

Qualification Pack



Sericulturist

QP Code: AGR/Q5201

Version: 3.0

NSQF Level: 3

Agriculture Skill Council of India || 6th Floor, GNG Tower, Plot No. 10, Sector -44, Gurgaon
Haryana-122004 || email:shrinkhala@asci-india.com

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AGR/Q5201: Sericulturist

Brief Job Description

A Sericulturist is responsible for rearing silkworms to obtain raw silk fiber from them. The individual sets up a rearing house; procure silkworm eggs; arrange to hatch them; hatches and maintain silkworm during their development staged; harvest and processes cocoon to extract raw silk fibre from them; and markets the raw silk fibre and cocoon. The person also propagates and maintains mulberry trees for mulberry leaves to feed silkworms.

Personal Attributes

The person must be physically fit to work for long durations. The individual must have attention to detail with good eyesight. The person must also know how to read and write.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [AGR/N5201: Cultivate mulberry trees for feeding silkworms](#)
2. [AGR/N5202: Prepare for rearing silkworms](#)
3. [AGR/N5203: Incubate silkworm eggs and rear larvae](#)
4. [AGR/N5205: Perform pest and disease management during sericulture](#)
5. [AGR/N5204: Maintain pupae, harvest and process cocoons, and carry out marketing activities](#)
6. [AGR/N9903: Maintain health and safety at the workplace](#)
7. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	Agriculture Allied Activities
Occupation	Silkworm Rearing
Country	India
NSQF Level	3

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Credits	9
Aligned to NCO/ISCO/ISIC Code	NCO-2015/6123.0201
Minimum Educational Qualification & Experience	8th Class with 1 Year of experience relevant experience OR 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
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	16 Years
Last Reviewed On	NA
Next Review Date	27/01/2025
NSQC Approval Date	27/01/2022
Version	3.0
Reference code on NQR	2022/AGR/ASCI/06524
NQR Version	1.0

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AGR/N5201: Cultivate mulberry trees for feeding silkworms

Description

This OS unit is about cultivating mulberry trees for mulberry leaves to feed silkworms.

Scope

The scope covers the following :

- Select the site for mulberry cultivation
- Prepare the field for mulberry cultivation
- Propagate mulberry saplings
- Transplant the saplings
- Maintain the mulberry trees
- Harvest mulberry leaves

Elements and Performance Criteria

Select the site for mulberry cultivation

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

- PC1.** select the appropriate mulberry varieties to be grown for silkworm feed
- PC2.** select the site for mulberry cultivation, ensuring it has the recommended temperature, Relative Humidity (RH), sunlight exposure and rainfall required for the cultivation of selected mulberry varieties
- PC3.** check that the site is situated away from any factories, highways, and any sources of effluents
- PC4.** ensure the availability of a reliable source of clean water, labour and other required inputs at the site

Prepare the field for mulberry cultivation

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

- PC5.** remove tree stumps, roots, weeds, debris and waste materials from the site
- PC6.** carry out tilling to the recommended depth and level the field using the appropriate farm machineries and implements
- PC7.** carry out soil fumigation and apply the recommended chemical treatment to the soil to eliminate any harmful organisms such as nematodes
- PC8.** water the soil with the recommended quantity after the prescribed period to wash away the chemicals applied to it
- PC9.** sample the soil from the site and coordinate with an approved laboratory to test its macro and micronutrients levels
- PC10.** apply the organic and/or inorganic treatment recommended by the lab in an appropriate quantity to improve the fertility of the soil and adjust its pH level
- PC11.** mulch the soil with compost to loosen it
- PC12.** create drains in the field for effective drainage and harvesting of water

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PC13. install an appropriate irrigation or fertigation system in the field such as flat bed, and ridges and furrow

PC14. erect fences around the field to protect it from external threats

Propagate mulberry saplings

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

PC15. procure seeds and cuttings of the selected mulberry varieties to be grown in the required quantity from an approved vendor or extract cuttings from the wild, ensuring the cuttings have the recommended dimensions

PC16. sort out the damaged and unsuitable seeds and cuttings

PC17. treat the seeds and cuttings using the recommended insecticide, pesticide or fungicide as per the prescription

PC18. prepare the raised, level or sunken nursery bed as appropriate

PC19. plant the treated seeds and cuttings in the nursery bed, maintaining the recommended planting depth and density

PC20. maintain the recommended temperature to induce the germination of seeds

PC21. irrigate the nursery bed with the recommended quantity of water as per the irrigation schedule

PC22. follow the recommended practices to prevent root and collar rot in saplings

PC23. apply the recommended organic and inorganic fertilisers in an appropriate quantity for the healthy growth of saplings

PC24. follow the recommended preventive and remedial practices to protect the saplings from relevant pests and disease

PC25. carry out hoeing and weeding in the nursery bed at appropriate intervals

PC26. check the saplings for maturity and harvest the mature saplings using the appropriate tools and implements

PC27. store the harvested saplings at the recommended temperature and humidity, ensuring hygienic conditions

Transplant the saplings

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

PC28. transplant saplings in the field, maintaining the recommended planting depth and density

PC29. water the saplings with the recommended quantity and apply the recommended organic or inorganic fertiliser immediately after transplanting

PC30. protect the saplings from direct sunlight and strong winds during the early stages of their growth

Maintain the mulberry trees

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

PC31. apply the recommended organic and inorganic fertilisers to the field in the recommended required quantity at appropriate intervals

PC32. irrigate the mulberry trees with the recommended quantity of water as per the irrigation schedule

PC33. follow the recommended preventive measures to protect the saplings from pests and disease

PC34. identify the signs of pest and disease infestation in mulberry trees and apply the recommended treatment as per the prescription

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- PC35.** drain out excess water from the field
- PC36.** prune the mulberry trees, as required
- PC37.** mulch the field to prevent the growth of weeds
- PC38.** carry out weeding and hoeing at appropriate intervals

Harvest mulberry leaves

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

- PC39.** check the mulberry leaves for signs of maturity and adequate growth for harvesting
- PC40.** arrange the appropriate tools and implements for harvesting mulberry leaves
- PC41.** harvest tender mulberry leaves manually or mechanically, along with branches or shoots, as appropriate at the recommended time of the day
- PC42.** collect the harvested leaves in appropriate material such as wet gunny bags
- PC43.** store the harvested leaves in the leaf preservation chamber or a dark storage area, ensuring hygiene along with the recommended temperature and humidity

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the criteria for selecting a mulberry variety to be grown for silkworm feed such as the agro-climatic conditions at the site
- KU2.** the criteria for selecting a site for mulberry cultivation, such as temperature, Relative Humidity (RH), sunlight exposure and rainfall, etc.
- KU3.** the importance of ensuring the site is situated away from any factories, highways, source of effluents, etc.
- KU4.** various inputs required for mulberry cultivation such as water, labour, fertilisers, insecticides, pesticides, etc.
- KU5.** the process of preparing the field for mulberry cultivation, such as clearing, tilling and levelling the field: soil fumigation: soil sampling, testing and application of necessary fertilisers, and mulching the field
- KU6.** the importance and process of creating drains for the field for effective drainage and harvesting of water
- KU7.** the process of installing an appropriate irrigation or fertigation system in the field such as flat bed, ridges and furrow, etc.
- KU8.** the importance of using mulberry cuttings of recommended dimensions for propagation
- KU9.** the process of treating the seeds and cuttings using the recommended insecticide, pesticide or fungicide
- KU10.** the process of preparing the raised, level or sunken nursery bed
- KU11.** the process of planting seeds and cuttings in the nursery bed and different planting methods such as paired row system, pit system, etc.
- KU12.** the importance of maintaining the recommended planting depth, density and temperature in the nursery bed
- KU13.** the recommended irrigation schedule for irrigating mulberry saplings
- KU14.** the recommended practices to be followed to prevent root and collar rot in saplings
- KU15.** the recommended organic and inorganic fertilisers to be applied to mulberry saplings

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- KU16.** the recommended preventive and remedial practices to be followed to protect mulberry saplings from relevant pests and disease
- KU17.** the process of carrying out hoeing and weeding in the nursery bed
- KU18.** the signs of maturity of mulberry saplings and the process of harvesting them using the appropriate tools and implements
- KU19.** the recommended temperature and humidity for storing the harvested mulberry saplings
- KU20.** the process of transplanting saplings in the field and the immediate care they need after being transplanted
- KU21.** the importance and ways of protecting the saplings from direct sunlight and strong winds during the early stages of their growth
- KU22.** the recommended organic and inorganic fertilisers to be applied to mulberry trees for their healthy growth
- KU23.** water requirements of mulberry trees during different stages of their growth
- KU24.** the recommended preventive measures to be followed to protect mulberry saplings from pests and disease
- KU25.** the signs of pest and disease infestation in mulberry trees and the recommended treatment to be applied to cure them
- KU26.** the importance of ensuring no waterlogging in mulberry field
- KU27.** the process of pruning mulberry trees
- KU28.** the importance of mulching to prevent the growth of weeds and the process of weeding
- KU29.** the signs of maturity of mulberry leaves
- KU30.** the process of harvesting mulberry leaves manually or mechanically using the appropriate tools and implements such as manual or power-operated stem cutting machine
- KU31.** the recommended temperature and humidity for storing the harvested mulberry leaves to preserve their freshness

Generic Skills (GS)

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

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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select the site for mulberry cultivation</i>	3	4	-	3
PC1. select the appropriate mulberry varieties to be grown for silkworm feed	-	-	-	-
PC2. select the site for mulberry cultivation, ensuring it has the recommended temperature, Relative Humidity (RH), sunlight exposure and rainfall required for the cultivation of selected mulberry varieties	-	-	-	-
PC3. check that the site is situated away from any factories, highways, and any sources of effluents	-	-	-	-
PC4. ensure the availability of a reliable source of clean water, labour and other required inputs at the site	-	-	-	-
<i>Prepare the field for mulberry cultivation</i>	8	10	-	8
PC5. remove tree stumps, roots, weeds, debris and waste materials from the site	-	-	-	-
PC6. carry out tilling to the recommended depth and level the field using the appropriate farm machineries and implements	-	-	-	-
PC7. carry out soil fumigation and apply the recommended chemical treatment to the soil to eliminate any harmful organisms such as nematodes	-	-	-	-
PC8. water the soil with the recommended quantity after the prescribed period to wash away the chemicals applied to it	-	-	-	-
PC9. sample the soil from the site and coordinate with an approved laboratory to test its macro and micronutrients levels	-	-	-	-
PC10. apply the organic and/or inorganic treatment recommended by the lab in an appropriate quantity to improve the fertility of the soil and adjust its pH level	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. mulch the soil with compost to loosen it	-	-	-	-
PC12. create drains in the field for effective drainage and harvesting of water	-	-	-	-
PC13. install an appropriate irrigation or fertigation system in the field such as flat bed, and ridges and furrow	-	-	-	-
PC14. erect fences around the field to protect it from external threats	-	-	-	-
<i>Propagate mulberry saplings</i>	10	12	-	10
PC15. procure seeds and cuttings of the selected mulberry varieties to be grown in the required quantity from an approved vendor or extract cuttings from the wild, ensuring the cuttings have the recommended dimensions	-	-	-	-
PC16. sort out the damaged and unsuitable seeds and cuttings	-	-	-	-
PC17. treat the seeds and cuttings using the recommended insecticide, pesticide or fungicide as per the prescription	-	-	-	-
PC18. prepare the raised, level or sunken nursery bed as appropriate	-	-	-	-
PC19. plant the treated seeds and cuttings in the nursery bed, maintaining the recommended planting depth and density	-	-	-	-
PC20. maintain the recommended temperature to induce the germination of seeds	-	-	-	-
PC21. irrigate the nursery bed with the recommended quantity of water as per the irrigation schedule	-	-	-	-
PC22. follow the recommended practices to prevent root and collar rot in saplings	-	-	-	-
PC23. apply the recommended organic and inorganic fertilisers in an appropriate quantity for the healthy growth of saplings	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC24. follow the recommended preventive and remedial practices to protect the saplings from relevant pests and disease	-	-	-	-
PC25. carry out hoeing and weeding in the nursery bed at appropriate intervals	-	-	-	-
PC26. check the saplings for maturity and harvest the mature saplings using the appropriate tools and implements	-	-	-	-
PC27. store the harvested saplings at the recommended temperature and humidity, ensuring hygienic conditions	-	-	-	-
<i>Transplant the saplings</i>	2	4	-	2
PC28. transplant saplings in the field, maintaining the recommended planting depth and density	-	-	-	-
PC29. water the saplings with the recommended quantity and apply the recommended organic or inorganic fertiliser immediately after transplanting	-	-	-	-
PC30. protect the saplings from direct sunlight and strong winds during the early stages of their growth	-	-	-	-
<i>Maintain the mulberry trees</i>	4	6	-	4
PC31. apply the recommended organic and inorganic fertilisers to the field in the recommended required quantity at appropriate intervals	-	-	-	-
PC32. irrigate the mulberry trees with the recommended quantity of water as per the irrigation schedule	-	-	-	-
PC33. follow the recommended preventive measures to protect the saplings from pests and disease	-	-	-	-
PC34. identify the signs of pest and disease infestation in mulberry trees and apply the recommended treatment as per the prescription	-	-	-	-
PC35. drain out excess water from the field	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC36. prune the mulberry trees, as required	-	-	-	-
PC37. mulch the field to prevent the growth of weeds	-	-	-	-
PC38. carry out weeding and hoeing at appropriate intervals	-	-	-	-
<i>Harvest mulberry leaves</i>	3	4	-	3
PC39. check the mulberry leaves for signs of maturity and adequate growth for harvesting	-	-	-	-
PC40. arrange the appropriate tools and implements for harvesting mulberry leaves	-	-	-	-
PC41. harvest tender mulberry leaves manually or mechanically, along with branches or shoots, as appropriate at the recommended time of the day	-	-	-	-
PC42. collect the harvested leaves in appropriate material such as wet gunny bags	-	-	-	-
PC43. store the harvested leaves in the leaf preservation chamber or a dark storage area, ensuring hygiene along with the recommended temperature and humidity	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N5201
NOS Name	Cultivate mulberry trees for feeding silkworms
Sector	Agriculture
Sub-Sector	Agriculture Allied Activities
Occupation	Silkworm Rearing
NSQF Level	3
Credits	1
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N5202: Prepare for rearing silkworms

Description

This OS unit is about preparing to rear silkworms.

Scope

The scope covers the following :

- Arrange the required resources
- Set up the rearing house
- Disinfect and precondition the rearing house, tools, implements and equipment
- Prepare mulberry leaves for feeding

Elements and Performance Criteria

Arrange the required resources

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

- PC1.** select an approved silkworm egg production unit and vendor based on the quality and price of silkworm eggs, tools, implements, equipment and other resources
- PC2.** procure silkworm eggs, tools, implements, equipment, rearing house construction material as per the requirement
- PC3.** arrange for safe and hygienic transportation of silkworm eggs under the recommended temperature and humidity
- PC4.** spread the silkworm loose eggs uniformly over appropriate material such as paraffin papers or wet foam pads and cover them to maintain them under the recommended temperature in the storage area
- PC5.** maintain the record of purchase

Set up the rearing house

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

- PC6.** select a site with the recommended temperature and humidity for the construction of rearing house for rearing silkworms, ensuring it is not damp and protected from direct sunlight and radiation
- PC7.** check the site does not experience storms and heavy rainfall
- PC8.** coordinate with an expert for the construction of the rearing house, ensuring adequate space and number of windows for ventilation depending on the brushing capacity and the method of rearing
- PC9.** ensure the rearing house has temperature control equipment to be used during unfavourable weather along with provision for making it air-tight for the purpose of being disinfected, whenever required
- PC10.** arrange for effective drainage of water from the rearing house to avoid dampness

Disinfect and precondition the rearing house, tools, implements and equipment

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

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- PC11.** clean and disinfect the rearing house, tools, implements and equipment using the recommended disinfectant such as chlorine dioxide, bleach, slaked lime, using the appropriate Personal Protective Equipment (PPE)
- PC12.** maintain the floor in the rearing house dry
- PC13.** ensure disinfection and preconditioning of the rearing house, tools, implements and equipment is carried out within the recommended period prior to starting the rearing activities

Prepare mulberry leaves for feeding

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

- PC14.** chop the mulberry leaves uniformly for feeding larvae
- PC15.** spray water on the chopped mulberry leaves at regular intervals or cover them with paraffin paper or wet foam pads to preserve their freshness

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the use of relevant PPE, tools and equipment such as disinfection mask, protective gumboots, sprayer, room heater, water air cooler, kerosene blowlamp, wet and dry thermometer, forceps, etc.
- KU2.** various items and accessories required for rearing silkworms such as paraffin paper, formalin, bleaching powder, lime powder, slides and coverslips, gunny cloth, egg transportation box, egg incubation chamber and frame, etc.
- KU3.** the process of procuring silkworm eggs, tools, implements, equipment and other resources
- KU4.** the importance of arranging safe and hygienic transportation and storage of silkworm eggs under the recommended temperature and humidity
- KU5.** the criteria for selecting a site for the construction of the rearing house
- KU6.** the process of constructing the rearing house and the importance of ensuring adequate space and number of windows for ventilation in it
- KU7.** the importance of having temperature control equipment in the rearing house to control temperature during unfavourable weather along with provision for making it air-tight for the purpose of disinfecting it
- KU8.** the importance of ensuring effective drainage of water in the rearing house
- KU9.** the importance and process of disinfecting and preconditioning the rearing house, tools, implements and equipment, using the recommended disinfectant such as chlorine dioxide, bleach, slaked lime, and the appropriate Personal Protective Equipment (PPE) to be used for the purpose
- KU10.** the importance of using the trays of recommended dimensions during the rearing of young larvae
- KU11.** the process of preparing mulberry leaves for feeding silkworms and ensuring the leaves are succulent, and rich in nutrients and moisture
- KU12.** the use of a leaf preservation chamber for maintaining the freshness of mulberry leaves

Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** communicate politely and professionally
- GS3.** read the relevant literature to learn about the latest developments in the field of work
- GS4.** listen attentively to understand the information/ instructions being shared
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** co-ordinate with the co-workers to achieve the work objectives
- 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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Arrange the required resources</i>	10	12	-	10
PC1. select an approved silkworm egg production unit and vendor based on the quality and price of silkworm eggs, tools, implements, equipment and other resources	-	-	-	-
PC2. procure silkworm eggs, tools, implements, equipment, rearing house construction material as per the requirement	-	-	-	-
PC3. arrange for safe and hygienic transportation of silkworm eggs under the recommended temperature and humidity	-	-	-	-
PC4. spread the silkworm loose eggs uniformly over appropriate material such as paraffin papers or wet foam pads and cover them to maintain them under the recommended temperature in the storage area	-	-	-	-
PC5. maintain the record of purchase	-	-	-	-
<i>Set up the rearing house</i>	11	14	-	11
PC6. select a site with the recommended temperature and humidity for the construction of rearing house for rearing silkworms, ensuring it is not damp and protected from direct sunlight and radiation	-	-	-	-
PC7. check the site does not experience storms and heavy rainfall	-	-	-	-
PC8. coordinate with an expert for the construction of the rearing house, ensuring adequate space and number of windows for ventilation depending on the brushing capacity and the method of rearing	-	-	-	-
PC9. ensure the rearing house has temperature control equipment to be used during unfavourable weather along with provision for making it air-tight for the purpose of being disinfected, whenever required	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. arrange for effective drainage of water from the rearing house to avoid dampness	-	-	-	-
<i>Disinfect and precondition the rearing house, tools, implements and equipment</i>	6	9	-	6
PC11. clean and disinfect the rearing house, tools, implements and equipment using the recommended disinfectant such as chlorine dioxide, bleach, slaked lime, using the appropriate Personal Protective Equipment (PPE)	-	-	-	-
PC12. maintain the floor in the rearing house dry	-	-	-	-
PC13. ensure disinfection and preconditioning of the rearing house, tools, implements and equipment is carried out within the recommended period prior to starting the rearing activities	-	-	-	-
<i>Prepare mulberry leaves for feeding</i>	3	5	-	3
PC14. chop the mulberry leaves uniformly for feeding larvae	-	-	-	-
PC15. spray water on the chopped mulberry leaves at regular intervals or cover them with paraffin paper or wet foam pads to preserve their freshness	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N5202
NOS Name	Prepare for rearing silkworms
Sector	Agriculture
Sub-Sector	Agriculture Allied Activities
Occupation	Silkworm Rearing
NSQF Level	3
Credits	1
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N5203: Incubate silkworm eggs and rear larvae

Description

This OS unit is about incubating silkworm eggs and rearing them to the larval stage

Scope

The scope covers the following :

- Preserve and incubate the silkworm eggs
- Carry out brushing and feed the larvae
- Maintain the rearing bed
- Ensure smooth moulting

Elements and Performance Criteria

Preserve and incubate the silkworm eggs

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

- PC1.** preserve the silkworm eggs in an earthen pot for the recommended duration prior to incubation
- PC2.** maintain the silkworm eggs in a dark storage area at the head pigmentation stage and expose them to light, when hatching is expected
- PC3.** incubate the silkworm eggs in the incubator at the recommended temperature, to hatch them into larvae

Carry out brushing and feed the larvae

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

- PC4.** carry out brushing to separate the hatched larvae from their eggshells, using the relevant implement and transfer them to rearing trays covered with paraffin paper
- PC5.** feed the larvae with the recommended quantity of tender and uniformly-chopped mulberry leaves, ensuring the leaves are rich in nutrients and moisture
- PC6.** follow the recommended practices to preserve the feed moisture
- PC7.** follow the recommended feeding schedule for the optimum growth of larvae

Maintain the rearing bed

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

- PC8.** remove the silkworm excreta and leftover leaves from the rearing bed and dispose them safely
- PC9.** follow the recommended practices to prevent insects from coming to the rearing bed
- PC10.** aerate the rearing bed appropriately
- PC11.** maintain the recommended temperature and humidity, along with adequate space on the rearing bed for easy movement of larvae and their healthy growth
- PC12.** maintain dryness in the rearing bed by applying lime during the moulting of larvae
- PC13.** maintain larvae in the rearing bed for the recommended duration until their development into pupae

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Ensure smooth moulting

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

PC14. identify the onset of moulting and regulate the larvae feed accordingly

PC15. ensure the larvae are not disturbed during the process

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the importance of preserving the silkworm eggs in an earthen pot for the recommended duration prior to incubation
- KU2.** the importance of maintaining the silkworm eggs in a dark storage area at the head pigmentation stage and exposing them to light at the appropriate time
- KU3.** the process of incubating silkworm eggs in the incubator at the temperature required for hatching them into larvae
- KU4.** how to carry out brushing to separate the hatched larvae from their eggshells, using the relevant implement and transfer
- KU5.** the use of a net of the recommended mesh size for feeding the larvae
- KU6.** the importance of feeding the larvae with the recommended quantity of tender and uniformly-chopped mulberry leaves, and ensuring the leaves are rich in nutrients and moisture
- KU7.** the recommended feeding schedule to be followed for the optimum growth of larvae
- KU8.** the importance and process of maintaining cleanliness in the rearing bed
- KU9.** the recommended practices to be followed to prevent insects from coming to the rearing bed
- KU10.** the process of aerating the rearing bed
- KU11.** the recommended temperature and humidity, and space to be maintained on the rearing bed
- KU12.** the use of lime for maintaining dryness in the rearing bed
- KU13.** the recommended duration for maintaining larvae in the rearing bed until their development into pupae
- KU14.** how to detect moulting in larvae
- KU15.** the importance and ways of maintaining the recommended temperature and humidity in the rearing bed under different climatic conditions
- KU16.** the importance of stopping or resuming feeding of larvae during moulting for the uniform growth of silkworms, and maintaining the rearing bed thin and dry
- KU17.** the process of moulting of larvae and the importance of ensuring no disturbance to them during the process
- KU18.** different stages of growth of larvae and the terminology used to refer to them
- KU19.** the importance of using mulberry leaves of medium maturity or coarse leaves according to the stages of growth of larvae
- KU20.** how to identify mature mulberry leaves and the importance of not using them to prevent disease outbreak
- KU21.** use of the recommended rearing bed disinfectants

Qualification Pack

Generic Skills (GS)

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

- GS1.** write work-related notes and maintain relevant records
- GS2.** read the relevant literature to get the latest updates about the field of work
- GS3.** listen attentively to understand the information/ instructions being shared
- GS4.** communicate clearly and politely
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** evaluate all possible solutions to a problem to select the best one
- GS7.** co-ordinate with the co-workers to achieve work objectives
- 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>Preserve and incubate the silkworm eggs</i>	6	8	-	6
PC1. preserve the silkworm eggs in an earthen pot for the recommended duration prior to incubation	-	-	-	-
PC2. maintain the silkworm eggs in a dark storage area at the head pigmentation stage and expose them to light, when hatching is expected	-	-	-	-
PC3. incubate the silkworm eggs in the incubator at the recommended temperature, to hatch them into larvae	-	-	-	-
<i>Carry out brushing and feed the larvae</i>	9	12	-	9
PC4. carry out brushing to separate the hatched larvae from their eggshells, using the relevant implement and transfer them to rearing trays covered with paraffin paper	-	-	-	-
PC5. feed the larvae with the recommended quantity of tender and uniformly-chopped mulberry leaves, ensuring the leaves are rich in nutrients and moisture	-	-	-	-
PC6. follow the recommended practices to preserve the feed moisture	-	-	-	-
PC7. follow the recommended feeding schedule for the optimum growth of larvae	-	-	-	-
<i>Maintain the rearing bed</i>	11	15	-	11
PC8. remove the silkworm excreta and leftover leaves from the rearing bed and dispose them safely	-	-	-	-
PC9. follow the recommended practices to prevent insects from coming to the rearing bed	-	-	-	-
PC10. aerate the rearing bed appropriately	-	-	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. maintain the recommended temperature and humidity, along with adequate space on the rearing bed for easy movement of larvae and their healthy growth	-	-	-	-
PC12. maintain dryness in the rearing bed by applying lime during the moulting of larvae	-	-	-	-
PC13. maintain larvae in the rearing bed for the recommended duration until their development into pupae	-	-	-	-
<i>Ensure smooth moulting</i>	4	5	-	4
PC14. identify the onset of moulting and regulate the larvae feed accordingly	-	-	-	-
PC15. ensure the larvae are not disturbed during the process	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N5203
NOS Name	Incubate silkworm eggs and rear larvae
Sector	Agriculture
Sub-Sector	Agriculture Allied Activities
Occupation	Silkworm Rearing
NSQF Level	3
Credits	2
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

Qualification Pack

AGR/N5205: Perform pest and disease management during sericulture

Description

This OS unit is about ensuring hygiene in the rearing house and performing pest and disease management during sericulture.

Scope

The scope covers the following :

- Maintain hygiene in the rearing house
- Perform pest and disease management

Elements and Performance Criteria

Maintain hygiene in the rearing house

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

- PC1.** maintain cleanliness along with recommended temperature and humidity in the rearing house to prevent pest and disease outbreak
- PC2.** apply the recommended chemical or solution in the rearing house to prevent pests and disease, using the appropriate PPE
- PC3.** ensure recommended space among the stocked silkworms for their healthy growth

Perform pest and disease management

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

- PC4.** follow the recommended practices to prevent infestation by silkworm pests such as beetles, ants, straw mites, vertebrate predators, etc.
- PC5.** check the mulberry leaves for pest infestation before feeding the silkworms, and replace the infested and dry leaves
- PC6.** monitor the silkworms regularly to identify the signs of pests and disease infestation
- PC7.** sample the silkworms and coordinate with an approved laboratory to determine diseases and disorders in silkworms
- PC8.** quarantine the unhealthy silkworms to treat them, and prevent them from infecting healthy silkworms
- PC9.** treat the unhealthy silkworms with the treatment prescribed by the laboratory
- PC10.** monitor the silkworms being treated and stock them with healthy silkworms on full recovery
- PC11.** maintain the record of treatment used to treat silkworms
- PC12.** identify, segregate and dispose the moribund and dead silkworms

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the importance of maintaining cleanliness along with appropriate temperature and humidity in the rearing house

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- KU2.** the recommended treatment to be applied in the rearing house to prevent pests and disease
- KU3.** the use of relevant PPE
- KU4.** the recommended practices to be followed to prevent infestation by silkworm pests such as beetles, ants, straw mites, vertebrate predators, etc.
- KU5.** the signs of pests and disease infestation in silkworms
- KU6.** importance and process of coordinating with an approved laboratory to determine diseases and disorders in silkworms
- KU7.** the process of quarantining the unhealthy silkworms and treating them with the treatment prescribed by the laboratory
- KU8.** the signs of recovery in unhealthy silkworms
- KU9.** the importance and process of maintaining the record of treatment used to treat silkworms
- KU10.** the process of identifying, segregating and disposing the moribund and dead silkworms

Generic Skills (GS)

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

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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain hygiene in the rearing house</i>	10	14	-	10
PC1. maintain cleanliness along with recommended temperature and humidity in the rearing house to prevent pest and disease outbreak	-	-	-	-
PC2. apply the recommended chemical or solution in the rearing house to prevent pests and disease, using the appropriate PPE	-	-	-	-
PC3. ensure recommended space among the stocked silkworms for their healthy growth	-	-	-	-
<i>Perform pest and disease management</i>	20	26	-	20
PC4. follow the recommended practices to prevent infestation by silkworm pests such as beetles, ants, straw mites, vertebrate predators, etc.	-	-	-	-
PC5. check the mulberry leaves for pest infestation before feeding the silkworms, and replace the infested and dry leaves	-	-	-	-
PC6. monitor the silkworms regularly to identify the signs of pests and disease infestation	-	-	-	-
PC7. sample the silkworms and coordinate with an approved laboratory to determine diseases and disorders in silkworms	-	-	-	-
PC8. quarantine the unhealthy silkworms to treat them, and prevent them from infecting healthy silkworms	-	-	-	-
PC9. treat the unhealthy silkworms with the treatment prescribed by the laboratory	-	-	-	-
PC10. monitor the silkworms being treated and stock them with healthy silkworms on full recovery	-	-	-	-
PC11. maintain the record of treatment used to treat silkworms	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. identify, segregate and dispose the moribund and dead silkworms	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N5205
NOS Name	Perform pest and disease management during sericulture
Sector	Agriculture
Sub-Sector	Agriculture Allied Activities
Occupation	Silkworm Rearing
NSQF Level	3
Credits	1
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

Qualification Pack

AGR/N5204: Maintain pupae, harvest and process cocoons, and carry out marketing activities

Description

This OS unit is about maintaining pupae until their maturity. It also covers the harvesting and processing of cocoons for extracting silk fibres from them.

Scope

The scope covers the following :

- Stock and prepare pupae for cocoon spinning
- Transfer pupae to moutage for cocoon spinning
- Monitor the cocoon spinning process
- Harvest cocoons and obtain silk threads
- Market the raw silk and cocoons
- Optimise resource utilisation
- Perform waste management

Elements and Performance Criteria

Stock and prepare pupae for cocoon spinning

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

- PC1.** prepare trays of appropriate materials such as bamboo and paper for stocking pupae, ensuring easy absorption of excess moisture
- PC2.** feed pupae with fresh mulberry leaves as per the feeding schedule
- PC3.** apply the recommended chemicals on mulberry leaves in the prescribed quantity for healthy growth of pupae along with uniform spinning of cocoons
- PC4.** remove faeces and leftover mulberry leaves, and disinfect the trays using the approved disinfectant

Transfer pupae to moutage for cocoon spinning

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

- PC5.** collect pupae from the tray after they achieve the required growth, using a net and transfer them to the moutage for spinning cocoons
- PC6.** ensure adequate space on moutage to allow pupae spin cocoon
- PC7.** position the moutage appropriately to prevent staining of cocoons by pupae's urine
- PC8.** identify and remove the unhealthy and dead pupae from the moutage

Monitor the cocoon spinning process

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

- PC9.** maintain the recommended temperature, humidity and light exposure during the spinning process
- PC10.** follow the recommended practices to prevent attacks from predatory ants during the spinning process

Harvest cocoons and obtain silk threads

Qualification Pack

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

- PC11.** check the pupae for the signs of maturity such as colour and hardness
- PC12.** harvest the cocoons containing appropriate quantity with mature pupae in them
- PC13.** expose the cocoons to heat or steam via sunlight exposure or boiling, and undertake the reeling process to separate and obtain raw silk fibre

Market the raw silk and cocoons

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

- PC14.** identify the potential buyers/ markets such as e-trading platforms, cooperatives, local traders, exporters for marketing the harvested raw silk fibre, and cocoons
- PC15.** coordinate and negotiate with the buyers to secure a profitable price for raw silk fibre and cocoons
- PC16.** arrange an appropriate mode of transport for safe and hygienic delivery of raw silk fibre and cocoons to the buyers, under the recommended temperature and humidity
- PC17.** process the payments using the buyer-preferred e-payment method
- PC18.** maintain the manual and/ or electronic record of sales and payments using the physical registers and/ or the relevant computer application

Optimise resource utilisation

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

- PC19.** optimise the usage of water and other resources in various tasks and processes
- PC20.** plug water leakages to prevent its wastage

Perform waste management

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

- PC21.** segregate waste into appropriate categories
- PC22.** dispose the non-recyclable waste in an environment-friendly manner and recycle the recyclable waste appropriately

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the process of preparing trays for stocking pupae, and the recommended materials to be used for the purpose
- KU2.** the process of feeding pupae with fresh mulberry leaves sprayed with the recommended chemicals to ensure healthy growth along with uniform spinning of cocoons
- KU3.** the process of cleaning and disinfecting the pupae trays using the approved disinfectant
- KU4.** the process of collecting pupae from the tray after they achieve the required growth and transferring them to the moutage for spinning cocoons
- KU5.** the importance of ensuring adequate space on moutage to allow pupae to spin cocoon
- KU6.** the importance of positioning the moutage appropriately to prevent staining of cocoons by pupae's urine
- KU7.** the process of identifying and removing the unhealthy and dead pupae from the moutage
- KU8.** the recommended temperature, humidity and light exposure to be maintained during the cocoon spinning process

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- KU9.** the recommended practices to be followed to prevent attack by predatory ants during the spinning process
- KU10.** how to achieve uniform spinning of cocoons
- KU11.** the appropriate time and stage for transferring the pupae to moutage
- KU12.** the recommended number of pupae to be maintained on the moutage
- KU13.** the importance and need of maintaining the moutage under shade and good ventilation
- KU14.** the importance and ways of controlling fluctuations in humidity to prevent thinning and thickening of silk filament
- KU15.** the signs of maturity of pupae such as colour and hardness
- KU16.** the appropriate time, and process of harvesting the cocoons
- KU17.** the process of exposing the cocoons to heat or steam via sunlight exposure or boiling, and undertaking the reeling process to separate and obtain raw silk fibre from them
- KU18.** how to identify, connect and negotiate with the potential buyers of raw fibre silk and cocoons
- KU19.** the appropriate packing material to be used to pack raw silk fibre and cocoons
- KU20.** the relevant labelling requirements
- KU21.** use of different types of e-payment methods
- KU22.** the importance of maintaining the record of sales and payments
- KU23.** how to maintain manual and electronic records using the physical registers and the relevant computer application respectively
- KU24.** basic accounting practices such as calculating the expenditure and cost of production, and benefit-cost (B:C) ratio, etc.
- KU25.** the benefits and different ways of resource optimisation
- KU26.** the criteria for segregating waste into appropriate categories
- KU27.** the importance of disposing the non-recyclable waste in an environment-friendly manner
- KU28.** how to recycle different types of recyclable waste

Generic Skills (GS)

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

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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Stock and prepare pupae for cocoon spinning</i>	7	7	-	7
PC1. prepare trays of appropriate materials such as bamboo and paper for stocking pupae, ensuring easy absorption of excess moisture	-	-	-	-
PC2. feed pupae with fresh mulberry leaves as per the feeding schedule	-	-	-	-
PC3. apply the recommended chemicals on mulberry leaves in the prescribed quantity for healthy growth of pupae along with uniform spinning of cocoons	-	-	-	-
PC4. remove faeces and leftover mulberry leaves, and disinfect the trays using the approved disinfectant	-	-	-	-
<i>Transfer pupae to moutage for cocoon spinning</i>	5	6	-	5
PC5. collect pupae from the tray after they achieve the required growth, using a net and transfer them to the moutage for spinning cocoons	-	-	-	-
PC6. ensure adequate space on moutage to allow pupae spin cocoon	-	-	-	-
PC7. position the moutage appropriately to prevent staining of cocoons by pupae's urine	-	-	-	-
PC8. identify and remove the unhealthy and dead pupae from the moutage	-	-	-	-
<i>Monitor the cocoon spinning process</i>	3	4	-	3
PC9. maintain the recommended temperature, humidity and light exposure during the spinning process	-	-	-	-
PC10. follow the recommended practices to prevent attacks from predatory ants during the spinning process	-	-	-	-
<i>Harvest cocoons and obtain silk threads</i>	4	8	-	4

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. check the pupae for the signs of maturity such as colour and hardness	-	-	-	-
PC12. harvest the cocoons containing appropriate quantity with mature pupae in them	-	-	-	-
PC13. expose the cocoons to heat or steam via sunlight exposure or boiling, and undertake the reeling process to separate and obtain raw silk fibre	-	-	-	-
<i>Market the raw silk and cocoons</i>	7	9	-	7
PC14. identify the potential buyers/ markets such as e-trading platforms, cooperatives, local traders, exporters for marketing the harvested raw silk fibre, and cocoons	-	-	-	-
PC15. coordinate and negotiate with the buyers to secure a profitable price for raw silk fibre and cocoons	-	-	-	-
PC16. arrange an appropriate mode of transport for safe and hygienic delivery of raw silk fibre and cocoons to the buyers, under the recommended temperature and humidity	-	-	-	-
PC17. process the payments using the buyer-preferred e-payment method	-	-	-	-
PC18. maintain the manual and/ or electronic record of sales and payments using the physical registers and/ or the relevant computer application	-	-	-	-
<i>Optimise resource utilisation</i>	2	3	-	2
PC19. optimise the usage of water and other resources in various tasks and processes	-	-	-	-
PC20. plug water leakages to prevent its wastage	-	-	-	-
<i>Perform waste management</i>	2	3	-	2
PC21. segregate waste into appropriate categories	-	-	-	-
PC22. dispose the non-recyclable waste in an environment-friendly manner and recycle the recyclable waste appropriately	-	-	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N5204
NOS Name	Maintain pupae, harvest and process cocoons, and carry out marketing activities
Sector	Agriculture
Sub-Sector	Agriculture Allied Activities
Occupation	Silkworm Rearing
NSQF Level	3
Credits	2
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	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:

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- 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

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- 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>	10	5	-	10
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	-	-	-	-
<i>Maintain clean and safe workplace</i>	15	15	-	15
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	-	-	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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	-	-	-	-
<i>Administer appropriate emergency procedures</i>	15	5	-	10
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	-	-	-	-
NOS Total	40	25	-	35

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9903
NOS Name	Maintain health and safety at the workplace
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	4.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
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.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	3	4	-	-
PC9. 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
PC10. calculate income, expenses, savings etc.	-	-	-	-
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	NA
Next Review Date	30/06/2025
NSQC Clearance Date	30/06/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

minimum 50% marks are required

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

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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N5201.Cultivate mulberry trees for feeding silkworms	30	40	-	30	100	20
AGR/N5202.Prepare for rearing silkworms	30	40	-	30	100	20
AGR/N5203.Incubate silkworm eggs and rear larvae	30	40	-	30	100	20
AGR/N5205.Perform pest and disease management during sericulture	30	40	-	30	100	15
AGR/N5204.Maintain pupae, harvest and process cocoons, and carry out marketing activities	30	40	0	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
Total	210	255	0	185	650	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment

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Glossary

Sector	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.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	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.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	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.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	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.
Scope	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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Knowledge and Understanding (KU)	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.
Organisational Context	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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	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.
Electives	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.
Options	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.