









Freshwater Aquaculture Farmer

QP Code: AGR/Q4905

Version: 3.0

NSQF Level: 4

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AGR/Q4905: Freshwater Aquaculture Farmer

Brief Job Description

A Freshwater Aquaculture Farmer is responsible for the purchase of quality seeds, managing pre-stocking and post-stocking practices for the production of healthy freshwater organisms and marketing them.

Personal Attributes

The individual must have problem-solving skills, attention to detail and stamina to work for long durations. The person must also know how to swim and possess basic reading, writing and communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. AGR/N4921: Perform pre-stocking and stocking activities
- 2. AGR/N4922: Perform post-stocking culture activities
- 3. AGR/N4923: Harvest, process and market the aquaculture organisms
- 4. AGR/N9922: Engage in collective farming/activity
- 5. <u>AGR/N4955: Follow the hygiene and safety practices in culture operations</u>
- 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	13
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2132.0900









Minimum Educational Qualification & Experience	12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (pursuing regular diploma) OR 10th grade pass (plus 2-year NTC) OR 10th grade pass (plus 1-year NTC plus 1 year NAC) OR 8th grade pass (plus 1-year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass and pursuing continuous schooling OR 10th grade pass with 2 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience)			
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	30/04/2025			
NSQC Approval Date	30/12/2021			
Version	3.0			
Reference code on NQR	QG-04-AG-00275-2023-V1.1-ASCI			
NQR Version	1.1			







AGR/N4921: Perform pre-stocking and stocking activities

Description

This OS unit is about preparing freshwater aquaculture systems (ponds/tanks) and stocking of quality seeds for culture.

Scope

The scope covers the following :

- Carry out soil conditioning
- Collect/ procure and stock seeds for culture activities
- Maintain the water body
- Optimise resource utilisation
- Perform waste management

Elements and Performance Criteria

Carry out soil conditioning

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

- PC1. check the pH level of the soil using a pH meter
- **PC2.** perform soil conditioning by applying lime, gypsum, etc.

Collect/ procure and stock seeds for culture activities

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

- PC3. select diversified carp species for the freshwater aquaculture system
- PC4. collect/ procure quality seed for rearing and transport them with minimum stress
- PC5. acclimatise the seeds before stocking

Maintain the water body

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

- **PC6.** maintain optimum water temperature, dissolved oxygen, salinity and pH levels in the pond/ tank for the cultured fish and crustacean species
- PC7. replace the pond water to remove organic waste and maintain the quality of water
- PC8. maintain the recommended water depth and stocking density for the cultured species

Optimise resource utilisation

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

PC9. optimise the usage of water, electricity and relevant materials in various tasks and processes

PC10. plug any water leakages to prevent its wastage

Perform waste management

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

- **PC11.** segregate waste into appropriate categories and deposit the recyclable waste at the identified location
- PC12. dispose the non-recyclable waste appropriately
- PC13. treat the wastewater for recycling by using lime or disinfectant









- PC14. check the water quality parameters after treatment to ensure suitability for re-use
- PC15. use the treated water in appropriate aquaculture operations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. how to check the pH levels of the soil
- KU2. relevant practices for soil conditioning
- KU3. various freshwater species of fish/crustaceans
- KU4. the process of procuring seeds
- KU5. criteria for the selection of good quality seeds
- KU6. safe transportation method for transporting fish seed with minimum stress
- KU7. the process of acclimatising seeds before being stocked
- KU8. how to check water quality parameters
- KU9. various practices for reducing water loss from the culture pond
- KU10. how to maintain the optimum pH level and salinity levels in the culture pond water
- **KU11.** the importance and process of maintaining optimum water temperature and stocking density for various freshwater species
- KU12. the process of aerating culture pond water to maintain the optimum dissolved oxygen level
- KU13. the process of replacing water in the culture pond
- KU14. how to treat wastewater using lime or recommended disinfectants
- **KU15.** different methods of recycling and disposing waste
- KU16. common sources of pollution and ways to minimise it
- **KU17.** the importance of following environmental and ecological best practices
- KU18. the benefits of resource optimisation

Generic Skills (GS)

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

- GS1. read the relevant literature to get updated information about the field of work
- GS2. plan and prioritise tasks to ensure timely completion
- GS3. take quick decisions to resolve work-related issues
- **GS4.** communicate politely and effectively with co-workers
- GS5. identify possible disruptions to work and take appropriate preventive measures
- GS6. take quick decisions to deal with any emergencies/ accidents







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Carry out soil conditioning	6	8	-	6
PC1. check the pH level of the soil using a pH meter	-	-	-	-
PC2. perform soil conditioning by applying lime, gypsum, etc.	-	-	-	-
<i>Collect/ procure and stock seeds for culture activities</i>	8	8	-	6
PC3. select diversified carp species for the freshwater aquaculture system	-	-	-	-
PC4. collect/ procure quality seed for rearing and transport them with minimum stress	-	-	-	-
PC5. acclimatise the seeds before stocking	-	-	-	-
Maintain the water body	6	10	-	8
PC6. maintain optimum water temperature, dissolved oxygen, salinity and pH levels in the pond/ tank for the cultured fish and crustacean species	-	-	-	-
PC7. replace the pond water to remove organic waste and maintain the quality of water	-	-	-	-
PC8. maintain the recommended water depth and stocking density for the cultured species	-	-	-	-
Optimise resource utilisation	4	6	-	4
PC9. optimise the usage of water, electricity and relevant materials in various tasks and processes	-	-	-	-
PC10. plug any water leakages to prevent its wastage	-	-	-	-
Perform waste management	6	8	-	6
PC11. segregate waste into appropriate categories and deposit the recyclable waste at the identified location	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. dispose the non-recyclable waste appropriately	-	-	-	-
PC13. treat the wastewater for recycling by using lime or disinfectant	-	-	-	-
PC14. check the water quality parameters after treatment to ensure suitability for re-use	-	-	-	-
PC15. use the treated water in appropriate aquaculture operations	-	-	-	-
NOS Total	30	40	-	30









National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4921
NOS Name	Perform pre-stocking and stocking activities
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	2
Version	2.0
Next Review Date	30/12/2024









AGR/N4922: Perform post-stocking culture activities

Description

This OS unit is about undertaking culture activities for freshwater organism after stocking them in the pond.

Scope

The scope covers the following :

- Maintain the physicochemical and biological parameters in the pond
- Perform feed management
- Perform health management

Elements and Performance Criteria

Maintain the physicochemical and biological parameters in the pond

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

- PC1. perform periodic soil, water, and fish sampling and netting operation
- **PC2.** apply appropriate dosages of lime, manure and fertilizers to maintain the soil and water quality
- **PC3.** maintain optimum levels of dissolved oxygen by using aerators
- **PC4.** apply the recommended herbicides and other chemicals to control the growth of aquatic weeds, algal bloom in the pond
- PC5. remove the aquatic weeds and algal bloom from the pond

Perform feed management

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

- **PC6.** sample the cultured organisms regularly to calculate their biomass and determine their growth
- **PC7.** feed the freshwater organisms with the recommended quantity and quality of feed as per the feeding schedule
- **PC8.** monitor the feed consumption and modify the feed ration according to the environmental conditions and season

Perform health management

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

- **PC9.** follow the recommended practices to prevent outbreak of disease and harmful organisms in the pond
- **PC10.** diagnose any problem/ disease with the help of an expert or a fish disease diagnostic laboratory
- PC11. quarantine the unhealthy fish in the quarantine tank
- PC12. treat the unhealthy fish with the recommended dose of prescribed treatment
- **PC13.** monitor the fish in the quarantine tank for signs of improvement and restock it in the culture pond on complete recovery









Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** basic physicochemical and biological parameters to be maintained in the culture pond
- KU2. appropriate soil and water conditions for the optimum growth of cultured organisms
- KU3. feed and feeding habits of various aquaculture organisms
- **KU4.** how to calculate daily feed ration according to the feed intake rate and biomass of the aquaculture organisms
- **KU5.** the need for appropriate diet composition of each variety of aquatic organisms in the culture system
- KU6. how to determine the health condition of organisms stocked in the pond
- KU7. the importance of using various chemicals and treatments in the recommended quantity
- KU8. different types of diseases that can affect the freshwater organisms
- KU9. the process of applying medicinal treatment in the pond to cure the unhealthy organisms
- KU10. how to perform periodic soil, water, and fish sampling and netting operation
- **KU11.** how to determine and apply the appropriate dose of lime, manure and fertilisers to maintain the soil and water quality
- **KU12.** methods to control aquatic weeds and algal bloom in the culture pond

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 latest updates about the field of work
- GS3. listen attentively to understand the information/ instructions 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. evaluate all possible solutions to a problem to select the best one
- GS7. co-ordinate with co-workers to achieve work objectives
- GS8. identify possible disruptions to work and take appropriate preventive measures







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Maintain the physicochemical and biological parameters in the pond	8	12	-	10
PC1. perform periodic soil, water, and fish sampling and netting operation	-	-	-	-
PC2. apply appropriate dosages of lime, manure and fertilizers to maintain the soil and water quality	-	-	-	-
PC3. maintain optimum levels of dissolved oxygen by using aerators	-	-	-	-
PC4. apply the recommended herbicides and other chemicals to control the growth of aquatic weeds, algal bloom in the pond	-	-	-	-
PC5. remove the aquatic weeds and algal bloom from the pond	-	-	-	-
Perform feed management	12	16	-	12
PC6. sample the cultured organisms regularly to calculate their biomass and determine their growth	-	-	-	-
PC7. feed the freshwater organisms with the recommended quantity and quality of feed as per the feeding schedule	-	-	-	-
PC8. monitor the feed consumption and modify the feed ration according to the environmental conditions and season	_	-	_	-
Perform health management	10	12	-	8
PC9. follow the recommended practices to prevent outbreak of disease and harmful organisms in the pond	-	-	-	-
PC10. diagnose any problem/ disease with the help of an expert or a fish disease diagnostic laboratory	-	-	-	-
PC11. quarantine the unhealthy fish in the quarantine tank	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. treat the unhealthy fish with the recommended dose of prescribed treatment	-	-	-	-
PC13. monitor the fish in the quarantine tank for signs of improvement and restock it in the culture pond on complete recovery	-	-	-	-
NOS Total	30	40	-	30







National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4922
NOS Name	Perform post-stocking culture activities
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	3
Version	2.0
Next Review Date	30/12/2024







AGR/N4923: Harvest, process and market the aquaculture organisms

Description

This OS unit is about carrying out harvesting, sorting, grading and marketing of aquaculture organisms.

Scope

The scope covers the following :

- Harvest the aquaculture organisms
- Sort, grade and store the aquaculture organisms
- Market the aquaculture organisms

Elements and Performance Criteria

Harvest the aquaculture organisms

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

- **PC1.** check the aquaculture organisms to ensure they have attained the marketable size and are ready for being harvested
- **PC2.** select an appropriate time of the day and method to harvest the aquaculture organisms such as ring seine, hook and line, traps and pots, trawling, purse seining, etc.
- **PC3.** use the appropriate tools and equipment such as dip net, cast net, portable lift net, gill nets according to the selected method
- **PC4.** harvest the aquaculture organisms partially or completely according to the local demand and proximity to the relevant markets/ buyers
- PC5. protect the aquaculture organisms from stress, damage and contamination during harvesting
- **PC6.** maintain the record of harvested organisms

Sort, grade and store the aquaculture organisms

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

- PC7. carry out sorting of organisms as per the relevant criteria such as species and maturity
- **PC8.** grade the organisms manually or mechanically on the basis of appropriate quality parameters such as size and appearance
- **PC9.** store the organisms in hygienic conditions at the recommended temperature and humidity before and after processing

Market the aquaculture organisms

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

- **PC10.** identify the market demand and potential buyers of the harvested aquaculture organisms
- **PC11.** negotiate the price with the buyer(s)
- **PC12.** pack the aquaculture organisms in appropriate containers for being transported to the market/ buyer
- **PC13.** maintain the optimum density while packing to ensure minimum stress to the organisms during transit









- **PC14.** follow the recommended practices to save the produce from contamination during packing and transit
- PC15. arrange an appropriate mode of transport to deliver the organisms to the buyer
- **PC16.** use the relevant e-payment method such as Aadhaar Enabled Payment System (AEPS), Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD) payment, etc.
- PC17. maintain the record of sales and payments
- PC18. calculate the benefit-cost (B:C) ratio

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. maturity indicators of various aquaculture organisms
- **KU2.** appropriate time and method to harvest the aquaculture organisms safely such as ring seine, shore seine, hook and line, traps and pots, trawling, purse seining, hook and line, etc.
- **KU3.** use of the relevant harvesting tools and equipment such as stake net, Chinese dip net, cast net, mini trawls, gill nets, trammel net, cast net and portable lift net to harvest the aquaculture organisms
- KU4. applicable documentation requirements
- KU5. the process and various criteria for sorting and grading harvested aquaculture organisms
- **KU6.** appropriate conditions to store the harvested aquaculture organisms
- **KU7.** various activities in the process of marketing the produce such as identifying the market demand, connecting with buyers and negotiating the price, processing order and payments etc.
- **KU8.** recommended practices for packing and transporting aquaculture organisms safely while protecting them from contamination
- **KU9.** use of various e-payment methods such as Aadhaar Enabled Payment System (AEPS), Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD) payment, etc.
- KU10. how to calculate the benefit-cost (B:C) ratio

Generic Skills (GS)

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

- **GS1.** write work-related records
- GS2. communicate clearly and politely with co-workers and clients
- **GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4. plan and prioritise tasks to ensure timely completion
- GS5. take quick decisions to deal with workplace emergencies/ accidents
- **GS6.** listen attentively to understand the information/ instructions being shared by the speaker
- GS7. identify possible disruptions to work and take appropriate preventive measures









- GS8. co-ordinate with co-workers to achieve work objectives
- **GS9.** evaluate all possible solutions to a problem to select the best one







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Harvest the aquaculture organisms	14	14	-	10
PC1. check the aquaculture organisms to ensure they have attained the marketable size and are ready for being harvested	-	-	-	-
PC2. select an appropriate time of the day and method to harvest the aquaculture organisms such as ring seine, hook and line, traps and pots, trawling, purse seining, etc.	-	-	-	-
PC3. use the appropriate tools and equipment such as dip net, cast net, portable lift net, gill nets according to the selected method	-	-	-	-
PC4. harvest the aquaculture organisms partially or completely according to the local demand and proximity to the relevant markets/ buyers	-	-	-	-
PC5. protect the aquaculture organisms from stress, damage and contamination during harvesting	-	-	-	-
PC6. maintain the record of harvested organisms	-	-	-	-
Sort, grade and store the aquaculture organisms	8	14	-	12
PC7. carry out sorting of organisms as per the relevant criteria such as species and maturity	-	-	-	-
PC8. grade the organisms manually or mechanically on the basis of appropriate quality parameters such as size and appearance	-	-	-	-
PC9. store the organisms in hygienic conditions at the recommended temperature and humidity before and after processing	-	-	-	-
Market the aquaculture organisms	8	12	-	8
PC10. identify the market demand and potential buyers of the harvested aquaculture organisms	_	_	_	-
PC11. negotiate the price with the buyer(s)	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. pack the aquaculture organisms in appropriate containers for being transported to the market/ buyer	-	_	-	-
PC13. maintain the optimum density while packing to ensure minimum stress to the organisms during transit	-	-	-	-
PC14. follow the recommended practices to save the produce from contamination during packing and transit	-	-	-	-
PC15. arrange an appropriate mode of transport to deliver the organisms to the buyer	-	-	-	-
PC16. use the relevant e-payment method such as Aadhaar Enabled Payment System (AEPS), Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD) payment, etc.	-	-	-	-
PC17. maintain the record of sales and payments	-	-	-	-
PC18. calculate the benefit-cost (B:C) ratio	-	-	-	-
NOS Total	30	40	-	30







National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4923
NOS Name	Harvest, process and market the aquaculture organisms
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	2
Version	3.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022







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:









- **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









- **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







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Create PGs/ FIGs/ SHGs	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	-	-	-	-
Prepare for the PG/ FIG/ SHG operations	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	-	_	-	-
Conduct group meetings and training sessions	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	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Carry out collective farming/ activities	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









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	1.0
Last Reviewed Date	24/02/2022
Next Review Date	27/01/2025
NSQC Clearance Date	27/01/2022







AGR/N4955: Follow the hygiene and safety practices in culture operations

Description

This OS unit is about following various hygiene and safety practices during culture operations.

Scope

The scope covers the following :

- Maintain the water body and its hygiene
- Maintain the health of cultured organisms
- Maintain personal health and safety

Elements and Performance Criteria

Maintain the water body and its hygiene

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

- **PC1.** follow the recommended practices to protect the aquaculture farm from different types of threats such as storms, predatory birds, harmful organisms, poachers, etc.
- PC2. carry out regular maintenance of the dykes and fences in the culture pond
- **PC3.** identify and remove the preying organisms from the culture pond or tank
- **PC4.** remove sludge, algae, uneaten feed and any other waste materials from the culture pond or tank
- **PC5.** apply the necessary disinfectants or preventive treatment in the culture pond or tank to prevent disease outbreak and the growth of harmful organisms

Maintain the health of cultured organisms

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

- **PC6.** follow the recommended practices to protect the cultured organisms from the air, water or fomite-borne contamination and diseases
- **PC7.** sample the cultured organisms regularly to identify the signs of stress/ disease/ phenotypic disorders and the presence of parasites and pathogens
- PC8. identify, quarantine and treat the unhealthy organisms following the recommended practices
- **PC9.** monitor the quarantined organisms for signs of improvement and restock them in the culture pond or tank on complete recovery
- **PC10.** remove the dead and moribund organisms and dispose them in an environment-friendly manner

Maintain personal health and safety

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

- PC11. check the relevant Personal Protective Equipment (PPE) before use and repair or replace it, as required
- **PC12.** use the relevant PPE during various aquaculture operations such as the application of hazardous chemicals
- **PC13.** use the recommended soap or sanitiser to keep hands sanitised









- **PC14.** store hazardous chemicals, tools and equipment in the safe storage area to avoid personal harm or injury
- **PC15.** administer first-aid to the injured personnel and co-ordinate with the emergency services for further medical attention

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. how to protect the aquaculture farm and cultured species from various threats
- **KU2.** the process of identifying and removing predators or preying organisms from the culture pond or tank
- **KU3.** the importance and process of carrying out regular cleaning of the culture pond or tank to remove sludge, algae, uneaten feed, etc.
- **KU4.** the recommended disinfectants for water bodies and the process of applying them to prevent disease outbreak and growth of harmful organisms
- **KU5.** recommended practices to protect the cultured organisms from air/ water/ fomite-borne contamination and diseases during and after harvesting
- **KU6.** the process of sampling the cultured organisms to identify disease, disorders and presence of parasites and pathogens
- **KU7.** the signs of stress or disease in the cultured organisms such as spots, lesions, erratic movement, etc.
- KU8. the process of identifying, quarantining and treating the unhealthy organisms
- KU9. the signs of improvement in the quarantined organisms
- **KU10.** the importance of removing the dead and moribund organisms from the water body promptly and disposing them safely
- KU11. the importance of using the relevant PPE and ensuring it is damage-free
- KU12. appropriate practices to be followed to maintain personal hygiene and prevent infections
- KU13. the importance of storing hazardous chemicals, tools and equipment safely
- KU14. how to administer first-aid and co-ordinate with emergency services

Generic Skills (GS)

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

- GS1. maintain work-related notes and records
- GS2. read the relevant guidelines and safety instruction in the local language/ English
- GS3. listen attentively to understand the information/ instructions being given
- **GS4.** communicate politely and professionally
- GS5. co-ordinate with the co-workers to achieve the work objectives
- GS6. evaluate all the possible solutions to a problem to select the best one
- GS7. take quick decisions within the limits of authority to resolve work-related issues
- GS8. plan and schedule tasks to ensure timely completion







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Maintain the water body and its hygiene	10	15	-	10
PC1. follow the recommended practices to protect the aquaculture farm from different types of threats such as storms, predatory birds, harmful organisms, poachers, etc.	-	-	-	-
PC2. carry out regular maintenance of the dykes and fences in the culture pond	-	-	-	-
PC3. identify and remove the preying organisms from the culture pond or tank	-	-	-	-
PC4. remove sludge, algae, uneaten feed and any other waste materials from the culture pond or tank	-	-	-	-
PC5. apply the necessary disinfectants or preventive treatment in the culture pond or tank to prevent disease outbreak and the growth of harmful organisms	-	-	-	_
Maintain the health of cultured organisms	10	15	-	10
PC6. follow the recommended practices to protect the cultured organisms from the air, water or fomite-borne contamination and diseases	-	-	-	-
PC7. sample the cultured organisms regularly to identify the signs of stress/ disease/ phenotypic disorders and the presence of parasites and pathogens	-	-	-	-
PC8. identify, quarantine and treat the unhealthy organisms following the recommended practices	-	-	-	-
PC9. monitor the quarantined organisms for signs of improvement and restock them in the culture pond or tank on complete recovery	-	-	-	-
PC10. remove the dead and moribund organisms and dispose them in an environment-friendly manner	-	-	-	-
Maintain personal health and safety	10	10	-	10









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. check the relevant Personal Protective Equipment (PPE) before use and repair or replace it, as required	-	-	-	-
PC12. use the relevant PPE during various aquaculture operations such as the application of hazardous chemicals	-	-	-	-
PC13. use the recommended soap or sanitiser to keep hands sanitised	-	-	-	-
PC14. store hazardous chemicals, tools and equipment in the safe storage area to avoid personal harm or injury	-	-	-	-
PC15. administer first-aid to the injured personnel and co-ordinate with the emergency services for further medical attention	-	-	-	-
NOS Total	30	40	-	30







National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4955
NOS Name	Follow the hygiene and safety practices in culture operations
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021







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/N4921.Perform pre- stocking and stocking activities	30	40	-	30	100	25
AGR/N4922.Perform post- stocking culture activities	30	40	-	30	100	30
AGR/N4923.Harvest, process and market the aquaculture organisms	30	40	-	30	100	25
AGR/N9922.Engage in collective farming/activity	30	40	-	30	100	5
AGR/N4955.Follow the hygiene and safety practices in culture operations	30	40	-	30	100	10
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	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.