

## Qualification Pack



# Bamboo Grower

QP Code: AGR/Q6101

Version: 3.0

NSQF Level: 3

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## Qualification Pack

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### AGR/Q6101: Bamboo Grower

#### Brief Job Description

A Bamboo Grower is responsible for propagating bamboo saplings in a nursery, transplanting them into the field, and maintaining and harvesting bamboo culms. The individual is also responsible for marketing the harvested bamboos culms.

#### Personal Attributes

The individual must be physically fit to work for long durations. The person must have good eyesight along with problem-solving and coordination skills. The abilities to read and write are the other important attributes required in this job role.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [AGR/N6101: Propagate bamboo saplings in the nursery](#)
2. [AGR/N6103: Select the bamboo variety and site, and prepare the field](#)
3. [AGR/N6104: Transplant and maintain the bamboo saplings](#)
4. [AGR/N6105: Carry out pruning and weeding in bamboo crop](#)
5. [AGR/N6106: Carry out irrigation, nutrient management and intercropping](#)
6. [AGR/N6107: Carry out integrated pest and disease management for bamboo crop](#)
7. [AGR/N6108: Carry out harvesting, post-harvest processing and marketing of bamboo culms](#)
8. [AGR/N9903: Maintain health and safety at the workplace](#)
9. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management

## Qualification Pack

<b>Country</b>	India
<b>NSQF Level</b>	3
<b>Credits</b>	9
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/6112.0701
<b>Minimum Educational Qualification &amp; Experience</b>	8th Class (Pass and pursuing continuous regular schooling) OR 5th Class with 4 Years of experience relevant experience OR Ability to read and write with 5 Years of experience relevant experience in farm cultivation /operations OR Certificate-NSQF (Level-3 (Non-Timber Forest Produce (NTFP) Collector/Harvester)) with 6 Months of experience relevant experience
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	17 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	30/04/2025
<b>NSQC Approval Date</b>	27/01/2022
<b>Version</b>	3.0
<b>Reference code on NQR</b>	2022/AGR/ASCI/06526
<b>NQR Version</b>	1.0

## Qualification Pack

### AGR/N6101: Propagate bamboo saplings in the nursery

#### Description

This OS unit is about propagating bamboo saplings in the nursery for being transplanted into the field.

#### Scope

The scope covers the following :

- Prepare for the propagation of bamboo sapling in the nursery
- Plant and maintain bamboo saplings
- Harvest and transport the bamboo saplings

#### Elements and Performance Criteria

##### *Prepare for the propagation of bamboo sapling in the nursery*

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

- PC1.** select a site for the propagation of bamboo saplings in the nursery, ensuring proximity to the bamboo field with the recommended climatic conditions, adequate exposure to sunlight and access to quality water in the required quantity
- PC2.** select an appropriate method for the cultivation of bamboo saplings such as planting culms, cutting, tillering, layering, etc.
- PC3.** select an approved vendor and procure the required planting material and other inputs such as fertilisers, insecticide/ pesticides/ fungicide, tools and implements, ensuring the quality of inputs
- PC4.** arrange for safe and hygienic transportation and storage of the procured planting material and other resources
- PC5.** treat the planting material appropriately for the common pests and disease before use, to prevent pest and disease during propagation and cultivation
- PC6.** prepare the sunken, raised or level nursery bed as per the requirement, arranging for efficient drainage of water

##### *Plant and maintain bamboo saplings*

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

- PC7.** plant seeds, cuttings or culms at the recommended depth and planting density and provide them immediate care such as water and fertiliser
- PC8.** protect the saplings from pests and disease by applying the recommended pesticides, insecticides or fungicides in the prescribed quantity
- PC9.** check the saplings regularly for healthy growth and apply the recommended organic or inorganic fertilisers in an appropriate quantity
- PC10.** water saplings with the recommended quantity at regular intervals, ensuring no damage to them
- PC11.** protect the saplings from strong winds, overexposure to sunlight and fluctuations in temperature
- PC12.** carry out weeding to remove unwanted plants growing in the nursery bed



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**PC13.** clear any waterlogging from the nursery bed

*Harvest and transport the bamboo saplings*

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

**PC14.** check the bamboo saplings to determine they have attained the growth required for being harvested

**PC15.** arrange the required tools, implements and accessories for harvesting the saplings

**PC16.** harvest the saplings, ensuring no damage to them

**PC17.** store the harvested saplings under the recommended temperature and humidity and in hygienic conditions

**PC18.** arrange an appropriate mode of transport and transport bamboo saplings to the field safely, maintaining the required level of moisture

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** the criteria for selecting a site for the propagation of bamboo saplings in the nursery such as the appropriate climatic conditions, adequate exposure to sunlight and access to quality water in the required quantity

**KU2.** different methods for the cultivation of bamboo saplings such as planting culms, cutting, tillering, layering, etc.

**KU3.** the process of selecting a vendor and procuring the resources required for the cultivation of bamboo saplings

**KU4.** the safe and hygienic transportation and storage of the planting material and other resources

**KU5.** the process of treating the planting material for common pests and diseases before use

**KU6.** how to prepare sunken, raised or level nursery bed

**KU7.** the importance of ensuring effective drainage in the nursery bed

**KU8.** the process of planting seeds, cuttings or culms at the recommended depth and planting density, and providing them immediate care such as water and fertiliser

**KU9.** use of the recommended pesticides, insecticides or fungicides in the prescribed quantity to protect saplings from pests and disease

**KU10.** how to apply the recommended organic or inorganic fertilisers in an appropriate quantity

**KU11.** irrigation schedule and the recommended quantity of water for irrigating bamboo saplings

**KU12.** the importance and ways of protecting saplings from strong winds, overexposure to sunlight and fluctuations in temperature

**KU13.** how to carry out weeding in the nursery bed

**KU14.** the process of harvesting bamboo saplings using the relevant tools and implements

**KU15.** the recommended temperature and humidity for storing bamboo saplings

**KU16.** the importance of transporting bamboo saplings to the field safely and maintaining the required level of moisture during transit

## Generic Skills (GS)

## Qualification Pack

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

- GS1.** write work-related records
- GS2.** communicate politely and professionally
- GS3.** read the relevant literature to get the latest updates about the field of work
- GS4.** plan and prioritise tasks to ensure timely completion
- GS5.** take quick decisions to deal with workplace emergencies/ accidents
- GS6.** listen attentively to understand the information/ instructions being shared
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** co-ordinate with the co-workers to achieve the work objectives
- GS9.** evaluate all possible solutions to a problem to select the best one

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for the propagation of bamboo sapling in the nursery</i>	<b>12</b>	<b>15</b>	-	<b>12</b>
<b>PC1.</b> select a site for the propagation of bamboo saplings in the nursery, ensuring proximity to the bamboo field with the recommended climatic conditions, adequate exposure to sunlight and access to quality water in the required quantity	-	-	-	-
<b>PC2.</b> select an appropriate method for the cultivation of bamboo saplings such as planting culms, cutting, tillering, layering, etc.	-	-	-	-
<b>PC3.</b> select an approved vendor and procure the required planting material and other inputs such as fertilisers, insecticide/ pesticides/ fungicide, tools and implements, ensuring the quality of inputs	-	-	-	-
<b>PC4.</b> arrange for safe and hygienic transportation and storage of the procured planting material and other resources	-	-	-	-
<b>PC5.</b> treat the planting material appropriately for the common pests and disease before use, to prevent pest and disease during propagation and cultivation	-	-	-	-
<b>PC6.</b> prepare the sunken, raised or level nursery bed as per the requirement, arranging for efficient drainage of water	-	-	-	-
<i>Plant and maintain bamboo saplings</i>	<b>10</b>	<b>15</b>	-	<b>10</b>
<b>PC7.</b> plant seeds, cuttings or culms at the recommended depth and planting density and provide them immediate care such as water and fertiliser	-	-	-	-
<b>PC8.</b> protect the saplings from pests and disease by applying the recommended pesticides, insecticides or fungicides in the prescribed quantity	-	-	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC9.</b> check the saplings regularly for healthy growth and apply the recommended organic or inorganic fertilisers in an appropriate quantity	-	-	-	-
<b>PC10.</b> water saplings with the recommended quantity at regular intervals, ensuring no damage to them	-	-	-	-
<b>PC11.</b> protect the saplings from strong winds, overexposure to sunlight and fluctuations in temperature	-	-	-	-
<b>PC12.</b> carry out weeding to remove unwanted plants growing in the nursery bed	-	-	-	-
<b>PC13.</b> clear any waterlogging from the nursery bed	-	-	-	-
<i>Harvest and transport the bamboo saplings</i>	<b>8</b>	<b>10</b>	-	<b>8</b>
<b>PC14.</b> check the bamboo saplings to determine they have attained the growth required for being harvested	-	-	-	-
<b>PC15.</b> arrange the required tools, implements and accessories for harvesting the saplings	-	-	-	-
<b>PC16.</b> harvest the saplings, ensuring no damage to them	-	-	-	-
<b>PC17.</b> store the harvested saplings under the recommended temperature and humidity and in hygienic conditions	-	-	-	-
<b>PC18.</b> arrange an appropriate mode of transport and transport bamboo saplings to the field safely, maintaining the required level of moisture	-	-	-	-
<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/N6101
<b>NOS Name</b>	Propagate bamboo saplings in the nursery
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## Qualification Pack

### AGR/N6103: Select the bamboo variety and site, and prepare the field

#### Description

This OS unit is about selecting the bamboo variety and site for cultivation along with preparing the field.

#### Scope

The scope covers the following :

- Select the bamboo variety and site
- Prepare the field for bamboo cultivation

#### Elements and Performance Criteria

##### *Select the bamboo variety and site*

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

- PC1.** select a high-yielding, pest and disease-resistant variety of bamboo to be grown with cost-effective cultivation practices
- PC2.** select a site with the appropriate temperature, precipitation and relative humidity recommended for the optimum growth of selected bamboo variety, ensuring the site does not experience waterlogging
- PC3.** ensure the site has access to a reliable source of water for irrigation, affordable labour and relevant markets for marketing the produce
- PC4.** ensure the soil at the site is well-drained and rich in organic matters

##### *Prepare the field for bamboo cultivation*

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

- PC5.** remove all waste materials from the site
- PC6.** carry out deep ploughing to remove shrubs, weeds, rocks, tree roots and stumps from the site
- PC7.** carry out soil fumigation using the recommended chemicals to disinfect the soil and water it thoroughly with the recommended quantity to wash away the disinfectants
- PC8.** sample the field soil and coordinate with an approved lab to determine its macro and micronutrients needs
- PC9.** apply the prescribed organic and inorganic fertilisers such as compost, peat moss or Farm Yard Manure (FYM) to the soil in the dose recommended by the lab to improve its fertility and loosen it
- PC10.** apply the recommended treatment such as lime or gypsum as per the lab's recommendation to adjust the soil's pH and salinity levels
- PC11.** prepare holes of the recommended depth and dimensions at appropriate spacing for planting bamboo saplings of the selected variety
- PC12.** create drains in the field for the effective drainage of water
- PC13.** install an appropriate irrigation or fertigation system in the field
- PC14.** erect fences around the field to protect it from stray animals and other external threats

## Qualification Pack

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the criteria for selecting a variety of bamboo to be cultivated and a site for cultivation
- KU2.** the characteristics of soil suitable for bamboo cultivation
- KU3.** the importance and process of clearing and deep ploughing the bamboo cultivation field
- KU4.** the process of carrying out soil fumigation using the recommended chemicals to disinfect the soil and watering it to wash away the disinfectants
- KU5.** the process of sampling the field soil and getting it tested by an approved lab to determine its macro and micronutrients needs
- KU6.** the importance and process of applying the prescribed organic and inorganic fertilisers such as compost, peat moss or Farm Yard Manure (FYM) to improve the soil's fertility and loosen it
- KU7.** the use of lime or gypsum to adjust the soil's pH and salinity levels
- KU8.** the process of preparing holes of the recommended depth and dimensions for planting bamboo saplings
- KU9.** the importance and process of creating drains in the field for the effective drainage of water
- KU10.** how to install an irrigation or fertigation system in the field
- KU11.** the importance of erecting fences around the field to protect it from stray animals and other external threats

### Generic Skills (GS)

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

- GS1.** write work-related notes and records
- GS2.** read the relevant literature to learn about the latest development in the field of work
- GS3.** communicate politely and professionally
- GS4.** listen attentively to understand the information being shared
- GS5.** plan and schedule tasks for effective time management
- GS6.** evaluate all possible solutions to a problem to select the best one

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select the bamboo variety and site</i>	<b>10</b>	<b>15</b>	-	<b>10</b>
<b>PC1.</b> select a high-yielding, pest and disease-resistant variety of bamboo to be grown with cost-effective cultivation practices	-	-	-	-
<b>PC2.</b> select a site with the appropriate temperature, precipitation and relative humidity recommended for the optimum growth of selected bamboo variety, ensuring the site does not experience waterlogging	-	-	-	-
<b>PC3.</b> ensure the site has access to a reliable source of water for irrigation, affordable labour and relevant markets for marketing the produce	-	-	-	-
<b>PC4.</b> ensure the soil at the site is well-drained and rich in organic matters	-	-	-	-
<i>Prepare the field for bamboo cultivation</i>	<b>20</b>	<b>25</b>	-	<b>20</b>
<b>PC5.</b> remove all waste materials from the site	-	-	-	-
<b>PC6.</b> carry out deep ploughing to remove shrubs, weeds, rocks, tree roots and stumps from the site	-	-	-	-
<b>PC7.</b> carry out soil fumigation using the recommended chemicals to disinfect the soil and water it thoroughly with the recommended quantity to wash away the disinfectants	-	-	-	-
<b>PC8.</b> sample the field soil and coordinate with an approved lab to determine its macro and micronutrients needs	-	-	-	-
<b>PC9.</b> apply the prescribed organic and inorganic fertilisers such as compost, peat moss or Farm Yard Manure (FYM) to the soil in the dose recommended by the lab to improve its fertility and loosen it	-	-	-	-
<b>PC10.</b> apply the recommended treatment such as lime or gypsum as per the lab's recommendation to adjust the soil's pH and salinity levels	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> prepare holes of the recommended depth and dimensions at appropriate spacing for planting bamboo saplings of the selected variety	-	-	-	-
<b>PC12.</b> create drains in the field for the effective drainage of water	-	-	-	-
<b>PC13.</b> install an appropriate irrigation or fertigation system in the field	-	-	-	-
<b>PC14.</b> erect fences around the field to protect it from stray animals and other external threats	-	-	-	-
<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/N6103
<b>NOS Name</b>	Select the bamboo variety and site, and prepare the field
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## Qualification Pack

### AGR/N6104: Transplant and maintain the bamboo saplings

#### Description

This OS unit is about transplanting and maintaining bamboo saplings in the field.

#### Scope

The scope covers the following :

- Transplant the saplings
- Maintain the saplings

#### Elements and Performance Criteria

##### *Transplant the saplings*

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

- PC1.** acclimatise the bamboo saplings before being transplanted in the field
- PC2.** select an appropriate time of the day with the recommended temperature for transplanting saplings to ensure their survival
- PC3.** transplant the bamboo saplings in the field using the appropriate tools and implements, maintaining the recommended planting depth and density
- PC4.** water the saplings with the recommended quantity and apply the recommended fertiliser in an appropriate quantity to provide immediate care after transplantation

##### *Maintain the saplings*

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

- PC5.** protect saplings from strong winds and direct sunlight during the early stages of their growth
- PC6.** irrigate the saplings according to the stages of their growth, avoiding over-irrigation to prevent root rot
- PC7.** monitor the saplings for signs of pest and disease and apply the recommended treatment in an prescribed quantity
- PC8.** replace the unhealthy or dead saplings with the healthy ones

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the importance of acclimatising and transplanting bamboo saplings at an appropriate temperature to ensure their survival
- KU2.** use of the relevant tools and implements for transplanting bamboo saplings
- KU3.** recommended planting depth and density to be maintained while transplanting bamboo saplings
- KU4.** the importance of watering the bamboo sapling with the recommended quantity and applying the recommended fertilisers in an appropriate quantity soon after transplanting them

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- KU5.** the importance and ways of protecting bamboo saplings from strong winds and direct sunlight during the early stages of their growth
- KU6.** the importance of monitoring the transplanted saplings
- KU7.** the importance of irrigating bamboo sapling with an appropriate quantity of water to prevent root rot
- KU8.** the recommended insecticides and pesticides to be applied to bamboo saplings

## Generic Skills (GS)

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

- GS1.** maintain work-related records
- GS2.** read the relevant health and safety instructions
- GS3.** listen attentively to understand the information being shared
- GS4.** communicate politely and professionally
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** identify possible disruptions to work and take appropriate preventive measures
- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** evaluate all possible solutions to a problem to select the best one
- GS9.** co-ordinate with the co-workers to achieve the work objectives

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Transplant the saplings</i>	<b>14</b>	<b>18</b>	-	<b>16</b>
<b>PC1.</b> acclimatise the bamboo saplings before being transplanted in the field	-	-	-	-
<b>PC2.</b> select an appropriate time of the day with the recommended temperature for transplanting saplings to ensure their survival	-	-	-	-
<b>PC3.</b> transplant the bamboo saplings in the field using the appropriate tools and implements, maintaining the recommended planting depth and density	-	-	-	-
<b>PC4.</b> water the saplings with the recommended quantity and apply the recommended fertiliser in an appropriate quantity to provide immediate care after transplantation	-	-	-	-
<i>Maintain the saplings</i>	<b>16</b>	<b>22</b>	-	<b>14</b>
<b>PC5.</b> protect saplings from strong winds and direct sunlight during the early stages of their growth	-	-	-	-
<b>PC6.</b> irrigate the saplings according to the stages of their growth, avoiding over-irrigation to prevent root rot	-	-	-	-
<b>PC7.</b> monitor the saplings for signs of pest and disease and apply the recommended treatment in an prescribed quantity	-	-	-	-
<b>PC8.</b> replace the unhealthy or dead saplings with the healthy ones	-	-	-	-
<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/N6104
<b>NOS Name</b>	Transplant and maintain the bamboo saplings
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## Qualification Pack

### AGR/N6105: Carry out pruning and weeding in bamboo crop

#### Description

This OS unit is about carrying out pruning and weeding in the bamboo crop.

#### Scope

The scope covers the following :

- Carry out pruning
- Carry out weeding

#### Elements and Performance Criteria

##### *Carry out pruning*

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

- PC1.** select the appropriate tools and implements such as pruner and lopper to prune the bamboo trees
- PC2.** carry out pruning to remove unwanted or dead culms, branches or leaves from bamboo trees, following the recommended method according to the stages of growth of bamboo trees
- PC3.** ensure no damage to the bamboo trees during pruning
- PC4.** apply the recommended chemicals to the pruned areas on the bamboo trees
- PC5.** remove the pruned tree parts and use them to prepare compost
- PC6.** remove unwanted, old and rotting clumps
- PC7.** prune the clumps at appropriate intervals and as per the requirement to prevent clump congestion
- PC8.** carry out thinning of clumps using the appropriate implements to provide space for new shoots to emerge

##### *Carry out weeding*

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

- PC9.** select the appropriate tools and implements for weeding out unwanted plants growing in the bamboo field
- PC10.** carry out weeding manually or mechanically, as appropriate, without leaving weed roots in the field
- PC11.** apply mulch or recommended herbicides in the prescribed quantity to prevent the growth of weeds
- PC12.** dispose the weeds eliminated from the field safely

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:



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- KU1.** use of the appropriate tools and implements such as pruner and lopper for pruning unwanted or dead culms, branches or leaves from bamboo trees
- KU2.** different methods of pruning bamboo trees
- KU3.** the recommended chemicals to be applied on the pruned areas on bamboo trees
- KU4.** how to utilise the pruned tree parts to prepare compost
- KU5.** the process of removing unwanted, old and rotting clumps
- KU6.** the importance of pruning bamboo clumps at appropriate intervals to prevent clump congestion
- KU7.** the process of thinning clumps using the appropriate implements to provide space for new shoots to emerge
- KU8.** the use of the appropriate weeding tools and implements for manual and mechanical weeding
- KU9.** the use of mulch and recommended herbicides in the prescribed quantity to prevent the growth of weeds
- KU10.** the importance of disposing the eliminated weeds away from the field

## Generic Skills (GS)

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

- GS1.** maintain work-related notes and records
- GS2.** read the relevant literature to get the latest updates about the field of work
- GS3.** listen attentively to understand the information being shared by the speaker
- GS4.** communicate politely and professionally
- GS5.** co-ordinate with the co-workers to achieve the work objectives
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** identify possible disruptions to work and take appropriate preventive measures
- GS9.** take quick decisions to deal with workplace emergencies/ accidents

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out pruning</i>	<b>16</b>	<b>18</b>	-	<b>14</b>
<b>PC1.</b> select the appropriate tools and implements such as pruner and lopper to prune the bamboo trees	-	-	-	-
<b>PC2.</b> carry out pruning to remove unwanted or dead culms, branches or leaves from bamboo trees, following the recommended method according to the stages of growth of bamboo trees	-	-	-	-
<b>PC3.</b> ensure no damage to the bamboo trees during pruning	-	-	-	-
<b>PC4.</b> apply the recommended chemicals to the pruned areas on the bamboo trees	-	-	-	-
<b>PC5.</b> remove the pruned tree parts and use them to prepare compost	-	-	-	-
<b>PC6.</b> remove unwanted, old and rotting clumps	-	-	-	-
<b>PC7.</b> prune the clumps at appropriate intervals and as per the requirement to prevent clump congestion	-	-	-	-
<b>PC8.</b> carry out thinning of clumps using the appropriate implements to provide space for new shoots to emerge	-	-	-	-
<i>Carry out weeding</i>	<b>14</b>	<b>22</b>	-	<b>16</b>
<b>PC9.</b> select the appropriate tools and implements for weeding out unwanted plants growing in the bamboo field	-	-	-	-
<b>PC10.</b> carry out weeding manually or mechanically, as appropriate, without leaving weed roots in the field	-	-	-	-
<b>PC11.</b> apply mulch or recommended herbicides in the prescribed quantity to prevent the growth of weeds	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> dispose the weeds eliminated from the field safely	-	-	-	-
<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/N6105
<b>NOS Name</b>	Carry out pruning and weeding in bamboo crop
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQF Clearance Date</b>	17/11/2022

## Qualification Pack

### AGR/N6106: Carry out irrigation, nutrient management and intercropping

#### Description

This OS unit is about carrying out irrigation and nutrient management of bamboo crop along with intercropping activities.

#### Scope

The scope covers the following :

- Irrigate bamboo trees
- Carry out intercropping
- Perform nutrient management

#### Elements and Performance Criteria

##### *Irrigate bamboo trees*

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

- PC1.** ascertain the irrigation needs of bamboo trees based on the soil moisture and climate
- PC2.** irrigate the bamboo trees with the recommended quantity of water following an appropriate irrigation method
- PC3.** follow the irrigation schedule as per the stages of growth of bamboo trees, avoiding over and under irrigation

##### *Carry out intercropping*

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

- PC4.** select appropriate vegetable or cash crops with nutrient requirement different from the bamboo crop for intercropping to increase the rate of crop production
- PC5.** carry out intercropping of the selected crops with the bamboo crop
- PC6.** maintain the recommended planting density while intercropping to allow for optimum growth of intercropped vegetables/ crops
- PC7.** trim the culms on bamboo plants as per the requirement to ensure the intercropped vegetables/ crops receive the required exposure to sunlight
- PC8.** follow the recommended practices to prevent canopy exposure, loss of soil moisture through evaporation and competition from weeds and other vegetation
- PC9.** apply the recommended organic or inorganic fertilisers in the field in an appropriate quantity

##### *Perform nutrient management*

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

- PC10.** coordinate with an approved lab for soil analysis and determine the need of adding macro and micronutrients to it
- PC11.** select the appropriate fertilisers containing the necessary macro and micronutrients as prescribed by the lab
- PC12.** apply the selected organic and inorganic fertilisers to the soil for the optimum growth of bamboo trees

## Qualification Pack

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** how to ascertain the irrigation needs of bamboo trees based on the soil moisture and climate
- KU2.** the process of irrigating bamboo trees with the recommended quantity of water and the appropriate irrigation method to be followed
- KU3.** the importance of following the irrigation schedule as per the stages of growth of bamboo trees, and avoiding over and under irrigation
- KU4.** the benefits of intercropping
- KU5.** how to select appropriate vegetable or cash crops for intercropping with bamboo crop
- KU6.** the process of intercropping and the importance of maintaining the recommended planting density while intercropping to allow for optimum growth of intercropped vegetables/ crops
- KU7.** the importance of trimming the culms on bamboo plants to ensure the intercropped vegetables/ crops receive the required exposure to sunlight
- KU8.** the recommended practices to be followed to prevent canopy exposure, loss of soil moisture through evaporation and competition from weeds and other vegetation
- KU9.** the recommended organic or inorganic fertilisers to be applied to the field during intercropping
- KU10.** the process of determining the macro and micronutrients needs of the soil through a soil analysis by an approved lab, and applying the recommended fertilisers

### Generic Skills (GS)

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

- GS1.** maintain work-related records
- GS2.** read and follow the health and safety instructions
- GS3.** listen attentively to understand the information being shared by the speaker
- GS4.** communicate clearly and politely with co-workers and clients
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** identify possible disruptions to work and take appropriate preventive measures
- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** evaluate all possible solutions to a problem to select the best one
- GS9.** co-ordinate with the co-workers to achieve the work objectives



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Irrigate bamboo trees</i>	<b>10</b>	<b>12</b>	-	<b>8</b>
<b>PC1.</b> ascertain the irrigation needs of bamboo trees based on the soil moisture and climate	-	-	-	-
<b>PC2.</b> irrigate the bamboo trees with the recommended quantity of water following an appropriate irrigation method	-	-	-	-
<b>PC3.</b> follow the irrigation schedule as per the stages of growth of bamboo trees, avoiding over and under irrigation	-	-	-	-
<i>Carry out intercropping</i>	<b>10</b>	<b>14</b>	-	<b>12</b>
<b>PC4.</b> select appropriate vegetable or cash crops with nutrient requirement different from the bamboo crop for intercropping to increase the rate of crop production	-	-	-	-
<b>PC5.</b> carry out intercropping of the selected crops with the bamboo crop	-	-	-	-
<b>PC6.</b> maintain the recommended planting density while intercropping to allow for optimum growth of intercropped vegetables/ crops	-	-	-	-
<b>PC7.</b> trim the culms on bamboo plants as per the requirement to ensure the intercropped vegetables/ crops receive the required exposure to sunlight	-	-	-	-
<b>PC8.</b> follow the recommended practices to prevent canopy exposure, loss of soil moisture through evaporation and competition from weeds and other vegetation	-	-	-	-
<b>PC9.</b> apply the recommended organic or inorganic fertilisers in the field in an appropriate quantity	-	-	-	-
<i>Perform nutrient management</i>	<b>10</b>	<b>14</b>	-	<b>10</b>
<b>PC10.</b> coordinate with an approved lab for soil analysis and determine the need of adding macro and micronutrients to it	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> select the appropriate fertilisers containing the necessary macro and micronutrients as prescribed by the lab	-	-	-	-
<b>PC12.</b> apply the selected organic and inorganic fertilisers to the soil for the optimum growth of bamboo trees	-	-	-	-
<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/N6106
<b>NOS Name</b>	Carry out irrigation, nutrient management and intercropping
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## Qualification Pack

### AGR/N6107: Carry out integrated pest and disease management for bamboo crop

#### Description

This OS unit is about carrying out integrated pest and disease management for the bamboo crop. It also covers resource optimisation, waste management and practising inclusion at work.

#### Scope

The scope covers the following :

- Manage pests and disease
- Optimise resource utilisation
- Perform waste management

#### Elements and Performance Criteria

##### *Manage pests and disease*

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

- PC1.** follow the recommended prophylactic measures to protect the bamboo trees from common pests and diseases, such as the adoption of natural enemies of bamboo pests
- PC2.** identify the symptoms, stage and location of various pests and diseases in bamboo trees along with the extent of damage
- PC3.** select the appropriate treatment according to the identified pest and disease
- PC4.** apply the selected treatment using the recommended personal protective equipment (PPE) as per the prescription
- PC5.** maintain the record of treatment applied to bamboo trees
- PC6.** remove the bamboo tree parts damaged by pests and disease and dispose them safely in an environment-friendly manner

##### *Optimise resource utilisation*

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

- PC7.** optimise the usage of water and other resources in various tasks and processes
- PC8.** plug water leakages to prevent its wastage

##### *Perform waste management*

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

- PC9.** segregate waste into appropriate categories
- PC10.** recycle the recyclable waste appropriately and dispose the non-recyclable waste in an environment-friendly manner

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

## Qualification Pack

- KU1.** the recommended prophylactic measures to be followed to protect bamboo trees from common pests and diseases, such as the adoption of natural enemies of bamboo pests
- KU2.** how to identify the symptoms, stage and location of various pests and diseases in bamboo trees along with the extent of damage
- KU3.** the process of selecting and applying appropriate treatment to bamboo culms to eliminate the identified pests and disease
- KU4.** use of the relevant PPE
- KU5.** the importance of maintaining the record of pesticides/ insecticides/ fungicides applied to bamboo trees
- KU6.** the process of removing bamboo tree parts damaged by pests and disease and disposing them in an environment-friendly manner
- KU7.** the benefits of resource optimisation
- KU8.** the criteria for segregating waste into appropriate categories
- KU9.** the process of recycling and disposing different types of waste

## Generic Skills (GS)

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

- GS1.** write work-related records
- GS2.** communicate politely and professionally
- GS3.** read the relevant literature to get the latest updates about the field of work
- GS4.** plan and prioritise tasks to ensure timely completion
- GS5.** take quick decisions to deal with workplace emergencies/ accidents
- GS6.** listen attentively to understand the information/ instructions being shared
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** evaluate all possible solutions to a problem to select the best one

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Manage pests and disease</i>	<b>14</b>	<b>20</b>	-	<b>14</b>
<b>PC1.</b> follow the recommended prophylactic measures to protect the bamboo trees from common pests and diseases, such as the adoption of natural enemies of bamboo pests	-	-	-	-
<b>PC2.</b> identify the symptoms, stage and location of various pests and diseases in bamboo trees along with the extent of damage	-	-	-	-
<b>PC3.</b> select the appropriate treatment according to the identified pest and disease	-	-	-	-
<b>PC4.</b> apply the selected treatment using the recommended personal protective equipment (PPE) as per the prescription	-	-	-	-
<b>PC5.</b> maintain the record of treatment applied to bamboo trees	-	-	-	-
<b>PC6.</b> remove the bamboo tree parts damaged by pests and disease and dispose them safely in an environment-friendly manner	-	-	-	-
<i>Optimise resource utilisation</i>	<b>8</b>	<b>10</b>	-	<b>8</b>
<b>PC7.</b> optimise the usage of water and other resources in various tasks and processes	-	-	-	-
<b>PC8.</b> plug water leakages to prevent its wastage	-	-	-	-
<i>Perform waste management</i>	<b>8</b>	<b>10</b>	-	<b>8</b>
<b>PC9.</b> segregate waste into appropriate categories	-	-	-	-
<b>PC10.</b> recycle the recyclable waste appropriately and dispose the non-recyclable waste in an environment-friendly manner	-	-	-	-
<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/N6107
<b>NOS Name</b>	Carry out integrated pest and disease management for bamboo crop
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## Qualification Pack

### AGR/N6108: Carry out harvesting, post-harvest processing and marketing of bamboo culms

#### Description

This OS unit is about carrying out harvesting and post-harvest processing and marketing of the bamboo crop.

#### Scope

The scope covers the following :

- Harvest bamboo culms
- Carry out post-harvest processing and store culms
- Market bamboo culms

#### Elements and Performance Criteria

##### *Harvest bamboo culms*

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

- PC1.** maintain the bamboo trees for the recommended duration and check the bamboo culms to ensure their readiness for being harvested
- PC2.** select an appropriate season for harvesting bamboo culms
- PC3.** arrange the necessary hand or machine tools and implements for harvesting bamboo culms, and disinfect them using the approved disinfectants
- PC4.** remove branches extending from the lower nodes of the mature culms to allow convenient harvesting and extraction
- PC5.** harvest mature bamboo culms appropriately using the relevant tools and implements, ensuring no damage to young culms and rhizomes on bamboo trees

##### *Carry out post-harvest processing and store culms*

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

- PC6.** collect and transport the harvested bamboo culms appropriately to avoid scratches or injury to their epidermal layer
- PC7.** undertake air drying of the harvested bamboo culms
- PC8.** select an appropriate storage area for storing culms and prepare it by applying the necessary treatment to remove pests, termites and disease
- PC9.** stack culms vertically in the storage area

##### *Market bamboo culms*

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

- PC10.** select the appropriate time for the sale of harvested bamboo culms considering their seasonal demand
- PC11.** identify the relevant buyers or market such as eMandi and local traders for the harvested bamboo culms
- PC12.** negotiate the price with the buyer(s)

## Qualification Pack

- PC13.** arrange for transportation of bamboo culms to the buyer(s) in an appropriate and safe mode of transport
- PC14.** process the payment using the buyer-preferred e-payment method
- PC15.** maintain the manual and/ or electronic record of sales and payments using the physical registers and/ or the relevant computer application

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the signs of maturity of bamboo culms for being harvested
- KU2.** the appropriate season for harvesting bamboo culms
- KU3.** use of the appropriate hand and mechanical tools and implements for harvesting bamboo culms
- KU4.** the importance of disinfecting the tools and implements before using them
- KU5.** the importance of removing branches extending from the lower nodes of the mature culms to allow convenient harvesting, cutting and extraction
- KU6.** the process of harvesting mature bamboo culms and the importance of ensuring no damage to young culms and rhizomes on bamboo trees
- KU7.** the importance of collecting and transporting the harvested bamboo culms appropriately to avoid scratches or injury to their epidermal layer
- KU8.** the process of air-drying the harvested bamboo culms
- KU9.** the selection of an appropriate storage area for storing culms and the process of applying the necessary treatment to remove pests, termites and disease from the storage area
- KU10.** the importance of stacking bamboo culms vertically in the storage area
- KU11.** the appropriate time for selling the harvested bamboo culms considering their seasonal demand
- KU12.** the process of identifying relevant buyers or markets such as e-Mandi and local traders for the harvested bamboo culms
- KU13.** how to negotiate the price with the buyer(s)
- KU14.** an appropriate mode of transportation for transporting bamboo culms
- KU15.** how to use different types of e-payment methods
- KU16.** how to maintain the record of sales and payments manually and electronically

## Generic Skills (GS)

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

- GS1.** maintain work-related records
- GS2.** read the relevant health and safety instructions
- GS3.** listen attentively to understand the information being shared
- GS4.** communicate politely and professionally
- GS5.** plan and prioritise tasks to ensure timely completion

## Qualification Pack

- GS6.** identify possible disruptions to work and take appropriate preventive measures
- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** evaluate all possible solutions to a problem to select the best one
- GS9.** co-ordinate with the co-workers to achieve the work objectives

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Harvest bamboo culms</i>	<b>10</b>	<b>12</b>	-	<b>8</b>
<b>PC1.</b> maintain the bamboo trees for the recommended duration and check the bamboo culms to ensure their readiness for being harvested	-	-	-	-
<b>PC2.</b> select an appropriate season for harvesting bamboo culms	-	-	-	-
<b>PC3.</b> arrange the necessary hand or machine tools and implements for harvesting bamboo culms, and disinfect them using the approved disinfectants	-	-	-	-
<b>PC4.</b> remove branches extending from the lower nodes of the mature culms to allow convenient harvesting and extraction	-	-	-	-
<b>PC5.</b> harvest mature bamboo culms appropriately using the relevant tools and implements, ensuring no damage to young culms and rhizomes on bamboo trees	-	-	-	-
<i>Carry out post-harvest processing and store culms</i>	<b>8</b>	<b>12</b>	-	<b>10</b>
<b>PC6.</b> collect and transport the harvested bamboo culms appropriately to avoid scratches or injury to their epidermal layer	-	-	-	-
<b>PC7.</b> undertake air drying of the harvested bamboo culms	-	-	-	-
<b>PC8.</b> select an appropriate storage area for storing culms and prepare it by applying the necessary treatment to remove pests, termites and disease	-	-	-	-
<b>PC9.</b> stack culms vertically in the storage area	-	-	-	-
<i>Market bamboo culms</i>	<b>12</b>	<b>16</b>	-	<b>12</b>
<b>PC10.</b> select the appropriate time for the sale of harvested bamboo culms considering their seasonal demand	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> identify the relevant buyers or market such as eMandi and local traders for the harvested bamboo culms	-	-	-	-
<b>PC12.</b> negotiate the price with the buyer(s)	-	-	-	-
<b>PC13.</b> arrange for transportation of bamboo culms to the buyer(s) in an appropriate and safe mode of transport	-	-	-	-
<b>PC14.</b> process the payment using the buyer-preferred e-payment method	-	-	-	-
<b>PC15.</b> maintain the manual and/ or electronic record of sales and payments using the physical registers and/ or the relevant computer application	-	-	-	-
<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/N6108
<b>NOS Name</b>	Carry out harvesting, post-harvest processing and marketing of bamboo culms
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro Forestry Management
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## 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>-</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>-</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>	4.0
<b>Last Reviewed Date</b>	22/10/2024
<b>Next Review Date</b>	22/10/2027
<b>NSQC Clearance Date</b>	22/10/2024

## Qualification Pack

### DGT/VSQ/N0101: Employability Skills (30 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
- 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.** understand the significance of employability skills in meeting the job requirements

##### *Constitutional values – Citizenship*

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

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

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

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

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

##### *Basic English Skills*

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

**PC4.** speak with others using some basic English phrases or sentences

##### *Communication Skills*

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

**PC5.** follow good manners while communicating with others

**PC6.** work with others in a team

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### *Diversity & Inclusion*

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

**PC7.** communicate and behave appropriately with all genders and PwD

**PC8.** report any issues related to sexual harassment

### *Financial and Legal Literacy*

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

**PC9.** use various financial products and services safely and securely

**PC10.** calculate income, expenses, savings etc.

**PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

### *Essential Digital Skills*

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

**PC12.** operate digital devices and use its features and applications securely and safely

**PC13.** use internet and social media platforms securely and safely

### *Entrepreneurship*

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

**PC14.** identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges

### *Customer Service*

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

**PC16.** identify different types of customers

**PC17.** identify customer needs and address them appropriately

**PC18.** follow appropriate hygiene and grooming standards

### *Getting ready for apprenticeship & Jobs*

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

**PC19.** create a basic biodata

**PC20.** search for suitable jobs and apply

**PC21.** identify and register apprenticeship opportunities as per requirement

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**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 basic spoken English language

**KU6.** Do and dont of effective communication

**KU7.** inclusivity and its importance

**KU8.** different types of disabilities and appropriate communication and behaviour towards PwD

**KU9.** different types of financial products and services

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- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

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

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation 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> understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values – Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>1</b>	<b>3</b>	-	-
<b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC4.</b> speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC5.</b> follow good manners while communicating with others	-	-	-	-
<b>PC6.</b> work with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>1</b>	-	-
<b>PC7.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC8.</b> report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>3</b>	<b>4</b>	-	-
<b>PC9.</b> use various financial products and services safely and securely	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> calculate income, expenses, savings etc.	-	-	-	-
<b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	<b>4</b>	<b>6</b>	-	-
<b>PC12.</b> operate digital devices and use its features and applications securely and safely	-	-	-	-
<b>PC13.</b> use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	<b>3</b>	<b>5</b>	-	-
<b>PC14.</b> identify and assess opportunities for potential business	-	-	-	-
<b>PC15.</b> identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	<b>2</b>	<b>2</b>	-	-
<b>PC16.</b> identify different types of customers	-	-	-	-
<b>PC17.</b> identify customer needs and address them appropriately	-	-	-	-
<b>PC18.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>1</b>	<b>3</b>	-	-
<b>PC19.</b> create a basic biodata	-	-	-	-
<b>PC20.</b> search for suitable jobs and apply	-	-	-	-
<b>PC21.</b> identify and register apprenticeship opportunities as per requirement	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0101
<b>NOS Name</b>	Employability Skills (30 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	2
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	29/03/2023
<b>Next Review Date</b>	29/03/2026
<b>NSQC Clearance Date</b>	29/03/2023

## Assessment Guidelines and Assessment Weightage

### 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

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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

### Minimum Aggregate Passing % at QP Level : 50

**(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/N6101.Propagate bamboo saplings in the nursery	30	40	-	30	100	15
AGR/N6103.Select the bamboo variety and site, and prepare the field	30	40	-	30	100	15
AGR/N6104.Transplant and maintain the bamboo saplings	30	40	-	30	100	10
AGR/N6105.Carry out pruning and weeding in bamboo crop	30	40	-	30	100	10
AGR/N6106.Carry out irrigation, nutrient management and intercropping	30	40	-	30	100	10
AGR/N6107.Carry out integrated pest and disease management for bamboo crop	30	40	-	30	100	15
AGR/N6108.Carry out harvesting, post-harvest processing and marketing of bamboo culms	30	40	-	30	100	15
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	5
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	5

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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
<b>Total</b>	<b>270</b>	<b>335</b>	<b>-</b>	<b>245</b>	<b>850</b>	<b>100</b>

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### 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>PPE</b>	Personal Protective Equipment

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### 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.