energy resources. • Discuss the significance of conserving environment and energy resources. • Discuss the significance of specified usage of resources at work area.	• Demonstrate the process of segregation and storage of recyclable, non-recyclable, hazardous and non-hazardous wastes in the ginning department. • Demonstrate handling and storage of waste materials.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Video visuals on different sources of energy including solar power, Covers, bags, wrappers, box etc.	

Module 5: Health, safety, and emergency response at workplace

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Perform first aid at workplace.
- Follow fire safety protocol in case of fire emergencies in the ginning mill.
- Recognise hazardous materials in the ginning mill.

Duration: *09:00*	**Duration: *23:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of safe handling procedure of tools and equipment. • Discuss the importance and standard procedure for handling materials. • Discuss the impacts and hazards of unsafe workplace conditions and deviation from standard procedures in the ginning mill (operational, environmental, personal, ergonomic, chemical, and electric, fire) and methods to avoid hazards. • Classify abnormal sounds emanating from faulty/worn out machine parts. • Discuss the types and importance of PPE used in the ginning department. • State various types of fire extinguishers. • Distinguish different types of alarms and their significance. • List the different items in a First Aid box. • Discuss the correct work posture and importance of ergonomics applicable while working in the ginning mill. • Discuss the factors effecting health and importance of following healthy lifestyle practises.	• Classify Personal Protective Equipment (PPEs) like body protector, ear plugs, nose mask, head cap, etc. as per guidelines. • Demonstrate handling of fire extinguishers. • Locate emergency exits of workplace and organization. • Participate in mock fire drills / evacuation at workplace. • Demonstrate procedures for application of first aid procedures for injury/accidents in mock situations. • Demonstrate lifting of heavy weight materials as per standard procedure. • Distinguish between the various types of fire extinguishers. • Demonstrate healthy lifestyle practises.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
PPE, first aid kit, fire extinguishers, bale pressing machine, seating arrangement for 25 people.	

Module 6: Organizational standards and policies

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Recognize the significance of organization policies, quality standards, rules and regulations in ginning mill.
- Explain the need for organizational standard and policies in a ginning mill.

Duration: *06:00*	**Duration: *11:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of following organizational standard procedures, quality standards, rules, codes, policies and safety standards in a ginning mill. • Discuss the need for organizational quality systems like 5S, ISO, SA, etc. to be followed in a ginning mill. • Brief the importance of following work wear standards, behavioural protocols and etiquette in a ginning mill. • Describe the standard protocol for reporting lost and found material. • Discuss the contents of organisation's formats and procedures for reporting production, defects, faults, material/tool requisition and quality parameters and task completed in a ginning mill. • Discuss the importance of discipline and adhering to timelines and state the effects of non-compliances.	• Demonstrate your role in implementation of the systems like Quality circles, 5S, ISO, etc. in the routine work. • Exhibit the steps to maintain a hygienic and healthy workplace. • Prepare a lost and found report for submission to the competent authority. • Demonstrate self-evaluation of following the timelines and discipline protocol.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
list of rules and regulations followed in the organization, list of industry standards such as performance indicators of mills, process, worker, seating arrangement for 25 people.	

Module 7: Teamwork, trust and communication

Mapped to TSC/N9016, v1.0

Terminal Outcomes:

- Conform to standard guidelines while working with the team.
- Discuss the requirements of effective communication at workplace.

Duration: *03:00*	**Duration: *07:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the importance of teamwork and following communication protocols at workplace. • Explain the limits and responsibilities for the assigned duties in a ginning mill. • Summarize emergency contact numbers, details of officials, reporting protocols and formats. • List hierarchy of communication and communication etiquettes in a ginning mill. • State the disadvantages of not adhering to team work and communication protocols.	• Prepare a sample team performance report for an allotted task. • Demonstrate the use appropriate verbal and non-verbal communication skills while interacting with others at workplace.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment, and Other Requirements	
Video visuals of basic communications and team working, models of communicating and team working area at your job, seating arrangement for 25 people.	

Module 8: Adaptability

Mapped to TSC/N9016, v1.0

Terminal Outcomes:

- Operate at various environment and different people for the assigned task.
- Discuss the need of adaptability at the workplace.

Duration: *02:00*	**Duration: *03:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of adaptability at work place with various levels of people. • Discuss the importance of developing adaptability skills. • Discuss the impacts of inadaptability at the work place. • Discuss various types of situations which demand adaptability skills. • Discuss various possibilities of basis of discrimination and ways to handle the same.	• Demonstrate the ability to work in dynamic work environment by developing coping mechanisms, survival tactics and traits of flexibility. • Create a sample backup work plan for the shortage of man power, raw materials, etc. • Demonstrate communication with members of different gender, ethnicity and PwD. • Demonstrate the process of preparation of sample application for reporting discrimination, to the concerned authority.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment, and Other Requirements	
Video visuals of adaptability with suitable examples, seating arrangement for 25 people.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Basic Literacy and Numeracy	5th Class (Self-declaration)	1	Ginning - Production	4	Ginning - Production	

Trainer Certification	
Domain Certification	**Platform Certification**
TSC/Q0904, v2.0 - Bale Press Operator, Minimum pass percentage 80 per cent.	MEP/Q2601, v1.0 – Trainer, Minimum pass percentage 80 per cent.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI	Textiles	3	Ginning - Production	-	-	

Assessor Certification	
Domain Certification	**Platform Certification**
TSC/Q0904, v2.0 - Bale press operator, Minimum pass percentage 80 per cent.	MEP/Q2601, v1.0 – Assessor, Minimum pass percentage 80 per cent.

Assessment Strategy

The overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF are given below.

a) The emphasis is on 'learn-by-doing' and practical demonstration of skills and knowledge based on the performance criteria.

b) The assessments papers are developed by Subject Matter Experts (SME) available with the Assessment Agency as per the performances and assessment criteria mentioned in the Qualification Packs.

c) The assessments papers are also checked for the various outcome-based parameters such as quality, time taken, tools & equipment requirement, etc.

d) The assessments are designed so as to assess maximum parts during the practical hands-on work. Duties and responsibility of Bale press operator are also assessed. The technical limitations at the training centres are taken care in theory and viva.

e) The assessment agencies are instructed to hire qualified and experienced assessors as per TSC's criteria who have integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments.

f) The assessment agencies are instructed to ideally have assessors with the right mix of industry experience; academia and these are detailed in Assessment Agency Protocol of TSC

g) The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to Assessment Framework, competency-based assessments, assessors guide etc. and they are assessed for Domain and assessment skills. Only those assessors who clear both the assessments with minimum 80% marks in each are permitted to carry out assessments.

h) The assessors are provided with the Assessors guide developed by the Assessment Agency or by Textile SSC as per Assessment Framework. The Assessors guides are developed to ensure the maximum possible consistency/transparency in the assessment by different assessors and elaborate on the following:

    1. Qualification Pack Structure.
    2. Guidance for the assessors to conduct theory, practical and viva assessments.
    3. Guidance to be given by assessor to trainees before the start of the assessments.
    4. Guidance on assessment process, practical brief, with step of operational practical observation checklist, Attendance Sheet and mark sheet.
    5. Viva guidance for uniformity and consistency across the batch.
    6. Guidance on assessment evidence collection.

The assessment results are backed by evidence collected by assessors.

1. The assessors need to collect a copy of the attendance sheets for the training done under the scheme. The attendance sheets are signed and stamped by the in charge/ Head of the training centre.

2. The assessors need to verify the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same needs to be mentioned in the attendance sheet. In case of suspicion, the assessor should authenticate and cross verify trainee's credential in the enrolment form.

3. The assessors need to take a camera to click photograph of the trainees working on the job and giving theory exam as evidence.

4. The assessors also need to carry a Photo ID card.

5. The assessors also need to take the photographs as evidence from appropriate angles/sides of the final work piece/job submitted by the trainee.

6. The details on assessment framework are elaborated in Textile SSC protocol for accreditation of Assessment Agencies and Assessment Framework.

All accredited Assessment Agencies follow the "Textile SSC's protocol for accreditation of Assessment Agencies and Assessment Framework". Each NOS in the Qualification Pack (QP) will be assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Performances Criteria in the NOS will be assigned marks for theory or practical based on relative importance, criticality of function and training infrastructure.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
SOP	Standard Operating Procedure
PPE	Personal Protective Equipment
QC	Quality Control
ISO	International Organization for Standardization
SA	Standards on Auditing