

## Qualification Pack



# Operator-Reaper, Thresher and Crop Residue Machinery

Options: Post-harvest machineries operation

QP Code: AGR/Q1105

Version: 3.0

NSQF Level: 4

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## Qualification Pack

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## Qualification Pack

# AGR/Q1105: Operator-Reaper, Thresher and Crop Residue Machinery

## Brief Job Description

An Operator-Reaper, Thresher and Crop Residue Machinery is responsible for operating harvesting and post-harvesting machineries such as reaper, thresher, chaff cutter, cleaner and grader, dryer, oil expeller. The individual also carries out minor repair and maintenance of the machineries.

## Personal Attributes

The individual must have the physical stamina to work for long hours. The person must have an aptitude for machines along with the ability to co-ordinate with others to achieve the work objectives.

## Applicable National Occupational Standards (NOS)

### Compulsory NOS:

1. [AGR/N1115: Prepare and operate the reaper](#)
2. [AGR/N1116: Prepare and operate the power thresher](#)
3. [AGR/N1117: Perform crop residue management](#)
4. [AGR/N9903: Maintain health and safety at the workplace](#)
5. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

### Options(Not mandatory):

Option : Post-harvest machineries operation

This OS unit is about operating various post-harvest machineries to process crop along with the repair and maintenance of the machineries.

1. [AGR/N1118: Operate the post-harvest machineries to process crop](#)

## Qualification Pack (QP) Parameters

<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production

### Qualification Pack

<b>Occupation</b>	Farm Machinery, Equipment Operation and Maintenance
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Credits</b>	14
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/8341.9900
<b>Minimum Educational Qualification &amp; Experience</b>	<p>12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (and pursuing regular diploma) OR 10th grade pass (plus 2-year NTC) OR 10th grade pass (plus 1-year NTC plus 1 year NAC) OR 8th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass and pursuing continuous schooling OR 10th grade pass with 2 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience)</p>
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQF Approval Date</b>	27/05/2021
<b>Version</b>	3.0
<b>Reference code on NQR</b>	QG-04-AG-00333-2023-V1.1-ASCI



## Qualification Pack

<b>NQR Version</b>	1.1
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## Qualification Pack

### AGR/N1115: Prepare and operate the reaper

#### Description

This OS unit is about preparing the reaper and carrying out its operation.

#### Scope

The scope covers the following :

- Prepare for reaper operation
- Operate the reaper
- Carry out minor repair and maintenance of reaper

#### Elements and Performance Criteria

##### *Prepare for reaper operation*

To be competent, the user/individual on the job must be able to:

- PC1.** select the relevant type of reaper according to the crop's variety and condition
- PC2.** connect the reaper with the tractor's Power Take-Off (PTO), ensuring it aligns correctly
- PC3.** tighten all the nuts and bolts of the reaper
- PC4.** apply necessary adjustments to the reaper such as adjustment to the reel cutter bar and v-belt tension
- PC5.** apply grease/ lubricant on the greasing points
- PC6.** check the reaper is ready for operation
- PC7.** arrange the relevant Personal Protective Equipment (PPE)

##### *Operate the reaper*

To be competent, the user/individual on the job must be able to:

- PC8.** start the tractor and reaper as per the Standard Operating Procedure (SOP)
- PC9.** operate the reaper as per the SOP to reap crop
- PC10.** inspect the reaper regularly during operations for blocked discharge, stoppage of cutting knife and conveyor belts, and loss of power
- PC11.** record the relevant parameters and impact on crop variety during the reaper operations
- PC12.** carry out troubleshooting for any issues encountered during the operation as per the operator's manual

##### *Carry out minor repair and maintenance of reaper*

To be competent, the user/individual on the job must be able to:

- PC13.** organise the relevant tools, equipment and spare parts to carry out repair and maintenance of the reaper
- PC14.** examine the v- belt, cutter bar, knife, star wheels, pressure springs and lugs for any wear and tear or damage
- PC15.** check the v-belt for the prescribed level of tension
- PC16.** clean the reaper guards
- PC17.** apply paint on the machine surface as per the requirement

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**PC18.** follow the manufacturer's instructions to carry out repair and maintenance activities

**PC19.** maintain the record of reaper's repair and maintenance

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** relevant documentation requirements

**KU2.** use of the relevant PPE

**KU3.** the selection of a reaper according to the crop's variety and condition

**KU4.** the correct method of connecting and aligning a reaper with a tractor's PTO

**KU5.** necessary adjustments required to be made to a reaper for operation such as adjustment of the reel cutter bar and tension of the v-belt

**KU6.** the SOP for starting and operating a reaper

**KU7.** inspections to be made during the operation of the reaper

**KU8.** common repair and maintenance needs of a reaper and the process to carry out repair and maintenance

**KU9.** relevant tools and equipment to carry out repair and maintenance of a reaper

**KU10.** importance of following the manufacturer's instructions to carry out repair and maintenance activities

**KU11.** Dangerous Machines (Regulation) Act, 1983

### Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** listen attentively to understand the information/ instructions being given

**GS2.** write work-related notes

**GS3.** communicate clearly and politely

**GS4.** read the relevant guides and manuals

**GS5.** co-ordinate with co-workers to achieve the work objectives

**GS6.** plan and prioritise tasks to ensure timely completion

**GS7.** take quick decisions to deal with workplace emergencies/ accidents

**GS8.** identify possible disruptions to work and take preventive measures

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for reaper operation</i>	<b>10</b>	<b>14</b>	-	<b>10</b>
<b>PC1.</b> select the relevant type of reaper according to the crop's variety and condition	-	-	-	-
<b>PC2.</b> connect the reaper with the tractor's Power Take-Off (PTO), ensuring it aligns correctly	-	-	-	-
<b>PC3.</b> tighten all the nuts and bolts of the reaper	-	-	-	-
<b>PC4.</b> apply necessary adjustments to the reaper such as adjustment to the reel cutter bar and v-belt tension	-	-	-	-
<b>PC5.</b> apply grease/ lubricant on the greasing points	-	-	-	-
<b>PC6.</b> check the reaper is ready for operation	-	-	-	-
<b>PC7.</b> arrange the relevant Personal Protective Equipment (PPE)	-	-	-	-
<i>Operate the reaper</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC8.</b> start the tractor and reaper as per the Standard Operating Procedure (SOP)	-	-	-	-
<b>PC9.</b> operate the reaper as per the SOP to reap crop	-	-	-	-
<b>PC10.</b> inspect the reaper regularly during operations for blocked discharge, stoppage of cutting knife and conveyor belts, and loss of power	-	-	-	-
<b>PC11.</b> record the relevant parameters and impact on crop variety during the reaper operations	-	-	-	-
<b>PC12.</b> carry out troubleshooting for any issues encountered during the operation as per the operator's manual	-	-	-	-
<i>Carry out minor repair and maintenance of reaper</i>	<b>15</b>	<b>18</b>	-	<b>15</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> organise the relevant tools, equipment and spare parts to carry out repair and maintenance of the reaper	-	-	-	-
<b>PC14.</b> examine the v- belt, cutter bar, knife, star wheels, pressure springs and lugs for any wear and tear or damage	-	-	-	-
<b>PC15.</b> check the v-belt for the prescribed level of tension	-	-	-	-
<b>PC16.</b> clean the reaper guards	-	-	-	-
<b>PC17.</b> apply paint on the machine surface as per the requirement	-	-	-	-
<b>PC18.</b> follow the manufacturer's instructions to carry out repair and maintenance activities	-	-	-	-
<b>PC19.</b> maintain the record of reaper's repair and maintenance	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1115
<b>NOS Name</b>	Prepare and operate the reaper
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N1116: Prepare and operate the power thresher

#### Description

This OS unit is about carrying out installation, operations and minor repair and maintenance of a power thresher.

#### Scope

The scope covers the following :

- Prepare power thresher for operation
- Operate power thresher
- Carry out regular maintenance of thresher

#### Elements and Performance Criteria

##### *Prepare power thresher for operation*

To be competent, the user/individual on the job must be able to:

- PC1.** select the type of power thresher according to the threshing operation and the crop
- PC2.** install the power thresher on a flat surface in the direction of the wind and at correct height
- PC3.** set up pegs around the thresher wheels
- PC4.** check the thresher belt for the prescribed level of tension
- PC5.** check that all nuts and bolts are secured tightly
- PC6.** ensure the sieve and conclave have the correct size
- PC7.** set the thresher drum with the correct direction of rotation
- PC8.** apply grease/ lubricant on the greasing points
- PC9.** connect the thresher with the tractor

##### *Operate the power thresher*

To be competent, the user/individual on the job must be able to:

- PC10.** start the tractor and thresher as per the SOP
- PC11.** operate the thresher at the speed recommended by the manufacturer
- PC12.** feed crop in thresher uniformly in the recommended quantity
- PC13.** collect clean grain from the thresher at regular intervals
- PC14.** apply various adjustments to the power thresher during operation to achieve machine efficiency such as speed of threshing drum, speed of blower, air flow, speed of crank, etc.
- PC15.** maintain the record of thresher output

##### *Carry out regular repair and maintenance of power thresher*

To be competent, the user/individual on the job must be able to:

- PC16.** organise the tools, equipment and spare parts for the repair and maintenance of power thresher
- PC17.** remove grain and chaff from the power thresher
- PC18.** examine the thresher to identify wear and tear or damages

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**PC19.** carry out repair and maintenance as per the operator's manual

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the selection of a power thresher according to the threshing operation and the crop
- KU2.** the process of preparing a thresher for operation
- KU3.** correct method of connecting the power thresher with the prime mover/ tractor
- KU4.** various adjustments required in a power thresher during operation such as speed of threshing cylinder, cylinder concave clearance, speed of blower, air flow, sieve slope and stroke length and speed of crank
- KU5.** the correct method of operating a power thresher and achieving machine efficiency
- KU6.** common repair and maintenance needs of a power thresher
- KU7.** relevant repair and maintenance tools and equipment and their handling
- KU8.** the process to carry out regular repair and maintenance of a power thresher

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** make note of work-related observations
- GS2.** read the relevant literature to get latest updates about the field of work
- GS3.** communicate clearly and respectfully
- GS4.** listen attentively to understand the client's instructions
- GS5.** take quick decisions to deal with workplace emergencies and accidents
- GS6.** plan and prioritise tasks for effective time-management
- GS7.** identify possible disruptions to work and take preventive measures

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare power thresher for operation</i>	<b>15</b>	<b>20</b>	-	<b>10</b>
<b>PC1.</b> select the type of power thresher according to the threshing operation and the crop	-	-	-	-
<b>PC2.</b> install the power thresher on a flat surface in the direction of the wind and at correct height	-	-	-	-
<b>PC3.</b> set up pegs around the thresher wheels	-	-	-	-
<b>PC4.</b> check the thresher belt for the prescribed level of tension	-	-	-	-
<b>PC5.</b> check that all nuts and bolts are secured tightly	-	-	-	-
<b>PC6.</b> ensure the sieve and conclave have the correct size	-	-	-	-
<b>PC7.</b> set the thresher drum with the correct direction of rotation	-	-	-	-
<b>PC8.</b> apply grease/ lubricant on the greasing points	-	-	-	-
<b>PC9.</b> connect the thresher with the tractor	-	-	-	-
<i>Operate the power thresher</i>	<b>10</b>	<b>15</b>	-	<b>10</b>
<b>PC10.</b> start the tractor and thresher as per the SOP	-	-	-	-
<b>PC11.</b> operate the thresher at the speed recommended by the manufacturer	-	-	-	-
<b>PC12.</b> feed crop in thresher uniformly in the recommended quantity	-	-	-	-
<b>PC13.</b> collect clean grain from the thresher at regular intervals	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> apply various adjustments to the power thresher during operation to achieve machine efficiency such as speed of threshing drum, speed of blower, air flow, speed of crank, etc.	-	-	-	-
<b>PC15.</b> maintain the record of thresher output	-	-	-	-
<i>Carry out regular repair and maintenance of power thresher</i>	<b>5</b>	<b>5</b>	-	<b>10</b>
<b>PC16.</b> organise the tools, equipment and spare parts for the repair and maintenance of power thresher	-	-	-	-
<b>PC17.</b> remove grain and chaff from the power thresher	-	-	-	-
<b>PC18.</b> examine the thresher to identify wear and tear or damages	-	-	-	-
<b>PC19.</b> carry out repair and maintenance as per the operator's manual	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1116
<b>NOS Name</b>	Prepare and operate the power thresher
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N1117: Perform crop residue management

#### Description

This OS unit is about operating different machineries for managing crop residue.

#### Scope

The scope covers the following :

- Prepare to manage the crop residue
- Operate the straw baler
- Operate the straw chopper
- Operate the chaff cutter
- Utilise crop residue
- Optimise resource utilisation

#### Elements and Performance Criteria

##### *Prepare to manage the crop residue*

To be competent, the user/individual on the job must be able to:

- PC1.** select the appropriate farm machinery to collect crop residue such as straw chopper, straw baler and chaff cutter
- PC2.** perform pre-start checks on the machinery as per the operator's manual
- PC3.** carry out repair and maintenance for any identified faults
- PC4.** select the appropriate mode of transport to haul straw to the storage facility
- PC5.** arrange the relevant PPE to perform the crop residue management activities

##### *Operate straw baler*

To be competent, the user/individual on the job must be able to:

- PC6.** organise the straw/ hay in stacks/ heaps for pickup
- PC7.** pick up straw/ hay from the ground using baler teeth
- PC8.** inspect that hay forms a cylinder once the baler chamber is full with hay
- PC9.** check that protective coating is attached to the cylindrical bundle of straw/ hay to prevent it from coming apart during movement
- PC10.** transport the bale of straw/hay to the designated storage

##### *Operate the straw chopper*

To be competent, the user/individual on the job must be able to:

- PC11.** inspect chain conveyor, pressing rollers, upper and lower feed rollers for correct functioning
- PC12.** operate straw chopper as per the instructions given in the operator's manual
- PC13.** identify common faults and repair needs of the straw chopper
- PC14.** carry out repair and maintenance as per the operator's manual

##### *Operate the chaff cutter*

To be competent, the user/individual on the job must be able to:

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- PC15.** select the appropriate manual or power-operated chaff cutter according to the need
- PC16.** apply necessary adjustments to the chaff cutter for operation
- PC17.** operate the chaff cutter as per the manufacturer's instructions
- PC18.** identify the common faults and repair needs of the straw chopper such as replacement of gears, sharpening of cutting blade, etc.
- PC19.** carry out repair and maintenance of the straw chopper as per the manufacturer's instructions
- PC20.** maintain the record of machine operation, repair and maintenance

### *Utilise crop residue*

To be competent, the user/individual on the job must be able to:

- PC21.** calculate the amount of crop residue from different crops that can be utilised
- PC22.** assess the quality of crop residue and its suitability for various purposes such as composting, livestock feed, soil mulching, thatching, etc.
- PC23.** use the crop residue for composting/ livestock feed/ soil mulching/ thatching according to its quality
- PC24.** dispose the remaining crop residue complying with the applicable laws

### *Optimise resource utilisation*

To be competent, the user/individual on the job must be able to:

- PC25.** optimise usage of various material in different tasks/ activities/ processes
- PC26.** optimise usage of water/ electricity/ energy in various tasks/ activities/ processes
- PC27.** connect electrical tools and equipment safely and turn off when not in use
- PC28.** segregate waste into different categories
- PC29.** dispose the non-recyclable waste appropriately
- PC30.** deposit the recyclable and reusable material at the identified location

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** selection of the appropriate farm machinery to collect crop residue such as straw chopper, straw baler and chaff cutter
- KU2.** pre-start checks and method of operating different crop residue management machinery
- KU3.** common repair and maintenance needs of crop residue management machinery and the process to carry out their repair and maintenance
- KU4.** use of the relevant repair and maintenance tools and equipment
- KU5.** use of the relevant PPE
- KU6.** utilisation of crop residue for different purposes such as livestock feed, soil mulching, bio-gas generation, composting, thatching, etc.
- KU7.** best practices for crop residue management
- KU8.** different methods of recycling and disposing waste
- KU9.** common sources of pollution and ways to minimise it
- KU10.** the importance of following the environmental and ecological best practices

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- KU11.** benefits of resource optimisation
- KU12.** ways of efficiently managing various materials
- KU13.** common practices of conserving electricity

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write work-related notes and maintain records
- GS2.** read the relevant guides and manuals
- GS3.** listen attentively to understand the information/ instructions being given
- GS4.** communicate politely and clearly
- GS5.** plan and schedule tasks for effective time-management
- GS6.** take quick decisions within the limits of authority to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take appropriate preventive measures

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare to manage the crop residue</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC1.</b> select the appropriate farm machinery to collect crop residue such as straw chopper, straw baler and chaff cutter	-	-	-	-
<b>PC2.</b> perform pre-start checks on the machinery as per the operator's manual	-	-	-	-
<b>PC3.</b> carry out repair and maintenance for any identified faults	-	-	-	-
<b>PC4.</b> select the appropriate mode of transport to haul straw to the storage facility	-	-	-	-
<b>PC5.</b> arrange the relevant PPE to perform the crop residue management activities	-	-	-	-
<i>Operate straw baler</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC6.</b> organise the straw/ hay in stacks/ heaps for pickup	-	-	-	-
<b>PC7.</b> pick up straw/ hay from the ground using baler teeth	-	-	-	-
<b>PC8.</b> inspect that hay forms a cylinder once the baler chamber is full with hay	-	-	-	-
<b>PC9.</b> check that protective coating is attached to the cylindrical bundle of straw/ hay to prevent it from coming apart during movement	-	-	-	-
<b>PC10.</b> transport the bale of straw/hay to the designated storage	-	-	-	-
<i>Operate the straw chopper</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC11.</b> inspect chain conveyor, pressing rollers, upper and lower feed rollers for correct functioning	-	-	-	-
<b>PC12.</b> operate straw chopper as per the instructions given in the operator's manual	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> identify common faults and repair needs of the straw chopper	-	-	-	-
<b>PC14.</b> carry out repair and maintenance as per the operator's manual	-	-	-	-
<i>Operate the chaff cutter</i>	<b>5</b>	<b>6</b>	-	<b>5</b>
<b>PC15.</b> select the appropriate manual or power-operated chaff cutter according to the need	-	-	-	-
<b>PC16.</b> apply necessary adjustments to the chaff cutter for operation	-	-	-	-
<b>PC17.</b> operate the chaff cutter as per the manufacturer's instructions	-	-	-	-
<b>PC18.</b> identify the common faults and repair needs of the straw chopper such as replacement of gears, sharpening of cutting blade, etc.	-	-	-	-
<b>PC19.</b> carry out repair and maintenance of the straw chopper as per the manufacturer's instructions	-	-	-	-
<b>PC20.</b> maintain the record of machine operation, repair and maintenance	-	-	-	-
<i>Utilise crop residue</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC21.</b> calculate the amount of crop residue from different crops that can be utilised	-	-	-	-
<b>PC22.</b> assess the quality of crop residue and its suitability for various purposes such as composting, livestock feed, soil mulching, thatching, etc.	-	-	-	-
<b>PC23.</b> use the crop residue for composting/ livestock feed/ soil mulching/ thatching according to its quality	-	-	-	-
<b>PC24.</b> dispose the remaining crop residue complying with the applicable laws	-	-	-	-
<i>Optimise resource utilisation</i>	<b>5</b>	<b>8</b>	-	<b>5</b>

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC25.</b> optimise usage of various material in different tasks/ activities/ processes	-	-	-	-
<b>PC26.</b> optimise usage of water/ electricity/ energy in various tasks/ activities/ processes	-	-	-	-
<b>PC27.</b> connect electrical tools and equipment safely and turn off when not in use	-	-	-	-
<b>PC28.</b> segregate waste into different categories	-	-	-	-
<b>PC29.</b> dispose the non-recyclable waste appropriately	-	-	-	-
<b>PC30.</b> deposit the recyclable and reusable material at the identified location	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1117
<b>NOS Name</b>	Perform crop residue management
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N9903: Maintain health and safety at the workplace

#### Description

This OS is about maintaining health and safety of self and other co-workers at the workplace

#### Scope

The scope covers the following :

- Maintain personal hygiene
- Maintain clean and safe workplace
- Administer appropriate emergency procedures

#### Elements and Performance Criteria

##### *Maintain personal hygiene*

To be competent, the user/individual on the job must be able to:

- PC1.** wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals
- PC2.** wash the worn clothes with soap and sun dry before use next time
- PC3.** ensure the face is covered with mask or three layers of cloth-piece
- PC4.** follow the workplace sanitization norms including distancing from sick people

##### *Maintain clean and safe workplace*

To be competent, the user/individual on the job must be able to:

- PC5.** carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor
- PC6.** wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy
- PC7.** follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards
- PC8.** assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices
- PC9.** sanitize equipment, tools and machinery before and after use
- PC10.** use equipment and materials safely and correctly and return the same to designated storage after use
- PC11.** dispose waste safely and correctly in the designated area
- PC12.** recognize risks to bystanders and take required action to reduce the risks
- PC13.** work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed
- PC14.** report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger
- PC15.** follow government / workplace advisories incase of outbreak of any disease/disaster

##### *Administer appropriate emergency procedures*

To be competent, the user/individual on the job must be able to:

## Qualification Pack

- PC16.** follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements
- PC17.** use emergency equipment in accordance with manufacturer's specifications and workplace requirements
- PC18.** provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques
- PC19.** recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate
- PC20.** report details of first aid administered in accordance with workplace procedures

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant legislation, standards, policies, and procedures at work
- KU2.** relevant health and safety requirements applicable to the work environment
- KU3.** own job role and responsibilities and sources of information pertaining to work
- KU4.** who to approach for support in order to obtain work related information, clarifications and support
- KU5.** importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business
- KU6.** personal hygiene and fitness requirement
- KU7.** importance of sanitization of the workplace
- KU8.** types of Personal Protective Equipment (PPE) required at the workplace and their importance
- KU9.** the correct and safe way to use materials and equipment required for the work
- KU10.** the importance of good housekeeping at the workplace
- KU11.** safe waste disposal methods
- KU12.** methods for minimizing environmental damage during work
- KU13.** the risks to health and safety including contagious diseases and the measures to be taken to control those risks in the area of work
- KU14.** workplace procedures and requirements for the prevention and treatment of workplace injuries/illnesses.
- KU15.** basic emergency first aid procedure
- KU16.** local emergency services
- KU17.** why accidents, incidents and problems should be reported and the appropriate actions to be taken

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record the data as per the requirement
- GS2.** report problems to the appropriate personnel in a timely manner

## Qualification Pack

- GS3.** read instruction manual for hand tool and equipments
- GS4.** communicate clearly and effectively with co-workers, and other stakeholders
- GS5.** comprehend information shared by senior people and experts
- GS6.** make decisions pertaining to personal hygiene and safety
- GS7.** schedule daily activities and draw up priorities
- GS8.** manage relationships with co-workers, manager and other stakeholders
- GS9.** assess situation and identify appropriate control measures

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain personal hygiene</i>	<b>10</b>	<b>5</b>	-	<b>10</b>
<b>PC1.</b> wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals	-	-	-	-
<b>PC2.</b> wash the worn clothes with soap and sun dry before use next time	-	-	-	-
<b>PC3.</b> ensure the face is covered with mask or three layers of cloth-piece	-	-	-	-
<b>PC4.</b> follow the workplace sanitization norms including distancing from sick people	-	-	-	-
<i>Maintain clean and safe workplace</i>	<b>15</b>	<b>15</b>	-	<b>15</b>
<b>PC5.</b> carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor	-	-	-	-
<b>PC6.</b> wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy	-	-	-	-
<b>PC7.</b> follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards	-	-	-	-
<b>PC8.</b> assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices	-	-	-	-
<b>PC9.</b> sanitize equipment, tools and machinery before and after use	-	-	-	-
<b>PC10.</b> use equipment and materials safely and correctly and return the same to designated storage after use	-	-	-	-
<b>PC11.</b> dispose waste safely and correctly in the designated area	-	-	-	-
<b>PC12.</b> recognize risks to bystanders and take required action to reduce the risks	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed	-	-	-	-
<b>PC14.</b> report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger	-	-	-	-
<b>PC15.</b> follow government / workplace advisories incase of outbreak of any disease/disaster	-	-	-	-
<i>Administer appropriate emergency procedures</i>	<b>15</b>	<b>5</b>	-	<b>10</b>
<b>PC16.</b> follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements	-	-	-	-
<b>PC17.</b> use emergency equipment in accordance with manufacturer's specifications and workplace requirements	-	-	-	-
<b>PC18.</b> provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	-	-	-	-
<b>PC19.</b> recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	-	-	-	-
<b>PC20.</b> report details of first aid administered in accordance with workplace procedures	-	-	-	-
<b>NOS Total</b>	<b>40</b>	<b>25</b>	-	<b>35</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N9903
<b>NOS Name</b>	Maintain health and safety at the workplace
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

### DGT/VSQ/N0102: Employability Skills (60 Hours)

#### Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

#### Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

#### Elements and Performance Criteria

##### *Introduction to Employability Skills*

To be competent, the user/individual on the job must be able to:

- PC1.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

##### *Constitutional values - Citizenship*

To be competent, the user/individual on the job must be able to:

- PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4.** follow environmentally sustainable practices

##### *Becoming a Professional in the 21st Century*

To be competent, the user/individual on the job must be able to:

- PC5.** recognize the significance of 21st Century Skills for employment
- PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

##### *Basic English Skills*

To be competent, the user/individual on the job must be able to:

## Qualification Pack

- PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9.** write short messages, notes, letters, e-mails etc. in English

### *Career Development & Goal Setting*

To be competent, the user/individual on the job must be able to:

- PC10.** understand the difference between job and career
- PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

### *Communication Skills*

To be competent, the user/individual on the job must be able to:

- PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13.** work collaboratively with others in a team

### *Diversity & Inclusion*

To be competent, the user/individual on the job must be able to:

- PC14.** communicate and behave appropriately with all genders and PwD
- PC15.** escalate any issues related to sexual harassment at workplace according to POSH Act

### *Financial and Legal Literacy*

To be competent, the user/individual on the job must be able to:

- PC16.** select financial institutions, products and services as per requirement
- PC17.** carry out offline and online financial transactions, safely and securely
- PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation

### *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

### *Entrepreneurship*

To be competent, the user/individual on the job must be able to:

- PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

### *Customer Service*

To be competent, the user/individual on the job must be able to:

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.

## Qualification Pack

**PC28.** follow appropriate hygiene and grooming standards

*Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**PC29.** create a professional Curriculum vitae (Résumé)

**PC30.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

**PC31.** apply to identified job openings using offline /online methods as per requirement

**PC32.** answer questions politely, with clarity and confidence, during recruitment and selection

**PC33.** identify apprenticeship opportunities and register for it as per guidelines and requirements

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills and different learning and employability related portals

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

**KU6.** importance of career development and setting long- and short-term goals

**KU7.** about effective communication

**KU8.** POSH Act

**KU9.** Gender sensitivity and inclusivity

**KU10.** different types of financial institutes, products, and services

**KU11.** how to compute income and expenditure

**KU12.** importance of maintaining safety and security in offline and online financial transactions

**KU13.** different legal rights and laws

**KU14.** different types of digital devices and the procedure to operate them safely and securely

**KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

**KU16.** how to identify business opportunities

**KU17.** types and needs of customers

**KU18.** how to apply for a job and prepare for an interview

**KU19.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** read and write different types of documents/instructions/correspondence

**GS2.** communicate effectively using appropriate language in formal and informal settings

## Qualification Pack

- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> identify employability skills required for jobs in various industries	-	-	-	-
<b>PC2.</b> identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC3.</b> recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
<b>PC4.</b> follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>2</b>	<b>4</b>	-	-
<b>PC5.</b> recognize the significance of 21st Century Skills for employment	-	-	-	-
<b>PC6.</b> practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
<b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
<b>PC9.</b> write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development &amp; Goal Setting</i>	<b>1</b>	<b>2</b>	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> understand the difference between job and career	-	-	-	-
<b>PC11.</b> prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	<b>2</b>	<b>2</b>	-	-
<b>PC12.</b> follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
<b>PC13.</b> work collaboratively with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>2</b>	-	-
<b>PC14.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC15.</b> escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>2</b>	<b>3</b>	-	-
<b>PC16.</b> select financial institutions, products and services as per requirement	-	-	-	-
<b>PC17.</b> carry out offline and online financial transactions, safely and securely	-	-	-	-
<b>PC18.</b> identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
<b>PC19.</b> identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	<b>3</b>	<b>4</b>	-	-
<b>PC20.</b> operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
<b>PC21.</b> use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
<b>PC22.</b> use basic features of word processor, spreadsheets, and presentations	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Entrepreneurship</i>	<b>2</b>	<b>3</b>	-	-
<b>PC23.</b> identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
<b>PC24.</b> develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
<b>PC25.</b> identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	<b>1</b>	<b>2</b>	-	-
<b>PC26.</b> identify different types of customers	-	-	-	-
<b>PC27.</b> identify and respond to customer requests and needs in a professional manner.	-	-	-	-
<b>PC28.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>2</b>	<b>3</b>	-	-
<b>PC29.</b> create a professional Curriculum vitae (Résumé)	-	-	-	-
<b>PC30.</b> search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
<b>PC31.</b> apply to identified job openings using offline /online methods as per requirement	-	-	-	-
<b>PC32.</b> answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
<b>PC33.</b> identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0102
<b>NOS Name</b>	Employability Skills (60 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N1118: Operate the post-harvest machineries to process crop

#### Description

This OS unit is about operating various post-harvest machineries to process crop along with the repair and maintenance of the machineries.

#### Scope

The scope covers the following :

- Operate and maintain the cleaning and grading machine
- Operate and maintain the drying machine
- Operate and maintain the oil expelling machine
- Operate and maintain the milling machine

#### Elements and Performance Criteria

##### *Operate and maintain the cleaning and grading machine*

To be competent, the user/individual on the job must be able to:

- PC1.** select the appropriate type of cleaner and grader according to the type of crop
- PC2.** apply the necessary alignment and adjustments
- PC3.** operate the cleaning and grading machine as per the SOP
- PC4.** record the quality of output
- PC5.** identify common damages and faults in the cleaning and grading machine
- PC6.** carry out regular repair and maintenance of cleaning and grading machine as per the instructions in the operator's manual
- PC7.** use the relevant PPE while using the grading machine

##### *Operate and maintain the drying machine*

To be competent, the user/individual on the job must be able to:

- PC8.** select the appropriate drying machine and method as per the crop
- PC9.** adjust the air temperature and grain flow rate as per the operator's manual
- PC10.** record the quality of output after drying
- PC11.** identify common damages and faults in the drying machine
- PC12.** carry out regular maintenance and repair as per the instructions in the operator's manual
- PC13.** use the relevant PPE while using the drying machine

##### *Operate and maintain the oil expelling machine*

To be competent, the user/individual on the job must be able to:

- PC14.** select the appropriate oil expelling machinery according to the type of crop such as screw expeller, hydraulic press, etc.
- PC15.** install the oil expelling machine as per the manufacturer's instructions
- PC16.** check the moisture content and maturity of seeds for extracting oil
- PC17.** clean the seeds as per the SOP to remove stones and husk

## Qualification Pack

- PC18.** feed seeds in the oil expeller at the recommended feed rate
- PC19.** regulate the internal pressure of the expeller and temperature of oil seeds as per the manufacturer's instructions
- PC20.** ensure the quality of the oil being extracted is as expected
- PC21.** remove the pressed seeds from the oil expelling machine
- PC22.** carry out regular maintenance and repair of the oil expelling machine as per the instructions in the operator's manual
- PC23.** use the relevant PPE while using the oil expelling machine

### *Operate and maintain the milling machine*

To be competent, the user/individual on the job must be able to:

- PC24.** select the appropriate type of milling machine according to the type of crop
- PC25.** install the milling machine as per the operator's manual
- PC26.** clean the grains to remove dust/ dirt/ immature and damaged grains
- PC27.** grade the grains for separate processing
- PC28.** carry out pitting of the grains for pre-milling treatment
- PC29.** carry out wet/ dry treatment as per the type of grain
- PC30.** condition the grains to allow penetration of water/ oil during milling
- PC31.** dry the conditioned grains using an appropriate method
- PC32.** carry out de-husking and splitting as per the SOP
- PC33.** grind the grain according to the type of grain
- PC34.** maintain the recommended roller speed, spacing between plates and rolls, emery size, Revolutions Per Minute (RPM) and screen size
- PC35.** record the quality of output after milling
- PC36.** carry out regular repair and maintenance of the milling machine as per the operator's manual
- PC37.** use the relevant PPE while using the milling machine

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** criteria for selecting different post-harvest machineries such as cleaner/ grader, drying machine, oil expeller, milling machine for processing the harvested crop
- KU2.** the process of installing and operating the post-harvest machineries
- KU3.** common repair and maintenance needs of post-harvest machineries and the process to carry out their repair and maintenance
- KU4.** use of the relevant PPE while operating various post-harvest machineries
- KU5.** functions of various components of the cleaning and grading machine such as hoppers, sieves, blower, oscillating equipment
- KU6.** adjustments to be made to the cleaning and grading machine such as feed rate, sieve slope, air flow rate, frequency of oscillations, etc.
- KU7.** components and systems of drying machine such as drying chamber, air distribution system, direct/ indirect heating system

## Qualification Pack

**KU8.** components of dal mills, flour mills and oil expellers, their functions and working principles

**KU9.** adjustment to be made to drying, milling and oil expelling machineries

### Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** write work-related notes

**GS2.** read the relevant guides and manuals

**GS3.** communicate clearly and politely

**GS4.** listen attentively to understand the information/ instructions being given

**GS5.** plan and prioritise tasks to ensure timely completion

**GS6.** take quick decisions to deal with workplace emergencies/ accidents

**GS7.** identify possible disruptions to work and take preventive measures

**GS8.** co-ordinate with co-workers to achieve the work objectives

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Operate and maintain the cleaning and grading machine</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC1.</b> select the appropriate type of cleaner and grader according to the type of crop	-	-	-	-
<b>PC2.</b> apply the necessary alignment and adjustments	-	-	-	-
<b>PC3.</b> operate the cleaning and grading machine as per the SOP	-	-	-	-
<b>PC4.</b> record the quality of output	-	-	-	-
<b>PC5.</b> identify common damages and faults in the cleaning and grading machine	-	-	-	-
<b>PC6.</b> carry out regular repair and maintenance of cleaning and grading machine as per the instructions in the operator's manual	-	-	-	-
<b>PC7.</b> use the relevant PPE while using the grading machine	-	-	-	-
<i>Operate and maintain the drying machine</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC8.</b> select the appropriate drying machine and method as per the crop	-	-	-	-
<b>PC9.</b> adjust the air temperature and grain flow rate as per the operator's manual	-	-	-	-
<b>PC10.</b> record the quality of output after drying	-	-	-	-
<b>PC11.</b> identify common damages and faults in the drying machine	-	-	-	-
<b>PC12.</b> carry out regular maintenance and repair as per the instructions in the operator's manual	-	-	-	-
<b>PC13.</b> use the relevant PPE while using the drying machine	-	-	-	-
<i>Operate and maintain the oil expelling machine</i>	<b>10</b>	<b>12</b>	-	<b>10</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> select the appropriate oil expelling machinery according to the type of crop such as screw expeller, hydraulic press, etc.	-	-	-	-
<b>PC15.</b> install the oil expelling machine as per the manufacturer's instructions	-	-	-	-
<b>PC16.</b> check the moisture content and maturity of seeds for extracting oil	-	-	-	-
<b>PC17.</b> clean the seeds as per the SOP to remove stones and husk	-	-	-	-
<b>PC18.</b> feed seeds in the oil expeller at the recommended feed rate	-	-	-	-
<b>PC19.</b> regulate the internal pressure of the expeller and temperature of oil seeds as per the manufacturer's instructions	-	-	-	-
<b>PC20.</b> ensure the quality of the oil being extracted is as expected	-	-	-	-
<b>PC21.</b> remove the pressed seeds from the oil expelling machine	-	-	-	-
<b>PC22.</b> carry out regular maintenance and repair of the oil expelling machine as per the instructions in the operator's manual	-	-	-	-
<b>PC23.</b> use the relevant PPE while using the oil expelling machine	-	-	-	-
<i>Operate and maintain the milling machine</i>	<b>10</b>	<b>12</b>	-	<b>10</b>
<b>PC24.</b> select the appropriate type of milling machine according to the type of crop	-	-	-	-
<b>PC25.</b> install the milling machine as per the operator's manual	-	-	-	-
<b>PC26.</b> clean the grains to remove dust/ dirt/ immature and damaged grains	-	-	-	-
<b>PC27.</b> grade the grains for separate processing	-	-	-	-
<b>PC28.</b> carry out pitting of the grains for pre-milling treatment	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC29.</b> carry out wet/ dry treatment as per the type of grain	-	-	-	-
<b>PC30.</b> condition the grains to allow penetration of water/ oil during milling	-	-	-	-
<b>PC31.</b> dry the conditioned grains using an appropriate method	-	-	-	-
<b>PC32.</b> carry out de-husking and splitting as per the SOP	-	-	-	-
<b>PC33.</b> grind the grain according to the type of grain	-	-	-	-
<b>PC34.</b> maintain the recommended roller speed, spacing between plates and rolls, emery size, Revolutions Per Minute (RPM) and screen size	-	-	-	-
<b>PC35.</b> record the quality of output after milling	-	-	-	-
<b>PC36.</b> carry out regular repair and maintenance of the milling machine as per the operator's manual	-	-	-	-
<b>PC37.</b> use the relevant PPE while using the milling machine	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	<b>-</b>	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1118
<b>NOS Name</b>	Operate the post-harvest machineries to process crop
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

#### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

## Qualification Pack

**Minimum Aggregate Passing % at QP Level : 70**

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N1115.Prepare and operate the reaper	30	40	-	30	100	25
AGR/N1116.Prepare and operate the power thresher	30	40	-	30	100	25
AGR/N1117.Perform crop residue management	30	40	-	30	100	30
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
<b>Total</b>	<b>150</b>	<b>175</b>	<b>-</b>	<b>125</b>	<b>450</b>	<b>100</b>

Optional: 1 Post-harvest machineries operation

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N1118.Operate the post-harvest machineries to process crop	30	40	-	30	100	20
<b>Total</b>	<b>30</b>	<b>40</b>	<b>-</b>	<b>30</b>	<b>100</b>	<b>20</b>

## Qualification Pack

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>PwD</b>	Persons with Disabilities
<b>PPE</b>	Personal Protective Equipment
<b>PPE</b>	Personal Protective Equipment

## Qualification Pack

### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

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<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.