

Qualification Pack



Cotton Cultivator

QP Code: AGR/Q0202

Version: 3.0

NSQF Level: 3

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

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AGR/Q0202: Cotton Cultivator

Brief Job Description

A Cotton Cultivator undertakes the cultivation of cotton crops and performs various activities such as selecting and preparing the farm, procuring, treating and sowing the cotton seeds. The individual is also responsible for maintaining the cotton crop, harvesting and marketing it.

Personal Attributes

The individual must be physically fit to work for long durations. The person must be able to take decisions independently and work in coordination with others. The individual must also know how to read and write.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [AGR/N0204: Select and prepare the site and sow the cotton seeds](#)
2. [AGR/N0108: Carry out macro and micronutrient management of field crops](#)
3. [AGR/N0205: Perform weed and integrated pest and disease management for cotton crop](#)
4. [AGR/N0111: Perform irrigation management for field crops](#)
5. [AGR/N0206: Carry out harvesting, post-harvest management and marketing of cotton](#)
6. [AGR/N9922: Engage in collective farming/activity](#)
7. [AGR/N9903: Maintain health and safety at the workplace](#)
8. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	Agriculture Crop Production
Occupation	Field Crops Cultivation (Cash Crops)
Country	India
NSQF Level	3

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Credits	10
Aligned to NCO/ISCO/ISIC Code	NCO-2015/6111.0601
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 3 Years of experience relevant experience OR Ability to read and write with 5 Years of experience relevant experience OR Certificate-NSQF (Level-3 (in Agriculture/Horticulture related Job Roles)) with 6 Months 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	30/04/2025
NSQF Approval Date	24/02/2022
Version	3.0
Reference code on NQR	2022/AGR/ASCI/06519
NQR Version	1.0

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AGR/N0204: Select and prepare the site and sow the cotton seeds

Description

This OS unit is about selecting and preparing the site for cotton cultivation. It also covers procuring, treating and sowing cotton seeds.

Scope

The scope covers the following :

- Select and prepare the site for cotton cultivation
- Procure and prepare the cotton seeds for planting
- Sow the cotton seeds
- Optimise resource utilisation
- Perform waste management

Elements and Performance Criteria

Select and prepare the site for cotton cultivation

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

- PC1.** check the site has conducive climatic conditions for cotton cultivation and is free from limiting factors such as flooding, drought, extreme heat and cold
- PC2.** coordinate with an authorised lab for soil testing to determine if the soil is suitable for cotton cultivation
- PC3.** ensure the site is accessible and has availability of quality water, labour and other inputs
- PC4.** identify the risks associated with cotton cultivation at the site and take appropriate preventive measures
- PC5.** carry out primary and secondary tilling using the appropriate farm machineries to achieve the recommended tilth for sowing cotton seeds
- PC6.** level the field using the appropriate machinery
- PC7.** create ridges and furrows maintaining the recommended space
- PC8.** create drainage channels for effective drainage of water
- PC9.** install an appropriate irrigation or fertigation system and create water channels for efficient irrigation

Procure and prepare the cotton seeds for planting

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

- PC10.** select the appropriate variety of cotton to be cultivated according to the climate, soil conditions, time of planting, cultivation duration, marketability, etc.
- PC11.** select an approved vendor based on the quality and price of cotton seeds and procure cotton seeds in the required quantity
- PC12.** ensure the cotton seeds meet the applicable quality standards, such as staple length, ginning outturn, spun specifications, disease and pest tolerance, fiber properties, tract suitability, and expected yield

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- PC13.** treat the seeds with the recommended pesticides and fungicides using them in the recommended dose
- PC14.** store the treated seeds at the recommended temperature and humidity, ensuring hygienic conditions in the storage area

Sow the cotton seeds

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

- PC15.** select an appropriate method for sowing cotton seeds such as broadcasting or mechanised sowing
- PC16.** sow the cotton seeds at the recommended seed rate using the relevant tools/ implements, maintaining the recommended planting density to achieve healthy growth of plants
- PC17.** sow extra seeds to fill the infillings

Optimise resource utilisation

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

- PC18.** optimise the usage of water and other resources in various tasks and processes
- PC19.** plug water leakages to prevent its wastage

Perform waste management

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

- PC20.** segregate waste into appropriate categories
- PC21.** 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:

- KU1.** the criteria for selecting a site for cotton cultivation
- KU2.** various agro-climatic zones suitable for cotton cultivation
- KU3.** the site, climate, soil type, soil fertility, nature of subsoil and soil depth suitable for growing cotton
- KU4.** the process of getting the soil sample tested through an authorised lab to determine the soil's suitability for cotton cultivation
- KU5.** various inputs required for cotton cultivation such as water, fertilisers, pesticides, labour, etc.
- KU6.** the process of preparing the field for sowing cotton seeds using the relevant farm machineries and implements
- KU7.** the appropriate precautions to be taken while operating different types of farm machineries, such as the use of Personal Protective Equipment (PPE)
- KU8.** how to install an irrigation or fertigation system
- KU9.** the criteria for selecting a cotton variety to be cultivated, such as climate along with resistance to various pests and diseases
- KU10.** various quality parameters to be checked while procuring cotton seeds
- KU11.** the cultivation period, appropriate time for sowing and yield of different cotton varieties
- KU12.** the process of procuring and treating cotton seeds

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- KU13.** the appropriate temperature and humidity for storing the treated cotton seeds
- KU14.** different methods for sowing cotton seeds such as broadcasting and mechanised sowing
- KU15.** the recommended seed rate to be maintained while sowing cotton seeds
- KU16.** the use of relevant tools and equipment for sowing cotton seeds
- KU17.** the recommended planting density to be maintained while sowing cotton seeds
- KU18.** the benefits and ways of resource optimisation
- KU19.** the criteria for segregating waste into appropriate categories
- KU20.** how to recycle and dispose different types of waste

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/ 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.** coordinate with the coworkers 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/ accidents

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select and prepare the site for cotton cultivation</i>	10	14	-	12
PC1. check the site has conducive climatic conditions for cotton cultivation and is free from limiting factors such as flooding, drought, extreme heat and cold	-	-	-	-
PC2. coordinate with an authorised lab for soil testing to determine if the soil is suitable for cotton cultivation	-	-	-	-
PC3. ensure the site is accessible and has availability of quality water, labour and other inputs	-	-	-	-
PC4. identify the risks associated with cotton cultivation at the site and take appropriate preventive measures	-	-	-	-
PC5. carry out primary and secondary tilling using the appropriate farm machineries to achieve the recommended tilth for sowing cotton seeds	-	-	-	-
PC6. level the field using the appropriate machinery	-	-	-	-
PC7. create ridges and furrows maintaining the recommended space	-	-	-	-
PC8. create drainage channels for effective drainage of water	-	-	-	-
PC9. install an appropriate irrigation or fertigation system and create water channels for efficient irrigation	-	-	-	-
<i>Procure and prepare the cotton seeds for planting</i>	8	8	-	6
PC10. select the appropriate variety of cotton to be cultivated according to the climate, soil conditions, time of planting, cultivation duration, marketability, etc.	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. select an approved vendor based on the quality and price of cotton seeds and procure cotton seeds in the required quantity	-	-	-	-
PC12. ensure the cotton seeds meet the applicable quality standards, such as staple length, ginning outturn, spun specifications, disease and pest tolerance, fiber properties, tract suitability, and expected yield	-	-	-	-
PC13. treat the seeds with the recommended pesticides and fungicides using them in the recommended dose	-	-	-	-
PC14. store the treated seeds at the recommended temperature and humidity, ensuring hygienic conditions in the storage area	-	-	-	-
<i>Sow the cotton seeds</i>	4	8	-	4
PC15. select an appropriate method for sowing cotton seeds such as broadcasting or mechanised sowing	-	-	-	-
PC16. sow the cotton seeds at the recommended seed rate using the relevant tools/ implements, maintaining the recommended planting density to achieve healthy growth of plants	-	-	-	-
PC17. sow extra seeds to fill the infillings	-	-	-	-
<i>Optimise resource utilisation</i>	4	6	-	4
PC18. optimise the usage of water and other resources in various tasks and processes	-	-	-	-
PC19. plug water leakages to prevent its wastage	-	-	-	-
<i>Perform waste management</i>	4	4	-	4
PC20. segregate waste into appropriate categories	-	-	-	-
PC21. recycle the recyclable waste appropriately and dispose the non-recyclable waste in an environment-friendly manner	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N0204
NOS Name	Select and prepare the site and sow the cotton seeds
Sector	Agriculture
Sub-Sector	Agriculture Crop Production
Occupation	Field Crop Cultivation (Cash crop)
NSQF Level	3
Credits	1
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N0108: Carry out macro and micronutrient management of field crops

Description

This OS unit is about managing the macro and micronutrient needs of field crops to ensure their optimum growth.

Scope

The scope covers the following :

- Determine the macro and micronutrients requirements
- Apply fertilisers to the soil
- Perform soil conservation

Elements and Performance Criteria

Determine the macro and micronutrients requirements

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

- PC1.** coordinate with an authorised lab to get the soil sample tested, ensuring the sample is collected from the field, packed and labelled as per the applicable procedure
- PC2.** interpret the soil analysis report to determine the micro and macronutrients requirements of the soil based on the planned crop variety or coordinate with an expert for the purpose
- PC3.** select the appropriate organic and inorganic fertilisers, ensuring they contain the required nutrients in the recommended quantity
- PC4.** prepare organic fertilisers such as farmyard manure, vermicompost and inorganic fertiliser solutions, ensuring personal safety

Apply fertilisers to the soil

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

- PC5.** prepare the mixture of liquid fertilisers for application in the field, using them in the recommended quantity
- PC6.** prepare the field for the application of fertilisers
- PC7.** apply organic and inorganic fertilisers containing the required macro and micronutrients to the soil in the recommended dose
- PC8.** regulate the dose of fertiliser according to the crop cycle
- PC9.** maintain the record of fertilisers used in the field

Perform soil conservation

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

- PC10.** prepare a soil nutrition supplementation calendar based on the stages of the crop's growth
- PC11.** follow the recommended practices for soil conservation, such as mulching to conserve soil moisture and application of organic fertilisers

Knowledge and Understanding (KU)

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The individual on the job needs to know and understand:

- KU1.** the basic concepts of plant nutrition and soil fertility
- KU2.** different types of macro and micronutrients, their properties and functions
- KU3.** common symptoms of nutrient deficiency in plants
- KU4.** the use of different types of green manure and nitrogen-fixing crops
- KU5.** the process of soil sampling and testing
- KU6.** how to interpret the soil analysis report to determine the macro and micronutrient requirements of the soil
- KU7.** different soil types, their advantages and disadvantages with reference to the presence of various nutrients
- KU8.** how to prepare the mixture of liquid fertilisers, using them in the recommended quantity
- KU9.** how to prepare the field for the application of fertilisers
- KU10.** the appropriate time, methods and dose for the application of different types of fertilisers for a variety of crops
- KU11.** the importance of regulating the dose of fertiliser according to the crop cycle
- KU12.** importance of soil conservation and various soil conservation practices
- KU13.** the importance of getting the soil tested through a government-approved soil-testing laboratory to determine the macro and micronutrients present in it, and the requirement of adding the nutrients manually
- KU14.** varieties of organic and inorganic fertilisers to be applied to the soil to improve its fertility, and the nutrient content in them
- KU15.** the process of preparing organic fertilisers such as farmyard manure, vermicompost and inorganic fertiliser solutions
- KU16.** how to apply organic and inorganic fertilisers to the soil and the recommended dose to be used
- KU17.** the harmful effects of over-dosage of fertilisers
- KU18.** applicable documentation requirements
- KU19.** the process of preparing a soil nutrition supplementation calendar based on the stages of the crop's growth

Generic Skills (GS)

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

- GS1.** maintain work-related notes and records
- 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

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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>Determine the macro and micronutrients requirements</i>	12	10	-	8
PC1. coordinate with an authorised lab to get the soil sample tested, ensuring the sample is collected from the field, packed and labelled as per the applicable procedure	-	-	-	-
PC2. interpret the soil analysis report to determine the micro and macronutrients requirements of the soil based on the planned crop variety or coordinate with an expert for the purpose	-	-	-	-
PC3. select the appropriate organic and inorganic fertilisers, ensuring they contain the required nutrients in the recommended quantity	-	-	-	-
PC4. prepare organic fertilisers such as farmyard manure, vermicompost and inorganic fertiliser solutions, ensuring personal safety	-	-	-	-
<i>Apply fertilisers to the soil</i>	10	16	-	10
PC5. prepare the mixture of liquid fertilisers for application in the field, using them in the recommended quantity	-	-	-	-
PC6. prepare the field for the application of fertilisers	-	-	-	-
PC7. apply organic and inorganic fertilisers containing the required macro and micronutrients to the soil in the recommended dose	-	-	-	-
PC8. regulate the dose of fertiliser according to the crop cycle	-	-	-	-
PC9. maintain the record of fertilisers used in the field	-	-	-	-
<i>Perform soil conservation</i>	8	14	-	12
PC10. prepare a soil nutrition supplementation calendar based on the stages of the crop's growth	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. follow the recommended practices for soil conservation, such as mulching to conserve soil moisture and application of organic fertilisers	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N0108
NOS Name	Carry out macro and micronutrient management of field crops
Sector	Agriculture
Sub-Sector	Agriculture Crop Production
Occupation	Field Crops Cultivation(Food Crops)
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	27/01/2025
NSQC Clearance Date	27/01/2022

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AGR/N0205: Perform weed and integrated pest and disease management for cotton crop

Description

This OS unit is about performing integrated pest management for cotton crop and taking various measures to prevent and control insects, pests and diseases in cotton crop.

Scope

The scope covers the following :

- Perform weed management
- Follow preventive measures to control pests and disease
- Identify the pests and disease in the cotton crop
- Identify and apply the necessary treatment

Elements and Performance Criteria

Perform weed management

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

- PC1.** select and prepare appropriate pre-emergence herbicide spray solution to prevent weed growth
- PC2.** apply the herbicides in the prescribed dose at the appropriate stage of crop growth, using the relevant plant protection equipment
- PC3.** maintain a healthy crop stand capable of competing with weeds at the critical stages of its growth

Follow preventive measures to control pests and disease

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

- PC4.** use pest and disease-resistant varieties of cotton
- PC5.** carry out crop rotation with suitable crops
- PC6.** follow the recommended practices to restrict the entry of pathogens into the field through planting material, irrigation water, workers, tools and equipment, and vectors such as whitefly
- PC7.** identify and remove the diseased crop to prevent the spread of pest and disease to healthy crop
- PC8.** use the recommended combination of biological, mechanical and chemical control methods for effective pest and disease prevention
- PC9.** use the recommended parasitoids trichogramma spp. and telenomus spp., microplitis demolitor and tachinid flies, banded caterpillar parasite, etc.
- PC10.** follow the appropriate integrated pest management techniques such trash mulching, de-trashing, egg destruction, bund freeing, water draining, usage of bio-control agents, etc.
- PC11.** identify natural enemies of the cotton pest such as ladybird, ground beetles, hoverfly and adopt them for pest control according to the advice of agricultural extension workers, Krishi Vigyan Kendra (KVK), diagnostic clinics, etc.

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Identify the pests and disease in the cotton crop

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

- PC12.** follow the recommended Integrated Pest Management (IPM) methods such as light and pheromone traps to identify the presence and population of pests, insects and vectors such as jassid, aphids, whitefly, pink bollworm, mealybugs, weevils, etc.
- PC13.** conduct regular field visits to identify major cotton crop diseases such as wilt, root rot, boll rot, leaf blight, leaf spot, leaf curl virus, yellow mosaic virus, bacterial blight, etc.
- PC14.** determine the stage of pest and disease incidence along with the extent of damage and economic threshold levels (ETL) of the pests
- PC15.** co-ordinate with the agricultural extension service agents and diagnostic clinics to determine the causal organism for the disease and its treatment

Identify and apply the necessary treatment

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

- PC16.** apply the recommended treatment as per the prescription to remove pests and disease
- PC17.** follow the recommended safety practices while applying any treatment, such as using the relevant PPE
- PC18.** maintain the record of the use of any pesticides, insecticides and any other treatment

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the criteria for selecting a herbicide to be applied to cotton crop
- KU2.** the process of preparing the herbicide spray solution and applying it using the relevant plant protection equipment
- KU3.** the importance of using herbicides in the prescribed dose and at the appropriate stage of crop growth
- KU4.** the benefit of maintaining a healthy crop stand that is capable of competing with weeds at the critical stages of its growth
- KU5.** different biotic and abiotic factors causing diseases and disorders in plants
- KU6.** different mode of transmissions of disease such as tools, implements, vectors, water, etc.
- KU7.** the importance of adopting safe production methods for safe produce
- KU8.** advantages of biological control of insects, pest and diseases
- KU9.** use of bio-pesticides in Integrated Pest Management (IPM)
- KU10.** minimum residue levels and Protected Health Information (PHI) for different types of pesticides
- KU11.** use of the pesticide spraying tools and equipment
- KU12.** national and international standards on pesticide residues
- KU13.** the use of recommended parasitoids for prevention of pests
- KU14.** the benefits and importance of using pest and disease-resistant varieties of cotton
- KU15.** recommended practices to restrict the entry of pathogens into the field through planting material, irrigation water, workers, tools and equipment, and vectors such as whitefly
- KU16.** the practice of crop rotation with suitable crops

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- KU17.** the importance of identifying and removing the diseased crop to prevent the spread of pest and disease to the healthy crop
- KU18.** use of the recommended combination of biological, mechanical and chemical control methods for effective pest and disease prevention such as traps, sticky plates etc.
- KU19.** appropriate integrated pest management techniques like trash mulching, de-trashing, egg destruction, bund freeing, water draining, usage of bio-control agents, etc.
- KU20.** how to identify different types of pests in the cotton crop such as jassid, aphids, whitefly, pink bollworm, mealybugs, weevils, etc.
- KU21.** how to identify plant disease vectors and major cotton diseases such as wilt, root rot, boll rot, leaf blight, leaf spot, leaf curl virus, yellow mosaic virus, bacterial blight, etc.
- KU22.** the process of determining the stage of pest and disease incidence along with the extent of damage and economic threshold levels (ETL) of pests
- KU23.** use of IPM methods such as light and pheromone traps to identify the presence and population of insects and vectors
- KU24.** the process of determining the causal organism for the disease and its treatment
- KU25.** natural enemies of common pests such as ladybird, ground beetles, hoverfly and the benefits of adopting them for pest control
- KU26.** the importance of applying the recommended treatment as per the prescription and maintaining the record of their use
- KU27.** the importance of using the recommended PPE while applying harmful chemicals
- KU28.** ways to minimise pollution caused by overuse of pesticides

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.** perform basic calculations
- GS4.** listen attentively to understand the information/ instructions being shared by the speaker
- GS5.** communicate clearly and politely with co-workers and clients
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** co-ordinate with the co-workers to achieve the work objectives
- GS9.** identify possible disruptions to work and take appropriate preventive measures
- GS10.** 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>Perform weed management</i>	6	8	-	6
PC1. select and prepare appropriate pre-emergence herbicide spray solution to prevent weed growth	-	-	-	-
PC2. apply the herbicides in the prescribed dose at the appropriate stage of crop growth, using the relevant plant protection equipment	-	-	-	-
PC3. maintain a healthy crop stand capable of competing with weeds at the critical stages of its growth	-	-	-	-
<i>Follow preventive measures to control pests and disease</i>	8	12	-	8
PC4. use pest and disease-resistant varieties of cotton	-	-	-	-
PC5. carry out crop rotation with suitable crops	-	-	-	-
PC6. follow the recommended practices to restrict the entry of pathogens into the field through planting material, irrigation water, workers, tools and equipment, and vectors such as whitefly	-	-	-	-
PC7. identify and remove the diseased crop to prevent the spread of pest and disease to healthy crop	-	-	-	-
PC8. use the recommended combination of biological, mechanical and chemical control methods for effective pest and disease prevention	-	-	-	-
PC9. use the recommended parasitoids trichogramma spp. and telenomus spp., microplitis demolitor and tachinid flies, banded caterpillar parasite, etc.	-	-	-	-
PC10. follow the appropriate integrated pest management techniques such trash mulching, de-trashing, egg destruction, bund freeing, water draining, usage of bio-control agents, etc.	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. identify natural enemies of the cotton pest such as ladybird, ground beetles, hoverfly and adopt them for pest control according to the advice of agricultural extension workers, Krishi Vigyan Kendra (KVK), diagnostic clinics, etc.	-	-	-	-
<i>Identify the pests and disease in the cotton crop</i>	8	12	-	10
PC12. follow the recommended Integrated Pest Management (IPM) methods such as light and pheromone traps to identify the presence and population of pests, insects and vectors such as jassid, aphids, whitefly, pink bollworm, mealybugs, weevils, etc.	-	-	-	-
PC13. conduct regular field visits to identify major cotton crop diseases such as wilt, root rot, boll rot, leaf blight, leaf spot, leaf curl virus, yellow mosaic virus, bacterial blight, etc.	-	-	-	-
PC14. determine the stage of pest and disease incidence along with the extent of damage and economic threshold levels (ETL) of the pests	-	-	-	-
PC15. co-ordinate with the agricultural extension service agents and diagnostic clinics to determine the causal organism for the disease and its treatment	-	-	-	-
<i>Identify and apply the necessary treatment</i>	8	8	-	6
PC16. apply the recommended treatment as per the prescription to remove pests and disease	-	-	-	-
PC17. follow the recommended safety practices while applying any treatment, such as using the relevant PPE	-	-	-	-
PC18. maintain the record of the use of any pesticides, insecticides and any other treatment	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N0205
NOS Name	Perform weed and integrated pest and disease management for cotton crop
Sector	Agriculture
Sub-Sector	Agriculture Crop Production
Occupation	Field Crop Cultivation (Cash crop)
NSQF Level	3
Credits	2
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N0111: Perform irrigation management for field crops

Description

This OS unit is about performing irrigation management of field crops.

Scope

The scope covers the following :

- Prepare for field irrigation
- Irrigate the field
- Manage the water usage

Elements and Performance Criteria

Prepare for field irrigation

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

- PC1.** collect a water sample from the source of irrigation and coordinate with an authorised lab to get it tested
- PC2.** follow the measures recommended by the lab to improve the water quality
- PC3.** set up an appropriate irrigation system such as surface irrigation, drip irrigation, sub-surface irrigation system based on the requirement of the specific field crop

Irrigate the field

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

- PC4.** irrigate the field according to the recommended irrigation schedule for the crop, ensuring there is adequate water supply at various stages of crop's growth
- PC5.** maintain the record of field irrigation to ensure irrigation as per the schedule
- PC6.** follow the recommended practices to prevent over and under-irrigation, ensuring there is no waterlogging at any stage of the crop's growth

Manage the water usage

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

- PC7.** follow the recommended practices for effective drainage of excess water from the field
- PC8.** maintain the recommended level of water in the soil to prevent the harmful effects of inappropriate levels of moisture in it
- PC9.** plug water spills and leakages to prevent its wastage

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the timing and method of irrigation appropriate for a given soil type and climatic conditions
- KU2.** the quantity of water required for different types of crops and its effect on the yield
- KU3.** the importance of sampling and testing irrigation water through an authorised lab to determine its quality

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- KU4.** various measures to be followed to improve the water quality
- KU5.** the process of setting up different types of irrigation systems such as surface irrigation, drip irrigation, sub-surface irrigation system, etc.
- KU6.** the advantages and disadvantages of using different types of irrigation systems
- KU7.** the importance of irrigating the field according to the recommended irrigation schedule for the crop and the factors to be considered in scheduling irrigation
- KU8.** the recommended practices to be followed to prevent over and under-irrigation
- KU9.** the recommended practices to be followed for effective drainage of excess water from the field
- KU10.** the importance of maintaining the recommended level of water in the soil to prevent the harmful effects caused by inappropriate levels of moisture
- KU11.** various practices to be followed to optimise the usage of water and prevent its wastage

Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides, manuals and literature to get the latest information about the field of work
- GS3.** communicate politely and professionally
- GS4.** listen attentively to understand the instructions being given
- GS5.** identify solutions to work-related issues
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** take quick decisions to deal with any emergencies or accidents
- GS8.** plan effective use of time and resources

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for field irrigation</i>	12	16	-	10
PC1. collect a water sample from the source of irrigation and coordinate with an authorised lab to get it tested	-	-	-	-
PC2. follow the measures recommended by the lab to improve the water quality	-	-	-	-
PC3. set up an appropriate irrigation system such as surface irrigation, drip irrigation, sub-surface irrigation system based on the requirement of the specific field crop	-	-	-	-
<i>Irrigate the field</i>	8	12	-	12
PC4. irrigate the field according to the recommended irrigation schedule for the crop, ensuring there is adequate water supply at various stages of crop's growth	-	-	-	-
PC5. maintain the record of field irrigation to ensure irrigation as per the schedule	-	-	-	-
PC6. follow the recommended practices to prevent over and under-irrigation, ensuring there is no waterlogging at any stage of the crop's growth	-	-	-	-
<i>Manage the water usage</i>	10	12	-	8
PC7. follow the recommended practices for effective drainage of excess water from the field	-	-	-	-
PC8. maintain the recommended level of water in the soil to prevent the harmful effects of inappropriate levels of moisture in it	-	-	-	-
PC9. plug water spills and leakages to prevent its wastage	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N0111
NOS Name	Perform irrigation management for field crops
Sector	Agriculture
Sub-Sector	Agriculture Crop Production
Occupation	Field Crops Cultivation(Food Crops)
NSQF Level	4
Credits	1
Version	3.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Qualification Pack

AGR/N0206: Carry out harvesting, post-harvest management and marketing of cotton

Description

This OS unit is about harvesting, processing and marketing of cotton crop.

Scope

The scope covers the following :

- Harvest cotton
- Dry and pack cotton
- Market cotton

Elements and Performance Criteria

Harvest cotton

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

- PC1.** check the maturity of the cotton crop to ensure its readiness for being harvested
- PC2.** select the manual or mechanised harvesting method according to the quantity of cotton to be harvested
- PC3.** arrange the necessary tools, equipment and machinery according to the selected harvesting method and prepare them for use
- PC4.** pick cotton at the appropriate time of the day ensuring minimum loss to it
- PC5.** follow the recommended practices to prevent dry leaves from sticking to cotton fibre
- PC6.** maintain different grades of harvested cotton such as clean cotton without contamination; yellowish cotton; and defected cotton, separately

Dry and pack cotton

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

- PC7.** dry the harvested cotton under the sun or mechanically, as suitable
- PC8.** follow the recommended practices to ensure that cotton doesn't absorb moisture
- PC9.** select a dry storage area with the recommended temperature and humidity for storing the harvested cotton
- PC10.** pack cotton following the recommended measures to prevent the absorption of moisture

Market cotton

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

- PC11.** select an appropriate time for selling cotton based on the periodical demand of the produce and profitability
- PC12.** identify the buyers of harvested cotton such as eMandi, procurement agencies, cotton traders, co-operatives, exporters, and establish marketing channels
- PC13.** coordinate and negotiate with the buyer to secure a profitable price for the produce
- PC14.** arrange an appropriate mode of transport to deliver cotton to the buyer, protecting it from contamination and moisture

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- PC15.** process the payments using the buyer-preferred e-payment method
- PC16.** calculate the benefit-cost (B:C) ratio
- PC17.** 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 ideal climate and conditions for harvesting cotton
- KU2.** how to assess the maturity of cotton crop
- KU3.** the manual and mechanical methods of harvesting cotton and the use of relevant tools, equipment and machinery
- KU4.** the recommended practices to be followed to prevent dry leaves from sticking to cotton fibre while harvesting it
- KU5.** the importance of maintaining different grades of harvested cotton separately
- KU6.** how to protect the harvested cotton from moisture
- KU7.** the appropriate temperature for storing the harvested cotton
- KU8.** the appropriate packing material for cotton such as jute bags, Polypropylene (PP) pouches, High- Density Polyethylene (HDPE) packaging, etc.
- KU9.** the process of identifying potential buyers, establishing marketing channels, and negotiating with buyers
- KU10.** the appropriate mode of transport for transporting cotton
- KU11.** how to use various e-payment methods
- KU12.** how to calculate the benefit-cost (B:C) ratio
- KU13.** how to maintain various manual and electronic records

Generic Skills (GS)

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

- GS1.** maintain work-related records
- GS2.** read the relevant literature to get the latest information about the field of work
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** identify appropriate solutions to work-related issues
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** plan effective use of time and resources

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Harvest cotton</i>	12	16	-	12
PC1. check the maturity of the cotton crop to ensure its readiness for being harvested	-	-	-	-
PC2. select the manual or mechanised harvesting method according to the quantity of cotton to be harvested	-	-	-	-
PC3. arrange the necessary tools, equipment and machinery according to the selected harvesting method and prepare them for use	-	-	-	-
PC4. pick cotton at the appropriate time of the day ensuring minimum loss to it	-	-	-	-
PC5. follow the recommended practices to prevent dry leaves from sticking to cotton fibre	-	-	-	-
PC6. maintain different grades of harvested cotton such as clean cotton without contamination; yellowish cotton; and defected cotton, separately	-	-	-	-
<i>Dry and pack cotton</i>	8	12	-	8
PC7. dry the harvested cotton under the sun or mechanically, as suitable	-	-	-	-
PC8. follow the recommended practices to ensure that cotton doesn't absorb moisture	-	-	-	-
PC9. select a dry storage area with the recommended temperature and humidity for storing the harvested cotton	-	-	-	-
PC10. pack cotton following the recommended measures to prevent the absorption of moisture	-	-	-	-
<i>Market cotton</i>	10	12	-	10
PC11. select an appropriate time for selling cotton based on the periodical demand of the produce and profitability	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. identify the buyers of harvested cotton such as eMandi, procurement agencies, cotton traders, co-operatives, exporters, and establish marketing channels	-	-	-	-
PC13. coordinate and negotiate with the buyer to secure a profitable price for the produce	-	-	-	-
PC14. arrange an appropriate mode of transport to deliver cotton to the buyer, protecting it from contamination and moisture	-	-	-	-
PC15. process the payments using the buyer-preferred e-payment method	-	-	-	-
PC16. calculate the benefit-cost (B:C) ratio	-	-	-	-
PC17. maintain the manual and/ or electronic record of sales and payments using the physical registers and/ or the relevant computer application	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N0206
NOS Name	Carry out harvesting, post-harvest management and marketing of cotton
Sector	Agriculture
Sub-Sector	Agriculture Crop Production
Occupation	Field Crop Cultivation (Cash crop)
NSQF Level	3
Credits	2
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

Qualification Pack

AGR/N9922: Engage in collective farming/activity

Description

This OS unit is about working collectively in Producer Groups (PGs), Farmers Interest Groups (FIGs), Self-Help Groups (SHGs) and other similar groups to attain a common objective.

Scope

The scope covers the following :

- Create PGs/ FIGs/ SHGs
- Prepare for the PG/ FIG/ SHG operations
- Conduct group meetings and training sessions
- Carry out collective farming/ activities

Elements and Performance Criteria

Create PGs/ FIGs/ SHGs

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

- PC1.** identify farmers/ groups with the common interests in the area
- PC2.** create Producer Groups (PGs)/Farmers Interest Groups (FIGs)/ Self-Help Groups (SHGs), following the applicable rules and regulations

Prepare for the PG/ FIG/ SHG operations

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

- PC3.** organise fundraising activities to support the functioning of the group
- PC4.** establish links with the local government at panchayat level to obtain access to the relevant development programmes and funds
- PC5.** induct subject matter experts (SMEs) in the group
- PC6.** assist in arranging the required Information and Communication Technology (ICT) products for the group
- PC7.** plan the commodity convergence with the relevant developmental programmes
- PC8.** plan optimal production to meet the market and household food security needs

Conduct group meetings and training sessions

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

- PC9.** conduct the initial group meetings to introduce the members, discuss the group objectives, group income-generating enterprises/ activities, methods of operation, etc.
- PC10.** assist in exchanging the domain and technical knowledge such as market or price information, latest technology, and resolving common issues or conflicts through the PG/ FIG/ SHG meetings
- PC11.** organise capacity building exercises such as skill development and training programmes

Carry out collective farming/ activities

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

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- PC12.** organise field trials to identify and resolve problems encountered by group members in the field operations
- PC13.** procure/hire advanced and expensive farm machineries/tools and equipment using the group fund for collective use of the group members
- PC14.** establish and manage the group-owned bank of quality seeds/ fertilisers/ pesticides/ tools and equipment, etc.
- PC15.** use the group's credit facility as per the applicable terms and conditions
- PC16.** carry out relevant duties as per own role in the PG/FIG/ SHG such as the group leader/ secretary/ book-keeper, etc.
- PC17.** co-ordinate within the group(s) in procuring inputs in bulk/large-scale farming, packing/transportation/marketing of the produce, etc.
- PC18.** assist in forming forward and backward linkages through the PGs/ FIGs/ SHGs
- PC19.** identify and follow the relevant practices to add value to the produce such as processing, packing, upgrading the quality, etc.
- PC20.** arrange for the regular repair and maintenance of the farm machineries/tools, equipment/tube/bore wells/storage/drying platforms/processing units, etc.
- PC21.** connect and partner with other groups to expand the network and address common problems at a large scale

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the process of preparing for the PG/ FIG/ SHG operations such as fundraising, induction of SMEs, investing in ICT products, etc.
- KU2.** how to establish links with the local government at the panchayat level to obtain access to the relevant development programmes and funds
- KU3.** the process of commodity convergence with the relevant developmental programmes
- KU4.** the importance of planning optimal production to meet the market and household food security needs
- KU5.** the importance of setting the group objectives and deciding the group income-generating enterprises/ activities, methods of operation, benefits, etc.
- KU6.** the importance of organising the PG/FIG/ SHG meetings and training sessions to resolve common concerns and get information about the latest developments in the field of work
- KU7.** the benefits of various capacity building exercises such as skill development and training programmes
- KU8.** the importance and process of conducting field trials to identify and resolve problems encountered by farmers in the field operations
- KU9.** the concept of group-owned bank to provide quality seeds, fertilisers, pesticides, tools and equipment to the member farmers
- KU10.** the process of using the group's credit facility
- KU11.** core collective farming activities such as procuring inputs in bulk, large-scale farming, packing, transportation and marketing of the produce, etc.
- KU12.** the concept and benefits of forming forward and backward linkages

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- KU13.** relevant value addition practices such as processing, packing, upgrading the quality, etc.
KU14. the benefits of connecting with similar groups to address common problems at a large scale

Generic Skills (GS)

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

- GS1.** write relevant notes and reports
GS2. read the relevant literature to get latest updates about the field of work
GS3. communicate politely and professionally
GS4. listen attentively to understand the information being shared
GS5. plan tasks for effective use of time
GS6. identify possible disruptions to work and take appropriate preventive measures
GS7. 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>Create PGs/ FIGs/ SHGs</i>	6	8	-	6
PC1. identify farmers/ groups with the common interests in the area	-	-	-	-
PC2. create Producer Groups (PGs)/Farmers Interest Groups (FIGs)/ Self-Help Groups (SHGs), following the applicable rules and regulations	-	-	-	-
<i>Prepare for the PG/ FIG/ SHG operations</i>	6	10	-	6
PC3. organise fundraising activities to support the functioning of the group	-	-	-	-
PC4. establish links with the local government at panchayat level to obtain access to the relevant development programmes and funds	-	-	-	-
PC5. induct subject matter experts (SMEs) in the group	-	-	-	-
PC6. assist in arranging the required Information and Communication Technology (ICT) products for the group	-	-	-	-
PC7. plan the commodity convergence with the relevant developmental programmes	-	-	-	-
PC8. plan optimal production to meet the market and household food security needs	-	-	-	-
<i>Conduct group meetings and training sessions</i>	8	6	-	8
PC9. conduct the initial group meetings to introduce the members, discuss the group objectives, group income-generating enterprises/ activities, methods of operation, etc.	-	-	-	-
PC10. assist in exchanging the domain and technical knowledge such as market or price information, latest technology, and resolving common issues or conflicts through the PG/ FIG/ SHG meetings	-	-	-	-
PC11. organise capacity building exercises such as skill development and training programmes	-	-	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out collective farming/ activities</i>	10	16	-	10
PC12. organise field trials to identify and resolve problems encountered by group members in the field operations	-	-	-	-
PC13. procure/hire advanced and expensive farm machineries/tools and equipment using the group fund for collective use of the group members	-	-	-	-
PC14. establish and manage the group-owned bank of quality seeds/ fertilisers/ pesticides/ tools and equipment, etc.	-	-	-	-
PC15. use the group's credit facility as per the applicable terms and conditions	-	-	-	-
PC16. carry out relevant duties as per own role in the PG/FIG/ SHG such as the group leader/ secretary/ book-keeper, etc.	-	-	-	-
PC17. co-ordinate within the group(s) in procuring inputs in bulk/large-scale farming, packing/transportation/marketing of the produce, etc.	-	-	-	-
PC18. assist in forming forward and backward linkages through the PGs/ FIGs/ SHGs	-	-	-	-
PC19. identify and follow the relevant practices to add value to the produce such as processing, packing, upgrading the quality, etc.	-	-	-	-
PC20. arrange for the regular repair and maintenance of the farm machineries/tools, equipment/tube/bore wells/storage/drying platforms/processing units, etc.	-	-	-	-
PC21. connect and partner with other groups to expand the network and address common problems at a large scale	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9922
NOS Name	Engage in collective farming/activity
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

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	-	-	-	-

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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	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	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

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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	-	-

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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	05/01/2023
Next Review Date	05/01/2026
NSQC Clearance Date	05/01/2023

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 the proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on a knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training centre (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.
5. In case of successfully passing only a certain number of NOSs, the trainee is eligible to take a

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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/N0204.Select and prepare the site and sow the cotton seeds	30	40	0	30	100	20
AGR/N0108.Carry out macro and micronutrient management of field crops	30	40	-	30	100	20
AGR/N0205.Perform weed and integrated pest and disease management for cotton crop	30	40	-	30	100	20
AGR/N0111.Perform irrigation management for field crops	30	40	-	30	100	10
AGR/N0206.Carry out harvesting, post-harvest management and marketing of cotton	30	40	-	30	100	15
AGR/N9922.Engage in collective farming/activity	30	40	-	30	100	5
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	240	295	0	215	750	100

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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

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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.