









Fish Seed Grower

QP Code: AGR/Q4908

Version: 4.0

NSQF Level: 4

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









Contents

AGR/Q4908: Fish Seed Grower	3
Brief Job Description	3
Applicable National Occupational Standards (NOS)	3
Compulsory NOS	3
Qualification Pack (QP) Parameters	
AGR/N4966: Ensure the soil and water quality in the culture pond	
AGR/N4969: Feeding and monitoring the Fish seed	
AGR/N4931: Supervise the culture, harvest and post-harvest activities	15
AGR/N4918: Ensure health, hygiene and safety during culture operations	22
AGR/N9923: Manage and lead a team effectively	28
DGT/VSQ/N0102: Employability Skills (60 Hours)	
Assessment Guidelines and Weightage	40
Assessment Guidelines	40
Assessment Weightage	41
Acronyms	
Glossary	43









AGR/Q4908: Fish Seed Grower

Brief Job Description

A Fish Seed Grower is responsible for raising the seeds of varieties of fish species. The person oversees the preparation of pond and the culture activities including the harvesting and post-harvest management of seeds.

Personal Attributes

The individual must have leadership qualities and management skills. The person must be attentive and be able to swim. Ability to resolve problems promptly and communicate effectively are other important attributes required in this job role.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. AGR/N4966: Ensure the soil and water quality in the culture pond
- 2. AGR/N4969: Feeding and monitoring the Fish seed
- 3. AGR/N4931: Supervise the culture, harvest and post-harvest activities
- 4. AGR/N4918: Ensure health, hygiene and safety during culture operations
- 5. AGR/N9923: Manage and lead a team effectively
- 6. DGT/VSQ/N0102: Employability Skills (60 Hours)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
Country	India
NSQF Level	4
Credits	15









Aligned to NCO/ISCO/ISIC Code	NCO-2015/6221
Minimum Educational Qualification & Experience	12th Class (or equivalent) OR 10th grade pass (or equivalent) with 3 Years of experience relevant experience in Fisheries and related sector OR Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience relevant experience in Fisheries and related sector OR Previous relevant Qualification of NSQF Level (3) with 3 Years of experience relevant experience in Fisheries and related sector
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	22/10/2027
NSQC Approval Date	22/10/2024
Version	4.0
Reference code on NQR	QG-04-AG-03236-2024-V2-ASCI
NQR Version	2.0









AGR/N4966: Ensure the soil and water quality in the culture pond

Description

This OS unit is about ensuring optimum soil and water quality in the culture pond for the optimal growth of fish. It also covers resource optimisation.

Scope

The scope covers the following:

- Supervise the soil conditioning process
- Ensure required water quality in the culture pond
- Optimise resource utilisation

Elements and Performance Criteria

Supervise the soil conditioning process

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

- **PC1.** instruct the aquaculture worker to check the pH level of the soil using a pH meter and apply lime or gypsum to it in the recommended quantity to adjust the pH
- **PC2.** determine the need of applying fertilisers to the culture pond soil through soil testing by an approved lab
- **PC3.** arrange for the recommended fertilisers such as basal manure or any other necessary soil treatment to be applied to the soil in an appropriate quantity
- **PC4.** ensure the soil in the culture pond is capable of holding water

Ensure required water quality in the culture pond

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

- **PC5.** ensure the culture pond has the optimum temperature level required for the fish/ crustacean species to be cultured
- **PC6.** ensure the pond has the recommended level of dissolved oxygen, salinity and alkalinity required for the fish/ crustacean species to be cultured
- **PC7.** ensure the culture pond has the optimum depth appropriate for the fish/ crustacean species to be cultured
- **PC8.** arrange for the pond water to be replaced for the removal of any waste in the pond

Optimise resource utilisation

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

- **PC9.** use water and other resources optimally in various tasks and processes and ensure the aguaculture workers also do the same
- PC10. arrange for any water leakages to be plugged to prevent its wastage

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:









- **KU1.** how to use a pH meter to check the soil pH level
- **KU2.** various measures to adjust the soil pH level such as applying lime or gypsum
- KU3. use of recommended fertilisers in an appropriate quantity
- **KU4.** the importance and ways of ensuring the optimum level of dissolved oxygen, salinity and alkalinity in the culture pond
- **KU5.** the process of replacing the pond water
- **KU6.** the importance of ensuring optimum depth in the culture pond for the fish/ crustacean species to be cultured
- **KU7.** benefits of resource optimisation
- KU8. different ways of using various materials efficiently

Generic Skills (GS)

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

- **GS1.** write work-related notes and reports
- **GS2.** read the relevant literature to learn about the latest development in the field of work
- GS3. communicate politely and professionally
- **GS4.** listen attentively to understand the information being shared
- **GS5.** plan and schedule tasks for effective time management
- **GS6.** evaluate all possible solutions to a problem to select the best one
- GS7. identify possible hazards and disruptions to work and take appropriate preventive measures
- GS8. take quick decisions to deal with workplace emergencies









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Supervise the soil conditioning process	12	16	-	12
PC1. instruct the aquaculture worker to check the pH level of the soil using a pH meter and apply lime or gypsum to it in the recommended quantity to adjust the pH	-	-	-	-
PC2. determine the need of applying fertilisers to the culture pond soil through soil testing by an approved lab	-	-	-	-
PC3. arrange for the recommended fertilisers such as basal manure or any other necessary soil treatment to be applied to the soil in an appropriate quantity	-	-	-	-
PC4. ensure the soil in the culture pond is capable of holding water	-	-	-	-
Ensure required water quality in the culture pond	12	16	-	12
PC5. ensure the culture pond has the optimum temperature level required for the fish/ crustacean species to be cultured	-	-	-	-
PC6. ensure the pond has the recommended level of dissolved oxygen, salinity and alkalinity required for the fish/ crustacean species to be cultured	-	-	-	-
PC7. ensure the culture pond has the optimum depth appropriate for the fish/ crustacean species to be cultured	-	-	-	-
PC8. arrange for the pond water to be replaced for the removal of any waste in the pond	-	-	-	-
Optimise resource utilisation	6	8	-	6
PC9. use water and other resources optimally in various tasks and processes and ensure the aquaculture workers also do the same	-	-	-	-
PC10. arrange for any water leakages to be plugged to prevent its wastage	-	-	-	-









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









National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4966
NOS Name	Ensure the soil and water quality in the culture pond
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	4
Version	2.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024









AGR/N4969: Feeding and monitoring the Fish seed

Description

This OS unit is about Feeding and monitoring of the Fish seed

Scope

The scope covers the following:

- Feed Quality
- Feeding Frequency and Quantity
- Feed Conversion Ratio (FCR)
- Growth Rates

Elements and Performance Criteria

Feed Quality

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

- **PC1.** Ensure adherence to a strict feed quality control program, including regular inspections and testing
- **PC2.** use high-quality, nutritionally balanced feed that meets the specific needs of the fish species and growth stages
- **PC3.** Ensure proper storage and handling of feed to maintain its nutritional value and prevent spoilage

Feeding Frequency and Quantity

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

- **PC4.** ensure accurate calculation and distribution of feed amounts based on fish size, water temperature, and growth rates
- **PC5.** Ensure consistent feeding schedules to avoid overfeeding or underfeeding
- **PC6.** Use automated feeding systems or manual feeding methods that ensure even distribution of feed throughout the tanks

Feed Conversion Ratio (FCR)

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

- **PC7.** Monitor and optimization of FCR to minimize feed wastage and maximize fish growth
- **PC8.** implement strategies to improve FCR, such as adjusting feeding rates, improving water quality, and preventing disease outbreaks

Growth Rates

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

- **PC9.** track and monitor fish growth rates to assess the effectiveness of feeding and management practices
- PC10. use standardized growth measurement methods to ensure accurate data collection
- **PC11.** record and analyze mortality rates to identify potential causes such as excessive feed, disease, poor water quality, or other factors and implement corrective measures









Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** nutritionally balanced feed for specific needs of the fish species and growth stages
- KU2. strict feed quality control program
- KU3. proper storage and handling of feed to maintain its nutritional value and prevent spoilage
- **KU4.** calculation and distribution of feed amounts based on fish size, water temperature, and growth rates
- KU5. feeding schedules to avoid overfeeding or underfeeding
- **KU6.** Feed Conversion Ratio (FCR) and strategies to adjust as per requirement
- KU7. standardized growth measurement methods to ensure accurate data collection
- **KU8.** potential causes such as excessive feed, disease, poor water quality, or other factors and implement corrective measures

Generic Skills (GS)

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

- **GS1.** maintain work-related records
- **GS2.** read and follow the health and safety instructions
- GS3. listen attentively to understand the information being shared by the speaker
- **GS4.** communicate clearly and politely with co-workers and clients
- **GS5.** co-ordinate with the co-workers to achieve the work objectives









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Feed Quality	6	8	-	6
PC1. Ensure adherence to a strict feed quality control program, including regular inspections and testing	-	-	-	-
PC2. use high-quality, nutritionally balanced feed that meets the specific needs of the fish species and growth stages	-	-	-	-
PC3. Ensure proper storage and handling of feed to maintain its nutritional value and prevent spoilage	-	-	-	-
Feeding Frequency and Quantity	8	12	-	10
PC4. ensure accurate calculation and distribution of feed amounts based on fish size, water temperature, and growth rates	-	-	-	-
PC5. Ensure consistent feeding schedules to avoid overfeeding or underfeeding	-	-	-	-
PC6. Use automated feeding systems or manual feeding methods that ensure even distribution of feed throughout the tanks	-	-	-	-
Feed Conversion Ratio (FCR)	10	12	-	8
PC7. Monitor and optimization of FCR to minimize feed wastage and maximize fish growth	-	-	-	-
PC8. implement strategies to improve FCR, such as adjusting feeding rates, improving water quality, and preventing disease outbreaks	-	-	-	-
Growth Rates	6	8	-	6
PC9. track and monitor fish growth rates to assess the effectiveness of feeding and management practices	-	-	-	-
PC10. use standardized growth measurement methods to ensure accurate data collection	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. record and analyze mortality rates to identify potential causes such as excessive feed, disease, poor water quality, or other factors and implement corrective measures	-	-	-	-
NOS Total	30	40	-	30









National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4969
NOS Name	Feeding and monitoring the Fish seed
Sector	Agriculture
Sub-Sector	
Occupation	Aquaculture
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024









AGR/N4931: Supervise the culture, harvest and post-harvest activities

Description

This OS unit is about supervising the maintenance of pond and seed production of a variety of fish and crustacean species

Scope

The scope covers the following:

- Ensure pond preparation for the selected seed species
- Purchase the seeds and supervise their stocking
- Supervise maintenance of the stocked seeds in the pond
- Supervise harvesting and packing of seeds
- Perform waste management

Elements and Performance Criteria

Ensure pond preparation for the selected seed species

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

- **PC1.** identify the species to be grown for seeds such as carps, catfish, murrel, freshwater prawn, etc.
- **PC2.** ensure the pond is prepared according to the stages of growth of the seed to be grown, such as spawn to fry, fry to fingerling, post-larvae to juvenile, etc.
- **PC3.** arrange for de-mudding to be carried out in the pond
- **PC4.** instruct the workers to drain out and sun-dry the perennial pond
- **PC5.** ensure the aquatic weeds, predatory and weed fish are removed from the pond
- **PC6.** arrange for the appropriate treatment to be applied for controlling aquatic insects before seed stocking

Purchase the seeds and supervise their stocking

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

- **PC7.** identify the vendors of the seeds of the selected species to be cultured
- **PC8.** select a vendor based on the quality of seeds
- **PC9.** arrange for an appropriate mode of transport for stress-free transportation of seeds to the pond
- **PC10.** arrange for the seeds to be acclimatised before being stocked
- **PC11.** maintain the record of purchase
- **PC12.** ensure that seeds are stocked at the species ratio and density recommended for the selected species

Supervise maintenance of the stocked seeds in the pond

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

PC13. ensure the recommended water level and Relative Humidity (RH) are maintained in the pond for the selected species









- **PC14.** instruct the workers to carry out the relevant culture activities for the stocked species
- **PC15.** ensure the seeds are given feed with the required nutrients in the recommended quantity and as per the feeding schedule
- **PC16.** arrange for periodic sampling of water, soil and seeds to check the occurrence of pathogens, abnormalities and infections
- **PC17.** ensure optimum salinity, pH, oxygen and temperature levels are maintained in the pond during culture operations
- **PC18.** instruct the workers to monitor the stocked seeds for signs of harmful organisms and disease
- **PC19.** arrange for the necessary treatment to be applied in the pond free remove harmful organisms and disease

Supervise harvesting and packing of seeds

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

- PC20. identify the maturity of seeds to ensure their readiness for being harvested
- **PC21.** ensure nets with appropriate mesh size are selected for harvesting the seeds
- **PC22.** instruct the workers to harvest the seeds using an appropriate method, ensuring no damage to them
- **PC23.** ensure conditioning of the seeds before transportation
- **PC24.** instruct the workers to pack the harvested fish seeds in appropriate containers at the optimum density
- **PC25.** ensure an appropriate mode of transport is used to transport the harvested seeds to the buyer or target market in hygienic conditions with the minimum stress

Perform waste management

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

- PC26. segregate waste into appropriate categories
- **PC27.** arrange for safe disposal of non-recyclable waste
- **PC28.** use lime or the approved disinfectant(s) to recycle the wastewater and ensure the workers also do the same
- **PC29.** ensure the quality parameters of the treated water are checked to determine its suitability for re-use
- **PC30.** arrange for the recycled water to be utilised in appropriate culture operations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** species suitable for seed production such as carps, catfish, murrel, freshwater prawn, etc.
- **KU2.** the process of preparing the pond according to the stages of growth of the seed to be grown, such as spawn to fry, fry to fingerling, post-larvae to juvenile, etc.
- **KU3.** the process of applying the appropriate treatments to improve the soil fertility such as basal manure, lime, gypsum, etc.
- **KU4.** the process of de-mudding, draining and sun-drying the pond
- **KU5.** the process of removing aquatic weed, predatory and weed fish from the pond
- **KU6.** relevant treatment to control aquatic insects in the pond









- **KU7.** the process of purchasing quality seeds from a vendor
- **KU8.** safe mode of transport for stress-free transportation of seeds to the pond
- **KU9.** the process of acclimatising the seeds before being stocked
- **KU10.** applicable documentation requirements
- **KU11.** the process of stocking seeds while maintaining the species ratio and density recommended for the selected species
- **KU12.** recommended water level, temperature and Relative Humidity (RH) for the varieties of fish species
- **KU13.** culture activities for a variety of fish species
- **KU14.** feed requirement and feeding schedule for different fish species
- **KU15.** the process of carrying out periodic sampling of water, soil and seeds to check the occurrence of pathogens, abnormalities and infections
- **KU16.** the importance of maintaining the optimum salinity, pH, oxygen levels in the pond
- **KU17.** signs of harmful organisms and disease in the stocked seeds and the appropriate treatment to remove them
- KU18. indicators of the maturity of the seeds for their readiness for being harvested
- **KU19.** importance of using the nets with appropriate mesh size and method for harvesting the seeds
- **KU20.** the process of conditioning the seeds before transportation
- **KU21.** appropriate containers and density for packing the seeds
- **KU22.** different methods of recycling and disposing waste
- **KU23.** common sources of pollution and ways to minimise it
- **KU24.** wastewater management and methods of recycling
- **KU25.** various uses of recycled water in culture operations
- **KU26.** the importance of following environmental and ecological best practices

Generic Skills (GS)

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

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









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure pond preparation for the selected seed species	8	12	-	8
PC1. identify the species to be grown for seeds such as carps, catfish, murrel, freshwater prawn, etc.	-	-	-	-
PC2. ensure the pond is prepared according to the stages of growth of the seed to be grown, such as spawn to fry, fry to fingerling, post-larvae to juvenile, etc.	-	-	-	-
PC3. arrange for de-mudding to be carried out in the pond	-	-	-	-
PC4. instruct the workers to drain out and sun-dry the perennial pond	-	-	-	-
PC5. ensure the aquatic weeds, predatory and weed fish are removed from the pond	-	-	-	-
PC6. arrange for the appropriate treatment to be applied for controlling aquatic insects before seed stocking	-	-	-	-
Purchase the seeds and supervise their stocking	6	8	-	6
PC7. identify the vendors of the seeds of the selected species to be cultured	-	-	-	-
PC8. select a vendor based on the quality of seeds	-	-	-	-
PC9. arrange for an appropriate mode of transport for stress-free transportation of seeds to the pond	-	-	-	-
PC10. arrange for the seeds to be acclimatised before being stocked	-	-	-	-
PC11. maintain the record of purchase	-	-	-	-
PC12. ensure that seeds are stocked at the species ratio and density recommended for the selected species	-	-	-	-
Supervise maintenance of the stocked seeds in the pond	4	8	-	6









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. ensure the recommended water level and Relative Humidity (RH) are maintained in the pond for the selected species	-	-	-	-
PC14. instruct the workers to carry out the relevant culture activities for the stocked species	-	-	-	-
PC15. ensure the seeds are given feed with the required nutrients in the recommended quantity and as per the feeding schedule	-	-	-	-
PC16. arrange for periodic sampling of water, soil and seeds to check the occurrence of pathogens, abnormalities and infections	-	-	-	-
PC17. ensure optimum salinity, pH, oxygen and temperature levels are maintained in the pond during culture operations	-	-	-	-
PC18. instruct the workers to monitor the stocked seeds for signs of harmful organisms and disease	-	-	-	-
PC19. arrange for the necessary treatment to be applied in the pond free remove harmful organisms and disease	-	-	-	-
Supervise harvesting and packing of seeds	8	6	-	6
PC20. identify the maturity of seeds to ensure their readiness for being harvested	-	-	-	-
PC21. ensure nets with appropriate mesh size are selected for harvesting the seeds	-	-	-	-
PC22. instruct the workers to harvest the seeds using an appropriate method, ensuring no damage to them	-	-	-	-
PC23. ensure conditioning of the seeds before transportation	-	-	-	-
PC24. instruct the workers to pack the harvested fish seeds in appropriate containers at the optimum density	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. ensure an appropriate mode of transport is used to transport the harvested seeds to the buyer or target market in hygienic conditions with the minimum stress	-	-	-	-
Perform waste management	4	6	-	4
PC26. segregate waste into appropriate categories	-	-	-	-
PC27. arrange for safe disposal of non-recyclable waste	-	-	-	-
PC28. use lime or the approved disinfectant(s) to recycle the wastewater and ensure the workers also do the same	-	-	-	-
PC29. ensure the quality parameters of the treated water are checked to determine its suitability for re-use	-	-	-	-
PC30. arrange for the recycled water to be utilised in appropriate culture operations	-	-	-	-
NOS Total	30	40	-	30









National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4931
NOS Name	Supervise the culture, harvest and post-harvest activities
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	5
Version	3.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024









AGR/N4918: Ensure health, hygiene and safety during culture operations

Description

This OS unit is about maintaining health, hygiene and safety during the culture operations.

Scope

The scope covers the following:

- Ensure the upkeep of water body, tools and equipment
- Maintain personal hygiene and safety
- Maintain the health of cultured organisms

Elements and Performance Criteria

Ensure the upkeep of water body, tools and equipment

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

- **PC1.** ensure the necessary practices are followed to protect the aquaculture farm and dykes from erosion and natural calamities such as flood and storms
- **PC2.** ensure protection of the cultured organisms from water/ air/ fomite borne diseases and contamination from handling
- **PC3.** identify and eliminate common predators and preying organisms from the water body
- **PC4.** ensure fences are erected to protect the water body from external threats
- **PC5.** restrict the entry of unauthorised persons into the aquaculture area
- **PC6.** follow the recommended practices to prevent the escape of cultured organisms from the culture pond/ tank
- **PC7.** conduct regular tests to ensure the appropriate soil and water quality parameters are maintained in the water body
- **PC8.** ensure all the nets, vessels, tools and equipment are cleaned and de-contaminated regularly *Maintain personal hygiene and safety*

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

- **PC9.** ensure basic safety checks are undertaken before the operation of any tools and equipment
- **PC10.** ensure the use of relevant Personal Protective Equipment (PPE) during various aquaculture operations
- **PC11.** use the recommended soap/ sanitiser to sanitise the hands and ensure the other personnel also use it
- PC12. follow the standard procedures to deal with accidents and emergencies
- **PC13.** use the first-aid kit to provide appropriate treatment in case of any injuries
- **PC14.** co-ordinate with the emergency services for further medical attention

Maintain the health of cultured organisms

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

PC15. follow the recommended prophylactic measures and ensure hygienic conditions during all the stages of growth of the cultured organisms









- **PC16.** examine the cultured organisms regularly to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.
- **PC17.** ensure the necessary medicines/ chemicals are applied as per prescription, maintaining the toxicity levels within the prescribed limits
- **PC18.** use the recommended therapeutic practices in combination with the prescribed treatment for the speedy recovery of the diseased organisms
- **PC19.** identify a quarantine area and arrange for the diseased organisms to be quarantined and treated
- **PC20.** co-ordinate with an expert to deal with unexpected disease outbreak among the cultured organisms
- **PC21.** ensure timely removal of the dead and moribund organisms from the water body
- PC22. arrange for safe disposal of the dead and diseased organisms

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** various practices to protect the aquaculture farm and dykes from erosion and natural calamities
- **KU2.** how to protect the cultured organisms from water/ air/ fomite borne diseases and contamination from handling
- **KU3.** the process of identifying and eliminating common predators and preying organisms in the water body
- **KU4.** the importance of fencing to protect the water body from external threats
- **KU5.** how to prevent the escape of cultured organisms from the culture pond/ tank
- **KU6.** the importance and process of conducting regular tests to maintain the recommended soil and water quality parameters in the water body
- **KU7.** the importance of cleaning and de-contaminating the nets, vessels, tools and equipment
- **KU8.** basic safety checks to be undertaken before operating any tools and equipment
- **KU9.** use of the relevant PPE during various aquaculture operations
- **KU10.** standard procedures to deal with accidents and emergencies
- **KU11.** how to administer first-aid and request further medical attention
- **KU12.** recommended prophylactic measures to prevent disease among cultured organisms
- **KU13.** the process of examining the cultured organisms to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.
- **KU14.** the process of applying medicines/ chemicals while maintaining the toxicity levels within the prescribed limits
- **KU15.** use of the various therapeutic practices in combination with the prescribed treatments for the speedy recovery of the diseased organisms
- **KU16.** the process of identifying diseased organisms, guarantining and treating them
- **KU17.** the importance and process of removing and disposing the dead and moribund organisms from the water body

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









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure the upkeep of water body, tools and equipment	10	12	-	8
PC1. ensure the necessary practices are followed to protect the aquaculture farm and dykes from erosion and natural calamities such as flood and storms	-	-	-	-
PC2. ensure protection of the cultured organisms from water/ air/ fomite borne diseases and contamination from handling	-	-	-	-
PC3. identify and eliminate common predators and preying organisms from the water body	-	-	-	-
PC4. ensure fences are erected to protect the water body from external threats	-	-	-	-
PC5. restrict the entry of unauthorised persons into the aquaculture area	-	-	-	-
PC6. follow the recommended practices to prevent the escape of cultured organisms from the culture pond/ tank	-	-	-	-
PC7. conduct regular tests to ensure the appropriate soil and water quality parameters are maintained in the water body	-	-	-	-
PC8. ensure all the nets, vessels, tools and equipment are cleaned and de-contaminated regularly	-	-	-	-
Maintain personal hygiene and safety	10	12	-	12
PC9. ensure basic safety checks are undertaken before the operation of any tools and equipment	-	-	-	-
PC10. ensure the use of relevant Personal Protective Equipment (PPE) during various aquaculture operations	-	-	-	-
PC11. use the recommended soap/ sanitiser to sanitise the hands and ensure the other personnel also use it	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. follow the standard procedures to deal with accidents and emergencies	-	-	-	-
PC13. use the first-aid kit to provide appropriate treatment in case of any injuries	-	-	-	-
PC14. co-ordinate with the emergency services for further medical attention	-	-	-	-
Maintain the health of cultured organisms	10	16	-	10
PC15. follow the recommended prophylactic measures and ensure hygienic conditions during all the stages of growth of the cultured organisms	-	-	-	-
PC16. examine the cultured organisms regularly to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.	-	-	-	-
PC17. ensure the necessary medicines/ chemicals are applied as per prescription, maintaining the toxicity levels within the prescribed limits	-	-	-	-
PC18. use the recommended therapeutic practices in combination with the prescribed treatment for the speedy recovery of the diseased organisms	-	-	-	-
PC19. identify a quarantine area and arrange for the diseased organisms to be quarantined and treated	-	-	-	-
PC20. co-ordinate with an expert to deal with unexpected disease outbreak among the cultured organisms	-	-	-	-
PC21. ensure timely removal of the dead and moribund organisms from the water body	-	-	-	-
PC22. arrange for safe disposal of the dead and diseased organisms	-	-	-	-
NOS Total	30	40	-	30









National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4918
NOS Name	Ensure health, hygiene and safety during culture operations
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	1
Version	3.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024









AGR/N9923: Manage and lead a team effectively

Description

This OS unit is about managing and leading a team to ensure that work objectives and organisational goals are achieved.

Scope

The scope covers the following:

- Manage the team performance
- Maintain a fair and professional work environment

Elements and Performance Criteria

Manage the team performance

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

- **PC1.** prepare a work plan according to the tasks and the number of available team members
- PC2. allocate tasks to the team members according to their skills and roles
- **PC3.** arrange the necessary support and resources to help the team members perform their duties
- **PC4.** conduct regular team meetings/ briefings to communicate with the team members regarding their work objectives, projects, work progress, etc.
- **PC5.** monitor the performance of each team member and progress of the tasks assigned to them
- **PC6.** collect the team performance data and prepare the necessary reports
- **PC7.** evaluate the reports to identify the scope of improvement
- **PC8.** assist the team members with poor performance in improving their performance
- **PC9.** arrange for reward and recognition for the team members with good performance
- **PC10.** arrange for relevant training and upskilling of the team members for their professional development

Maintain a fair and professional work environment

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

- **PC11.** maintain professional relationships with the team members
- **PC12.** conduct counselling sessions to resolve conflicts among the team members and guide them regarding their professional development
- **PC13.** communicate with the team members to understand their concerns and find appropriate solutions
- **PC14.** ensure equal and fair career progression opportunities for all the team members

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the process of preparing a work plan and allocating tasks









- KU2. the importance of conducting regular team meetings and counselling sessions
- **KU3.** the importance and process of monitoring the team performance
- **KU4.** how to prepare work progress reports and their evaluation
- **KU5.** various practices to manage and improve team performance
- **KU6.** the importance of ensuring reward and recognition for the team's good performance
- **KU7.** the importance of arranging training and upskilling for team members for their professional development
- **KU8.** how to maintain professional relationships with the team members
- **KU9.** the importance and process of resolving conflicts among the team members
- **KU10.** the importance of resolving concerns of the team members for their best performance
- **KU11.** the importance of ensuring equal and fair career progression opportunities for all the team members

Generic Skills (GS)

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

- **GS1.** write work-related notes and prepare reports
- **GS2.** read the relevant policy and scheme-related documents
- **GS3.** communicate politely and professionally
- **GS4.** listen attentively to understand the information/ concerns being shared
- **GS5.** plan and prioritise tasks to ensure timely completion
- **GS6.** take quick decisions to deal with workplace emergencies/ accidents
- **GS7.** identify possible disruptions to work and take preventive measures
- **GS8.** co-ordinate with the co-workers to achieve the work objectives









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Manage the team performance	16	24	-	15
PC1. prepare a work plan according to the tasks and the number of available team members	-	-	-	-
PC2. allocate tasks to the team members according to their skills and roles	-	-	-	-
PC3. arrange the necessary support and resources to help the team members perform their duties	-	-	-	-
PC4. conduct regular team meetings/ briefings to communicate with the team members regarding their work objectives, projects, work progress, etc.	-	-	-	-
PC5. monitor the performance of each team member and progress of the tasks assigned to them	-	-	-	-
PC6. collect the team performance data and prepare the necessary reports	-	-	-	-
PC7. evaluate the reports to identify the scope of improvement	-	-	-	-
PC8. assist the team members with poor performance in improving their performance	-	-	-	-
PC9. arrange for reward and recognition for the team members with good performance	-	-	-	-
PC10. arrange for relevant training and upskilling of the team members for their professional development	-	-	-	-
Maintain a fair and professional work environment	14	16	-	15
PC11. maintain professional relationships with the team members	-	-	-	-
PC12. conduct counselling sessions to resolve conflicts among the team members and guide them regarding their professional development	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. communicate with the team members to understand their concerns and find appropriate solutions	-	-	-	-
PC14. ensure equal and fair career progression opportunities for all the team members	-	-	-	-
NOS Total	30	40	-	30









National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9923
NOS Name	Manage and lead a team effectively
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	6
Credits	1
Version	2.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024









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

Description

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

Scope

The scope covers the following:

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

Elements and Performance Criteria

Introduction to Employability Skills

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

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

Constitutional values - Citizenship

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

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

Becoming a Professional in the 21st Century

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

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

Basic English Skills

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









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

Career Development & Goal Setting

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

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

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

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

Diversity & Inclusion

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

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

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

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

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

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

Entrepreneurship

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

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

Customer Service

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

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









PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

- PC29. create a professional Curriculum vitae (Résumé)
- **PC30.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively
- **PC31.** apply to identified job openings using offline /online methods as per requirement
- **PC32.** answer questions politely, with clarity and confidence, during recruitment and selection
- **PC33.** identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. need for employability skills and different learning and employability related portals
- **KU2.** various constitutional and personal values
- **KU3.** different environmentally sustainable practices and their importance
- **KU4.** Twenty first (21st) century skills and their importance
- **KU5.** how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up
- **KU6.** importance of career development and setting long- and short-term goals
- **KU7.** about effective communication
- KU8. POSH Act
- **KU9.** Gender sensitivity and inclusivity
- **KU10.** different types of financial institutes, products, and services
- **KU11.** how to compute income and expenditure
- **KU12.** importance of maintaining safety and security in offline and online financial transactions
- **KU13.** different legal rights and laws
- **KU14.** different types of digital devices and the procedure to operate them safely and securely
- **KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.
- **KU16.** how to identify business opportunities
- **KU17.** types and needs of customers
- **KU18.** how to apply for a job and prepare for an interview
- **KU19.** apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

- **GS1.** read and write different types of documents/instructions/correspondence
- GS2. communicate effectively using appropriate language in formal and informal settings









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









Assessment Criteria

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









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









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









National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	18/02/2025
Next Review Date	18/02/2028
NSQC Clearance Date	18/02/2025

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each
- examination/ training center based on these criteria.
- 5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take 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: 70

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

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N4966.Ensure the soil and water quality in the culture pond	30	40	-	30	100	30
AGR/N4969.Feeding and monitoring the Fish seed	30	40	-	30	100	20
AGR/N4931.Supervise the culture, harvest and post-harvest activities	30	40	-	30	100	30
AGR/N4918.Ensure health, hygiene and safety during culture operations	30	40	-	30	100	10
AGR/N9923.Manage and lead a team effectively	30	40	-	30	100	5
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
Total	170	230	-	150	550	100









Acronyms

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









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.









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.