



# Animal/ Aqua Feed Technician

Electives: Fish and crustacean/ Animal

QP Code: AGR/Q5109

Version: 3.0

NSQF Level: 4

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## AGR/Q5109: Animal/ Aqua Feed Technician

### Brief Job Description

A Animal/ Aqua Feed Technician is responsible for procuring fish, crustacean or animal feed ingredients, formulating, preparing, packing, storing and marketing the feed. The person also operates the feed mill and carries out its regular repair and maintenance.

### Personal Attributes

The individual must be physically fit to work for long durations with the ability to coordinate with others to achieve the work objectives. The person must also know how to read and write.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [AGR/N5118: Purchase and store the fish, crustacean and animal feed ingredients](#)
2. [AGR/N9908: Undertake basic entrepreneurial activities for small enterprise](#)
3. [AGR/N9903: Maintain health and safety at the workplace](#)
4. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

#### Electives (mandatory to select at least one):

##### Elective 1: Fish and crustacean

This OS unit is about preparing, packing, storing and marketing the fish and crustacean feed.

1. [AGR/N5119: Prepare, pack, store and market the fish and crustacean feed](#)

##### Elective 2: Animal

This OS unit is about preparing animal feed and maintaining the feed plant.

1. [AGR/N4822: Prepare animal feed and maintain the feed plant](#)

### Qualification Pack (QP) Parameters

|                   |             |
|-------------------|-------------|
| <b>Sector</b>     | Agriculture |
| <b>Sub-Sector</b> | Fisheries   |

|   |   |
|---|---|
| <b>Occupation</b>   | Assistance (Fisheries), Livestock Health Management   |
| <b>Country</b>  | India   |
| <b>NSQF Level</b>   | 4   |
| <b>Credits</b>  | 17  |
| <b>Aligned to NCO/ISCO/ISIC Code</b>                      | NCO-2015/8131.9900  |
| <b>Minimum Educational Qualification &amp; Experience</b> | 12th grade Pass<br>OR<br>Completed 2nd year of the 3-year diploma after 10 (and pursuing regular diploma)<br>OR<br>10th grade pass (plus 2-year NTC )<br>OR<br>10th grade pass (plus 1-year NTC plus 1 year NAC)<br>OR<br>8th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS<br>OR<br>10th grade pass and pursuing continuous schooling<br>OR<br>10th grade pass with 2 Years of experience relevant experience<br>OR<br>Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience<br>OR<br>Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience) |
| <b>Minimum Level of Education for Training in School</b>  |   |
| <b>Pre-Requisite License or Training</b>                  | NA  |
| <b>Minimum Job Entry Age</b>                              | 18 Years  |
| <b>Last Reviewed On</b>                                   | NA  |
| <b>Next Review Date</b>                                   | 30/12/2024  |
| <b>Deactivation Date</b>                                  | 31/12/2024  |
| <b>NSQC Approval Date</b>                                 | 30/12/2021  |
| <b>Version</b>  | 3.0   |
| <b>Reference code on NQR</b>                              | QG-04-AG-00272-2023-V1.1-ASCI   |

|                    |            |
|--------------------|------------|
| <b>NQR Version</b> | <b>1.1</b> |
|--------------------|------------|

## **AGR/N5118: Purchase and store the fish, crustacean and animal feed ingredients**

### **Description**

This OS unit is about purchasing and storing the fish, crustacean and animal feed ingredients.

### **Scope**

The scope covers the following :

- Purchase the feed ingredients
- Store the feed ingredients safely
- Optimise resource utilisation
- Perform waste management

### **Elements and Performance Criteria**

#### *Purchase the feed ingredients*

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

- PC1.** determine the feed and nutrient requirements of the target fish, crustacean and animal species
- PC2.** identify the availability of feed ingredients and additives such as synthetic/ animal protein, carbohydrates, vitamins, probiotics, antioxidants, immuno-stimulants, growth promoters, amino-acids, preservatives with the local vendors
- PC3.** check the quality of feed ingredients to ensure compliance with the fish, crustacean and animal feed standards
- PC4.** check the market price of the required feed ingredients
- PC5.** select a vendor based on the quality and price of the feed ingredients
- PC6.** purchase the feed ingredients in the required quantity
- PC7.** arrange for safe and hygienic transportation of the feed ingredients
- PC8.** maintain the manual and/ or electronic record of the purchase and payment

#### *Store the feed ingredients safely*

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

- PC9.** identify a storage area with the required capacity to store the feed ingredients
- PC10.** ensure the storage area has the recommended levels of temperature and humidity
- PC11.** apply the necessary treatment in the storage area to prevent the growth of pests, rodents and disease
- PC12.** store the feed ingredients safely using racks, pallets and crates
- PC13.** arrange to protect the feed ingredients from exposure to water and adverse weather to prolong its shelf life
- PC14.** follow the applicable hygiene standards while handling the feed ingredients to protect them from contamination

#### *Optimise resource utilisation*

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

**PC15.** optimise the usage of water, electricity and other resources in various tasks and processes

**PC16.** plug any water leakages to prevent its wastage

**PC17.** connect the electrical tools and equipment safely and switch them off when not in use

*Perform waste management*

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

**PC18.** segregate waste into appropriate categories

**PC19.** recycle the recyclable waste appropriately and dispose the non-recyclable waste in an environment-friendly manner

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

**KU1.** how to determine the feed and nutrient requirements of the various fish, crustacean and animal species

**KU2.** various feed ingredients and additives used in fish/ crustacean/ animal feed such as animal or synthetic protein, carbohydrates, vitamins, probiotics, antioxidants, immuno-stimulants, growth promoters, amino-acids, preservatives, etc.

**KU3.** the importance process of checking the quality of feed ingredients to ensure compliance with the fish, crustacean and animal feed standards

**KU4.** the process of identifying and connecting with the vendors of fish, crustacean and animal feed ingredients and procuring the feed ingredients

**KU5.** applicable documentation requirements

**KU6.** the storage requirements for fish, crustacean and animal feed ingredients such as the temperature and humidity

**KU7.** the appropriate treatment to be applied in the storage area to prevent the growth of pests, rodents and disease

**KU8.** various accessories used to store the feed ingredients safely such as racks, pallets and crates

**KU9.** the importance of protecting the feed ingredients from exposure to water and adverse weather

**KU10.** appropriate practices to be followed to protect the feed ingredients from contamination

**KU11.** the benefits of resource optimisation

**KU12.** appropriate categories for segregating the waste

**KU13.** the process of recycling and disposing different types of waste

## **Generic Skills (GS)**

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

**GS1.** write work-related records

**GS2.** communicate politely and professionally

**GS3.** read the relevant literature to learn 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
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** co-ordinate with the co-workers to achieve the work objectives
- GS9.** evaluate all possible solutions to a problem to select the best one



**Assessment Criteria**

| Assessment Criteria for Outcomes   | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Purchase the feed ingredients</i>   | <b>12</b>    | <b>14</b>       | -             | <b>10</b>  |
| <b>PC1.</b> determine the feed and nutrient requirements of the target fish, crustacean and animal species   | -            | -               | -             | -          |
| <b>PC2.</b> identify the availability of feed ingredients and additives such as synthetic/ animal protein, carbohydrates, vitamins, probiotics, antioxidants, immuno-stimulants, growth promoters, amino-acids, preservatives with the local vendors | -            | -               | -             | -          |
| <b>PC3.</b> check the quality of feed ingredients to ensure compliance with the fish, crustacean and animal feed standards   | -            | -               | -             | -          |
| <b>PC4.</b> check the market price of the required feed ingredients  | -            | -               | -             | -          |
| <b>PC5.</b> select a vendor based on the quality and price of the feed ingredients   | -            | -               | -             | -          |
| <b>PC6.</b> purchase the feed ingredients in the required quantity   | -            | -               | -             | -          |
| <b>PC7.</b> arrange for safe and hygienic transportation of the feed ingredients   | -            | -               | -             | -          |
| <b>PC8.</b> maintain the manual and/ or electronic record of the purchase and payment  | -            | -               | -             | -          |
| <i>Store the feed ingredients safely</i>   | <b>10</b>    | <b>12</b>       | -             | <b>12</b>  |
| <b>PC9.</b> identify a storage area with the required capacity to store the feed ingredients   | -            | -               | -             | -          |
| <b>PC10.</b> ensure the storage area has the recommended levels of temperature and humidity  | -            | -               | -             | -          |
| <b>PC11.</b> apply the necessary treatment in the storage area to prevent the growth of pests, rodents and disease   | -            | -               | -             | -          |
| <b>PC12.</b> store the feed ingredients safely using racks, pallets and crates   | -            | -               | -             | -          |

| Assessment Criteria for Outcomes   | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <b>PC13.</b> arrange to protect the feed ingredients from exposure to water and adverse weather to prolong its shelf life      | -            | -               | -             | -          |
| <b>PC14.</b> follow the applicable hygiene standards while handling the feed ingredients to protect them from contamination    | -            | -               | -             | -          |
| <i>Optimise resource utilisation</i>   | <b>4</b>     | <b>8</b>        | -             | <b>4</b>   |
| <b>PC15.</b> optimise the usage of water, electricity and other resources in various tasks and processes                       | -            | -               | -             | -          |
| <b>PC16.</b> plug any water leakages to prevent its wastage  | -            | -               | -             | -          |
| <b>PC17.</b> connect the electrical tools and equipment safely and switch them off when not in use                             | -            | -               | -             | -          |
| <i>Perform waste management</i>  | <b>4</b>     | <b>6</b>        | -             | <b>4</b>   |
| <b>PC18.</b> segregate waste into appropriate categories   | -            | -               | -             | -          |
| <b>PC19.</b> recycle the recyclable waste appropriately and dispose the non-recyclable waste in an environment-friendly manner | -            | -               | -             | -          |
| <b>NOS Total</b>   | <b>30</b>    | <b>40</b>       | -             | <b>30</b>  |

**National Occupational Standards (NOS) Parameters**

|                            |   |
|----------------------------|---|
| <b>NOS Code</b>            | AGR/N5118   |
| <b>NOS Name</b>            | Purchase and store the fish, crustacean and animal feed ingredients |
| <b>Sector</b>              | Agriculture   |
| <b>Sub-Sector</b>          | Fisheries   |
| <b>Occupation</b>          | Assistance (Fisheries)  |
| <b>NSQF Level</b>          | 4   |
| <b>Credits</b>             | 3   |
| <b>Version</b>             | 3.0   |
| <b>Last Reviewed Date</b>  | NA  |
| <b>Next Review Date</b>    | 30/12/2024  |
| <b>NSQC Clearance Date</b> | 30/12/2021  |

## **AGR/N9908: Undertake basic entrepreneurial activities for small enterprise**

### **Description**

This OS unit is about undertaking basic entrepreneurial or business activities in the agriculture sector.

### **Scope**

The scope covers the following :

- Plan the agricultural enterprise/ business
- Manage the agricultural production process
- Manage the post-production and marketing processes

### **Elements and Performance Criteria**

#### *Plan the agricultural enterprise/ business*

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

- PC1.** analyse the demand and supply of the relevant agricultural produce in the market
- PC2.** identify the target customers and assess their needs and expectations with respect to the quality and price of the produce
- PC3.** identify various types of agricultural entrepreneurship/ business opportunities
- PC4.** plan agricultural production with the use of relevant and efficient technologies for availing funds
- PC5.** identify appropriate and authentic advisory services/Government authority for skill upgradation to successfully plan and implement business activities
- PC6.** prepare a basic business plan for the agricultural entrepreneurship/business activities
- PC7.** identify appropriate sources of funding for the agricultural entrepreneurship/ business
- PC8.** coordinate with the relevant government authorities to subscribe to the relevant government schemes and programs to benefit from them
- PC9.** ensure compliance with the government structural reforms and framework along with the applicable rules and regulations while setting up the agricultural enterprise/ business

#### *Manage the agricultural production process*

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

- PC10.** select and arrange the necessary resources for the business operations
- PC11.** ensure the use of relevant and efficient production technologies as per planning and availability of funds
- PC12.** follow the recommended practices for efficient input resource management
- PC13.** optimise the production processes and output through the amalgamation of existing practices with smart technologies
- PC14.** follow the recommended sustainability practices during agricultural production to prevent adverse impacts on the environment and produce viz. deforestation, loss of biodiversity, soil degradation, etc.

#### *Manage the post-production and marketing processes*

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

- PC15.** ensure the availability of proper storage infrastructures and facilities post-production of the produce as per the industry quality standards
- PC16.** collect information related to the wholesale and retail price of produce
- PC17.** calculate the costs incurred and determine the price of the produce for profitability
- PC18.** ensure that the cost of production, transportation, and marketing are considered while calculating the cost and setting the price for the produce
- PC19.** collect information related to various subsidies/funds offered by the government, authorised state units and other financial institutions involved with the promotion of the produce
- PC20.** select appropriate marketing channels for the produce, considering the relevant requirements and constraints
- PC21.** identify various risks to production and post-production processes and manage them appropriately
- PC22.** undertake outreach programs to promote agricultural products and services, and expand agri-business
- PC23.** prepare and execute a marketing plan considering the 4Ps i.e. product, price, promotion, and place and 4As i.e. acceptability, affordability, accessibility, and awareness
- PC24.** use the relevant digital services such as e-commerce, e-payments, electronic record-keeping, etc.
- PC25.** use efficient post-production logistics means to improve the supply quantity, reduce the cost to the consumer, and increase demand consequently
- PC26.** ensure all the relevant information such as quality and quantity of produce, date of manufacture, batch number, and sale is recorded electronically and/ or manually
- PC27.** coordinate with the various stakeholders for efficient and sustainable agri-business growth and development

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** how to analyse the demand and supply of the relevant agricultural produce in the market
- KU2.** the process of identifying the target customers and assess their needs and expectations with respect to the quality and price of the produce
- KU3.** how to identify various types of agricultural entrepreneurship/ business opportunities
- KU4.** how to prepare a basic business plan for the agricultural entrepreneurship/business activities
- KU5.** appropriate sources of funding for the agricultural entrepreneurship/ businesses
- KU6.** the relevant government schemes and programs
- KU7.** the importance of ensuring compliance with the government structural reforms and framework, along with the applicable rules and regulations
- KU8.** various resources required for agricultural production
- KU9.** the process of planning agricultural production and the use of relevant technologies to enhance production
- KU10.** the importance of ensuring no cause adverse impact on the environment and produce during production
- KU11.** the recommended practices to be followed for efficient input resource management

- KU12.** the process of optimising the production processes and output through the amalgamation of existing practices with smart technologies
- KU13.** the recommended sustainability practices to be followed during agricultural production to prevent and deal with deforestation, loss of biodiversity, soil degradation, etc.
- KU14.** how to collect information related to the wholesale and retail price of agricultural produce
- KU15.** how to calculate the economics of the produce viz. production cost, price of the produce, B:C Ratio etc.
- KU16.** relevant government schemes with the provision of subsidies/funds for the promotion of agricultural produce
- KU17.** the process of selecting appropriate marketing channels for marketing agricultural produce, and the applicable requirements and constraints
- KU18.** the relevant buyers of different types of agricultural produce such as co-operatives, retailers, local vendors, wholesalers, e-trading portals, marketing companies, exporters, etc.
- KU19.** how to identify and manage various risks to production and post-production processes
- KU20.** how to undertake outreach programs to promote agricultural products and services, and expand agri-business
- KU21.** the 4Ps i.e. product, price, promotion, and place and 4As i.e. acceptability, affordability, accessibility, and awareness considered while preparing and executing a marketing plan
- KU22.** use of the relevant digital services such as e-commerce, e-payments, electronic record-keeping, etc.
- KU23.** the importance of using efficient post-production logistics
- KU24.** the importance of maintaining various records accurately

## Generic Skills (GS)

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

- GS1.** maintain work-related notes and records
- GS2.** read the relevant literature to get the latest updates about the field work
- GS3.** communicate politely and professionally
- GS4.** listen attentively to understand the information being shared
- GS5.** plan and schedule tasks for efficient time management
- GS6.** identify possible disruptions to work and take appropriate preventive measures
- GS7.** take quick decisions to deal with workplace emergencies/ accident
- GS8.** 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 |
|---|--------------|-----------------|---------------|------------|
| <i>Plan the agricultural enterprise/ business</i>   | <b>10</b>    | <b>14</b>       | -             | <b>10</b>  |
| <b>PC1.</b> analyse the demand and supply of the relevant agricultural produce in the market  | -            | -               | -             | -          |
| <b>PC2.</b> identify the target customers and assess their needs and expectations with respect to the quality and price of the produce  | -            | -               | -             | -          |
| <b>PC3.</b> identify various types of agricultural entrepreneurship/ business opportunities   | -            | -               | -             | -          |
| <b>PC4.</b> plan agricultural production with the use of relevant and efficient technologies for availing funds   | -            | -               | -             | -          |
| <b>PC5.</b> identify appropriate and authentic advisory services/Government authority for skill upgradation to successfully plan and implement business activities                        | -            | -               | -             | -          |
| <b>PC6.</b> prepare a basic business plan for the agricultural entrepreneurship/business activities   | -            | -               | -             | -          |
| <b>PC7.</b> identify appropriate sources of funding for the agricultural entrepreneurship/ business   | -            | -               | -             | -          |
| <b>PC8.</b> coordinate with the relevant government authorities to subscribe to the relevant government schemes and programs to benefit from them   | -            | -               | -             | -          |
| <b>PC9.</b> ensure compliance with the government structural reforms and framework along with the applicable rules and regulations while setting up the agricultural enterprise/ business | -            | -               | -             | -          |
| <i>Manage the agricultural production process</i>   | <b>8</b>     | <b>10</b>       | -             | <b>8</b>   |
| <b>PC10.</b> select and arrange the necessary resources for the business operations   | -            | -               | -             | -          |
| <b>PC11.</b> ensure the use of relevant and efficient production technologies as per planning and availability of funds   | -            | -               | -             | -          |
| <b>PC12.</b> follow the recommended practices for efficient input resource management   | -            | -               | -             | -          |

| Assessment Criteria for Outcomes   | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <b>PC13.</b> optimise the production processes and output through the amalgamation of existing practices with smart technologies   | -            | -               | -             | -          |
| <b>PC14.</b> follow the recommended sustainability practices during agricultural production to prevent adverse impacts on the environment and produce viz. deforestation, loss of biodiversity, soil degradation, etc. | -            | -               | -             | -          |
| <i>Manage the post-production and marketing processes</i>  | <b>12</b>    | <b>16</b>       | -             | <b>12</b>  |
| <b>PC15.</b> ensure the availability of proper storage infrastructures and facilities post-production of the produce as per the industry quality standards   | -            | -               | -             | -          |
| <b>PC16.</b> collect information related to the wholesale and retail price of produce  | -            | -               | -             | -          |
| <b>PC17.</b> calculate the costs incurred and determine the price of the produce for profitability   | -            | -               | -             | -          |
| <b>PC18.</b> ensure that the cost of production, transportation, and marketing are considered while calculating the cost and setting the price for the produce   | -            | -               | -             | -          |
| <b>PC19.</b> collect information related to various subsidies/funds offered by the government, authorised state units and other financial institutions involved with the promotion of the produce                      | -            | -               | -             | -          |
| <b>PC20.</b> select appropriate marketing channels for the produce, considering the relevant requirements and constraints  | -            | -               | -             | -          |
| <b>PC21.</b> identify various risks to production and post-production processes and manage them appropriately  | -            | -               | -             | -          |
| <b>PC22.</b> undertake outreach programs to promote agricultural products and services, and expand agri-business   | -            | -               | -             | -          |
| <b>PC23.</b> prepare and execute a marketing plan considering the 4Ps i.e. product, price, promotion, and place and 4As i.e. acceptability, affordability, accessibility, and awareness                                | -            | -               | -             | -          |



| Assessment Criteria for Outcomes  | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <b>PC24.</b> use the relevant digital services such as e-commerce, e-payments, electronic record-keeping, etc.  | -            | -               | -             | -          |
| <b>PC25.</b> use efficient post-production logistics means to improve the supply quantity, reduce the cost to the consumer, and increase demand consequently                      | -            | -               | -             | -          |
| <b>PC26.</b> ensure all the relevant information such as quality and quantity of produce, date of manufacture, batch number, and sale is recorded electronically and/ or manually | -            | -               | -             | -          |
| <b>PC27.</b> coordinate with the various stakeholders for efficient and sustainable agri-business growth and development  | -            | -               | -             | -          |
| <b>NOS Total</b>  | <b>30</b>    | <b>40</b>       | <b>-</b>      | <b>30</b>  |

**National Occupational Standards (NOS) Parameters**

|                            |   |
|----------------------------|---|
| <b>NOS Code</b>            | AGR/N9908   |
| <b>NOS Name</b>            | Undertake basic entrepreneurial activities for small enterprise |
| <b>Sector</b>              | Agriculture   |
| <b>Sub-Sector</b>          | Generic   |
| <b>Occupation</b>          | Generic   |
| <b>NSQF Level</b>          | 4   |
| <b>Credits</b>             | 1   |
| <b>Version</b>             | 2.0   |
| <b>Last Reviewed Date</b>  | 27/08/2024  |
| <b>Next Review Date</b>    | 27/08/2027  |
| <b>NSQC Clearance Date</b> | 27/08/2024  |

## **AGR/N9903: Maintain health and safety at the workplace**

### **Description**

This OS is about maintaining health and safety of self and other co-workers at the workplace

### **Scope**

The scope covers the following :

- Maintain personal hygiene
- Maintain clean and safe workplace
- Administer appropriate emergency procedures

### **Elements and Performance Criteria**

#### *Maintain personal hygiene*

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

- PC1.** wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals
- PC2.** wash the worn clothes with soap and sun dry before use next time
- PC3.** ensure the face is covered with mask or three layers of cloth-piece
- PC4.** follow the workplace sanitization norms including distancing from sick people

#### *Maintain clean and safe workplace*

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

- PC5.** carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor
- PC6.** wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy
- PC7.** follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards
- PC8.** assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices
- PC9.** sanitize equipment, tools and machinery before and after use
- PC10.** use equipment and materials safely and correctly and return the same to designated storage after use
- PC11.** dispose waste safely and correctly in the designated area
- PC12.** recognize risks to bystanders and take required action to reduce the risks
- PC13.** work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed
- PC14.** report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger
- PC15.** follow government / workplace advisories incase of outbreak of any disease/disaster

#### *Administer appropriate emergency procedures*

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

- PC16.** follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements
- PC17.** use emergency equipment in accordance with manufacturer's specifications and workplace requirements
- PC18.** provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques
- PC19.** recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate
- PC20.** report details of first aid administered in accordance with workplace procedures

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** relevant legislation, standards, policies, and procedures at work
- KU2.** relevant health and safety requirements applicable to the work environment
- KU3.** own job role and responsibilities and sources of information pertaining to work
- KU4.** who to approach for support in order to obtain work related information, clarifications and support
- KU5.** importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business
- KU6.** personal hygiene and fitness requirement
- KU7.** importance of sanitization of the workplace
- KU8.** types of Personal Protective Equipment (PPE) required at the workplace and their importance
- KU9.** the correct and safe way to use materials and equipment required for the work
- KU10.** the importance of good housekeeping at the workplace
- KU11.** safe waste disposal methods
- KU12.** methods for minimizing environmental damage during work
- KU13.** the risks to health and safety including contagious diseases and the measures to be taken to control those risks in the area of work
- KU14.** workplace procedures and requirements for the prevention and treatment of workplace injuries/illnesses.
- KU15.** basic emergency first aid procedure
- KU16.** local emergency services
- KU17.** why accidents, incidents and problems should be reported and the appropriate actions to be taken

## **Generic Skills (GS)**

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

- GS1.** record the data as per the requirement
- GS2.** report problems to the appropriate personnel in a timely manner
- GS3.** read instruction manual for hand tool and equipments

- GS4.** communicate clearly and effectively with co-workers, and other stakeholders
- GS5.** comprehend information shared by senior people and experts
- GS6.** make decisions pertaining to personal hygiene and safety
- GS7.** schedule daily activities and draw up priorities
- GS8.** manage relationships with co-workers, manager and other stakeholders
- GS9.** assess situation and identify appropriate control measures

**Assessment Criteria**

| Assessment Criteria for Outcomes   | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Maintain personal hygiene</i>   | <b>10</b>    | <b>5</b>        | -             | <b>10</b>  |
| <b>PC1.</b> wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals  | -            | -               | -             | -          |
| <b>PC2.</b> wash the worn clothes with soap and sun dry before use next time   | -            | -               | -             | -          |
| <b>PC3.</b> ensure the face is covered with mask or three layers of cloth-piece  | -            | -               | -             | -          |
| <b>PC4.</b> follow the workplace sanitization norms including distancing from sick people  | -            | -               | -             | -          |
| <i>Maintain clean and safe workplace</i>   | <b>15</b>    | <b>15</b>       | -             | <b>15</b>  |
| <b>PC5.</b> carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor | -            | -               | -             | -          |
| <b>PC6.</b> wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy                     | -            | -               | -             | -          |
| <b>PC7.</b> follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards                                 | -            | -               | -             | -          |
| <b>PC8.</b> assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices                      | -            | -               | -             | -          |
| <b>PC9.</b> sanitize equipment, tools and machinery before and after use   | -            | -               | -             | -          |
| <b>PC10.</b> use equipment and materials safely and correctly and return the same to designated storage after use                                  | -            | -               | -             | -          |
| <b>PC11.</b> dispose waste safely and correctly in the designated area   | -            | -               | -             | -          |
| <b>PC12.</b> recognize risks to bystanders and take required action to reduce the risks  | -            | -               | -             | -          |

| Assessment Criteria for Outcomes  | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <b>PC13.</b> work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed   | -            | -               | -             | -          |
| <b>PC14.</b> report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger                                      | -            | -               | -             | -          |
| <b>PC15.</b> follow government / workplace advisories incase of outbreak of any disease/disaster  | -            | -               | -             | -          |
| <i>Administer appropriate emergency procedures</i>  | <b>15</b>    | <b>5</b>        | -             | <b>10</b>  |
| <b>PC16.</b> follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements | -            | -               | -             | -          |
| <b>PC17.</b> use emergency equipment in accordance with manufacturer's specifications and workplace requirements  | -            | -               | -             | -          |
| <b>PC18.</b> provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques   | -            | -               | -             | -          |
| <b>PC19.</b> recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate   | -            | -               | -             | -          |
| <b>PC20.</b> report details of first aid administered in accordance with workplace procedures   | -            | -               | -             | -          |
| <b>NOS Total</b>  | <b>40</b>    | <b>25</b>       | -             | <b>35</b>  |

**National Occupational Standards (NOS) Parameters**

|                            |   |
|----------------------------|---|
| <b>NOS Code</b>            | AGR/N9903                                   |
| <b>NOS Name</b>            | Maintain health and safety at the workplace |
| <b>Sector</b>              | Agriculture                                 |
| <b>Sub-Sector</b>          | Generic                                     |
| <b>Occupation</b>          | Generic                                     |
| <b>NSQF Level</b>          | 4   |
| <b>Credits</b>             | 1   |
| <b>Version</b>             | 3.0   |
| <b>Last Reviewed Date</b>  | 27/08/2024                                  |
| <b>Next Review Date</b>    | 27/08/2027                                  |
| <b>NSQC Clearance Date</b> | 27/08/2024                                  |



## **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 |
|--|--------------|-----------------|---------------|------------|
| <i>Introduction to Employability Skills</i>  | <b>1</b>     | <b>1</b>        | -             | -          |
| <b>PC1.</b> identify employability skills required for jobs in various industries  | -            | -               | -             | -          |
| <b>PC2.</b> identify and explore learning and employability portals  | -            | -               | -             | -          |
| <i>Constitutional values – Citizenship</i>   | <b>1</b>     | <b>1</b>        | -             | -          |
| <b>PC3.</b> 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.   | -            | -               | -             | -          |
| <b>PC4.</b> follow environmentally sustainable practices   | -            | -               | -             | -          |
| <i>Becoming a Professional in the 21st Century</i>   | <b>2</b>     | <b>4</b>        | -             | -          |
| <b>PC5.</b> recognize the significance of 21st Century Skills for employment   | -            | -               | -             | -          |
| <b>PC6.</b> 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 | -            | -               | -             | -          |
| <i>Basic English Skills</i>  | <b>2</b>     | <b>3</b>        | -             | -          |
| <b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone  | -            | -               | -             | -          |
| <b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English   | -            | -               | -             | -          |
| <b>PC9.</b> write short messages, notes, letters, e-mails etc. in English  | -            | -               | -             | -          |
| <i>Career Development &amp; Goal Setting</i>   | <b>1</b>     | <b>2</b>        | -             | -          |

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

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

**National Occupational Standards (NOS) Parameters**

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



## **AGR/N5119: Prepare, pack, store and market the fish and crustacean feed**

### **Description**

This OS unit is about preparing, packing, storing and marketing the fish and crustacean feed.

### **Scope**

The scope covers the following :

- Formulate the fish and crustacean feed
- Prepare the feed mill for use
- Prepare the fish and crustacean feed
- Pack and store the feed
- Carry out sampling
- Market the fish and crustacean feed

### **Elements and Performance Criteria**

#### *Formulate the fish and crustacean feed*

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

- PC1.** analyse the proximate composition of the feed to check its properties with respect to the quantity of moisture, crude protein, ether extract, crude fibre, crude ash and nitrogen-free extracts
- PC2.** formulate the feed composition including various ingredients according to the culture method, type of water body in use and nutrient requirements of the target fish/ crustacean species during various stages of its growth

#### *Prepare the feed mill for use*

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

- PC3.** arrange the appropriate Personal Protective Equipment (PPE) to use the feed mill
- PC4.** conduct the regular checks on the feed mill before using it
- PC5.** prepare the feed mill for use as per the manufacturer's instructions
- PC6.** carry out repair and maintenance for the minor issues and co-ordinate with an expert to resolve complex problems with the feed mill

#### *Prepare the fish and crustacean feed*

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

- PC7.** operate the feed mill as per the manufacturer's instructions to grind the selected ingredients to the required level
- PC8.** mix the ground ingredients thoroughly
- PC9.** prepare dough with the finely ground and mixed ingredients, recommended quantity of water, required additives and preservatives
- PC10.** create pellets and flakes with the kneaded dough using the feed extruder machine
- PC11.** steam cook and dry the pellets and flakes at the recommended temperature
- PC12.** maintain the recommended moisture levels to ensure the prepared feed pellets/ flakes do not crumble

- PC13.** check the physical and chemical properties of the prepared feed such as water stability, sinking rate, floating percentage, nutrient leaching and microbial infestation to ensure compliance with the established quality standards

#### *Pack and store the feed*

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

- PC14.** select insulated containers or bags of the required capacity for packing the fish/ crustacean feed
- PC15.** pack the feed in the containers or bags following the recommended practices to protect it from contamination
- PC16.** store the packed feed at the recommended temperature and humidity, protecting it from insects and rodents

#### *Carry out sampling*

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

- PC17.** collect feed samples randomly from the stored feed bags periodically
- PC18.** check the physical and chemical properties of the feed
- PC19.** discard the nutritionally-inferior and bacteria-infested feed

#### *Market the fish and crustacean feed*

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

- PC20.** identify the market demand for the prepared feed
- PC21.** negotiate with the potential buyers to secure a profitable price
- PC22.** arrange for safe and hygienic transportation of feed to the buyer(s)
- PC23.** process payments using the appropriate e-payment method
- PC24.** calculate the benefit-cost (B:C) ratio
- PC25.** maintain the manual and/ or electronic record of sales and payments in physical registers and/ or relevant computer application

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** the process of analysing the proximate composition of the feed
- KU2.** the process of formulating the feed composition
- KU3.** use of the relevant PPE
- KU4.** the process of conducting regular checks on the feed mill before using it
- KU5.** the process of preparing the feed mill for use as per the manufacturer's instructions
- KU6.** the process of carrying out minor repair and maintenance of the feed mill
- KU7.** the process of operating the feed mill
- KU8.** the process of preparing dough with finely ground and mixed ingredients and pellets/ flakes with it using the feed extruder machine
- KU9.** the recommended level of moisture to be maintained in the feed pellets/ flakes to ensure they do not crumble
- KU10.** the process of checking the physical and chemical properties of the prepared feed
- KU11.** the packing and storage requirements for the prepared feed pellets and flakes
- KU12.** the process of periodic sampling of stored pellets and flakes to ensure their quality

- KU13.** the process of marketing the prepared feed
- KU14.** how to use various e-payment methods
- KU15.** how to calculate the benefit-cost (B:C) ratio

### **Generic Skills (GS)**

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

- GS1.** write word-related notes
- GS2.** read the relevant literature to stay updated about the latest development in the field of work
- GS3.** plan and schedule tasks for effective time management
- GS4.** identify possible hazards and disruptions and take appropriate preventive measures
- GS5.** communicate politely and professionally
- GS6.** listen attentively to understand the information being shared
- GS7.** take quick decisions to deal with workplace emergencies
- GS8.** 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 |
|--|--------------|-----------------|---------------|------------|
| <i>Formulate the fish and crustacean feed</i>  | <b>2</b>     | <b>4</b>        | -             | <b>4</b>   |
| <b>PC1.</b> analyse the proximate composition of the feed to check its properties with respect to the quantity of moisture, crude protein, ether extract, crude fibre, crude ash and nitrogen-free extracts                              | -            | -               | -             | -          |
| <b>PC2.</b> formulate the feed composition including various ingredients according to the culture method, type of water body in use and nutrient requirements of the target fish/ crustacean species during various stages of its growth | -            | -               | -             | -          |
| <i>Prepare the feed mill for use</i>   | <b>6</b>     | <b>8</b>        | -             | <b>8</b>   |
| <b>PC3.</b> arrange the appropriate Personal Protective Equipment (PPE) to use the feed mill   | -            | -               | -             | -          |
| <b>PC4.</b> conduct the regular checks on the feed mill before using it  | -            | -               | -             | -          |
| <b>PC5.</b> prepare the feed mill for use as per the manufacturer's instructions   | -            | -               | -             | -          |
| <b>PC6.</b> carry out repair and maintenance for the minor issues and co-ordinate with an expert to resolve complex problems with the feed mill  | -            | -               | -             | -          |
| <i>Prepare the fish and crustacean feed</i>  | <b>6</b>     | <b>8</b>        | -             | <b>4</b>   |
| <b>PC7.</b> operate the feed mill as per the manufacturer's instructions to grind the selected ingredients to the required level   | -            | -               | -             | -          |
| <b>PC8.</b> mix the ground ingredients thoroughly  | -            | -               | -             | -          |
| <b>PC9.</b> prepare dough with the finely ground and mixed ingredients, recommended quantity of water, required additives and preservatives  | -            | -               | -             | -          |
| <b>PC10.</b> create pellets and flakes with the kneaded dough using the feed extruder machine  | -            | -               | -             | -          |
| <b>PC11.</b> steam cook and dry the pellets and flakes at the recommended temperature  | -            | -               | -             | -          |

| Assessment Criteria for Outcomes   | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <b>PC12.</b> maintain the recommended moisture levels to ensure the prepared feed pellets/ flakes do not crumble   | -            | -               | -             | -          |
| <b>PC13.</b> check the physical and chemical properties of the prepared feed such as water stability, sinking rate, floating percentage, nutrient leaching and microbial infestation to ensure compliance with the established quality standards | -            | -               | -             | -          |
| <i>Pack and store the feed</i>   | <b>8</b>     | <b>10</b>       | -             | <b>6</b>   |
| <b>PC14.</b> select insulated containers or bags of the required capacity for packing the fish/ crustacean feed  | -            | -               | -             | -          |
| <b>PC15.</b> pack the feed in the containers or bags following the recommended practices to protect it from contamination  | -            | -               | -             | -          |
| <b>PC16.</b> store the packed feed at the recommended temperature and humidity, protecting it from insects and rodents   | -            | -               | -             | -          |
| <i>Carry out sampling</i>  | <b>2</b>     | <b>4</b>        | -             | <b>2</b>   |
| <b>PC17.</b> collect feed samples randomly from the stored feed bags periodically  | -            | -               | -             | -          |
| <b>PC18.</b> check the physical and chemical properties of the feed  | -            | -               | -             | -          |
| <b>PC19.</b> discard the nutritionally-inferior and bacteria-infested feed   | -            | -               | -             | -          |
| <i>Market the fish and crustacean feed</i>   | <b>6</b>     | <b>6</b>        | -             | <b>6</b>   |
| <b>PC20.</b> identify the market demand for the prepared feed  | -            | -               | -             | -          |
| <b>PC21.</b> negotiate with the potential buyers to secure a profitable price  | -            | -               | -             | -          |
| <b>PC22.</b> arrange for safe and hygienic transportation of feed to the buyer(s)  | -            | -               | -             | -          |
| <b>PC23.</b> process payments using the appropriate e-payment method   | -            | -               | -             | -          |

| Assessment Criteria for Outcomes   | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <b>PC24.</b> calculate the benefit-cost (B:C) ratio  | -            | -               | -             | -          |
| <b>PC25.</b> maintain the manual and/ or electronic record of sales and payments in physical registers and/ or relevant computer application | -            | -               | -             | -          |
| <b>NOS Total</b>   | <b>30</b>    | <b>40</b>       | <b>-</b>      | <b>30</b>  |

**National Occupational Standards (NOS) Parameters**

|                         |  |
|-------------------------|--|
| <b>NOS Code</b>         | AGR/N5119  |
| <b>NOS Name</b>         | Prepare, pack, store and market the fish and crustacean feed |
| <b>Sector</b>           | Agriculture  |
| <b>Sub-Sector</b>       | Fisheries  |
| <b>Occupation</b>       | Assistance (Fisheries)                                       |
| <b>NSQF Level</b>       | 4  |
| <b>Credits</b>          | 4  |
| <b>Version</b>          | 2.0  |
| <b>Next Review Date</b> | 30/12/2024   |

## **AGR/N4822: Prepare animal feed and maintain the feed plant**

### **Description**

This OS unit is about preparing animal feed and maintaining the feed plant.

### **Scope**

The scope covers the following :

- Formulate the animal feed
- Prepare, pack and store the animal feed
- Maintain hygiene and safety in the feed plant

### **Elements and Performance Criteria**

#### *Formulate the animal feed*

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

- PC1.** prepare the feed formulation for various animals according to the stages of their growth, lactation, required food and non-food production, etc.
- PC2.** select a variety of antibiotics and probiotics to be used in the feed according to the animal(s) to be fed
- PC3.** estimate the need of using premixes in the feed and include them in the feed as per the requirement

#### *Prepare, pack and store the animal feed*

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

- PC4.** grind the selected feed ingredients in the feed hammer-mill as per the requirement
- PC5.** mix the ground ingredients manually or using a feed mixer
- PC6.** add the recommended fatty ingredients in an appropriate quantity while mixing the ingredients to improve the absorption of fat-soluble vitamins and increase the utilisation of energy
- PC7.** add molasses in the mixed feed in the recommended quantity to improve its palatability and control pulverulence
- PC8.** crush the assorted feed manually or mechanically into fine particles
- PC9.** process the fine particles through the cattle feed pellet mill/ feed pelletiser to create feed pellets according to the animals to be fed
- PC10.** dry the feed pellets at the recommended temperature
- PC11.** ensure the feed pellets have the recommended moisture levels along with the required physical and chemical properties
- PC12.** select appropriate packing material such as sacks and head-sealed bags to pack the prepared animal feed
- PC13.** pack the animal feed protecting it from contamination
- PC14.** store the packed feed at the recommended temperature and humidity, protecting it from insects and rodents

#### *Maintain hygiene and safety in the feed plant*

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



- PC15.** apply the necessary treatment to protect the feed plant from bacteria, rodents and other types of contamination
- PC16.** decontaminate all the feed plant tools and equipment regularly
- PC17.** maintain cleanliness in the feed plant
- PC18.** implement effective security measures to prevent theft/ sabotage in the plant such as ensuring access to the feed plant by the authorised personnel only
- PC19.** follow the necessary measures to prevent fire and other types of accidents in the plant

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** use of conventional animal feed ingredients such as chaff, grass, seedlings, wheat/ maize straw, grain, cereals, flour-mill by-products, etc.
- KU2.** hygienic and safe transportation and storage of animal feed ingredients
- KU3.** the process of preparing the feed formulation for various animals according to the stages of their growth, lactation, required food and non-food production, etc.
- KU4.** use of antibiotics, probiotics, premixes and preservatives in the feed
- KU5.** how to operate feed hammer-mill to grind the feed ingredients
- KU6.** the use of feed mixer to mix the ground ingredients
- KU7.** the importance of using fatty ingredients in animal feed to improve the absorption of fat-soluble vitamins and increase the utilisation of energy
- KU8.** usage of molasses in the mixed feed to improve its palatability and control pulverulence
- KU9.** the process of creating feed pellets using the pellet mill/ feed pelletiser
- KU10.** the importance of ensuring the feed pellets have the recommended moisture levels along with the required physical and chemical properties
- KU11.** the appropriate packing material such as sacks and head-sealed bags for packing animal feed
- KU12.** the importance of protecting the animal feed from contamination and storing it at the recommended temperature and humidity
- KU13.** the recommended treatment to be applied in the storage area to protect the feed plant from rodents, bacteria and other types of contamination
- KU14.** the importance of decontaminating the feed plant tools and equipment and maintaining cleanliness in the feed plant
- KU15.** applicable measures to be taken to prevent fire and other types of accidents in the plant

### **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 instructions in the local language or English
- GS3.** listen attentively to understand the information/ instructions being shared
- 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 |
|--|--------------|-----------------|---------------|------------|
| <i>Formulate the animal feed</i>   | <b>6</b>     | <b>8</b>        | -             | <b>6</b>   |
| <b>PC1.</b> prepare the feed formulation for various animals according to the stages of their growth, lactation, required food and non-food production, etc.                                       | -            | -               | -             | -          |
| <b>PC2.</b> select a variety of antibiotics and probiotics to be used in the feed according to the animal(s) to be fed   | -            | -               | -             | -          |
| <b>PC3.</b> estimate the need of using premixes in the feed and include them in the feed as per the requirement  | -            | -               | -             | -          |
| <i>Prepare, pack and store the animal feed</i>   | <b>12</b>    | <b>14</b>       | -             | <b>12</b>  |
| <b>PC4.</b> grind the selected feed ingredients in the feed hammer-mill as per the requirement   | -            | -               | -             | -          |
| <b>PC5.</b> mix the ground ingredients manually or using a feed mixer  | -            | -               | -             | -          |
| <b>PC6.</b> add the recommended fatty ingredients in an appropriate quantity while mixing the ingredients to improve the absorption of fat-soluble vitamins and increase the utilisation of energy | -            | -               | -             | -          |
| <b>PC7.</b> add molasses in the mixed feed in the recommended quantity to improve its palatability and control pulverulence  | -            | -               | -             | -          |
| <b>PC8.</b> crush the assorted feed manually or mechanically into fine particles   | -            | -               | -             | -          |
| <b>PC9.</b> process the fine particles through the cattle feed pellet mill/ feed pelletiser to create feed pellets according to the animals to be fed  | -            | -               | -             | -          |
| <b>PC10.</b> dry the feed pellets at the recommended temperature   | -            | -               | -             | -          |
| <b>PC11.</b> ensure the feed pellets have the recommended moisture levels along with the required physical and chemical properties   | -            | -               | -             | -          |

| Assessment Criteria for Outcomes  | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| <b>PC12.</b> select appropriate packing material such as sacks and head-sealed bags to pack the prepared animal feed  | -            | -               | -             | -          |
| <b>PC13.</b> pack the animal feed protecting it from contamination  | -            | -               | -             | -          |
| <b>PC14.</b> store the packed feed at the recommended temperature and humidity, protecting it from insects and rodents  | -            | -               | -             | -          |
| <i>Maintain hygiene and safety in the feed plant</i>  | <b>12</b>    | <b>18</b>       | -             | <b>12</b>  |
| <b>PC15.</b> apply the necessary treatment to protect the feed plant from bacteria, rodents and other types of contamination  | -            | -               | -             | -          |
| <b>PC16.</b> decontaminate all the feed plant tools and equipment regularly   | -            | -               | -             | -          |
| <b>PC17.</b> maintain cleanliness in the feed plant   | -            | -               | -             | -          |
| <b>PC18.</b> implement effective security measures to prevent theft/ sabotage in the plant such as ensuring access to the feed plant by the authorised personnel only | -            | -               | -             | -          |
| <b>PC19.</b> follow the necessary measures to prevent fire and other types of accidents in the plant  | -            | -               | -             | -          |
| <b>NOS Total</b>  | <b>30</b>    | <b>40</b>       | -             | <b>30</b>  |

## National Occupational Standards (NOS) Parameters

|                         |   |
|-------------------------|---|
| <b>NOS Code</b>         | AGR/N4822                                       |
| <b>NOS Name</b>         | Prepare animal feed and maintain the feed plant |
| <b>Sector</b>           | Agriculture                                     |
| <b>Sub-Sector</b>       | Animal Husbandry                                |
| <b>Occupation</b>       | Livestock Health Management                     |
| <b>NSQF Level</b>       | 4   |
| <b>Credits</b>          | 4   |
| <b>Version</b>          | 1.0   |
| <b>Next Review Date</b> | 30/12/2024                                      |

## 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/N5118.Purchase and store the fish, crustacean and animal feed ingredients | 30           | 40              | -             | 30         | 100         | 40        |
| AGR/N9908.Undertake basic entrepreneurial activities for small enterprise     | 30           | 40              | -             | 30         | 100         | 10        |
| AGR/N9903.Maintain health and safety at the workplace                         | 40           | 25              | -             | 35         | 100         | 5         |
| DGT/VSQ/N0102.Employability Skills (60 Hours)                                 | 20           | 30              | 0             | 0          | 50          | 5         |
| <b>Total</b>  | <b>120</b>   | <b>135</b>      | <b>-</b>      | <b>95</b>  | <b>350</b>  | <b>60</b> |

### Elective: 1 Fish and crustacean

| National Occupational Standards  | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage |
|--|--------------|-----------------|---------------|------------|-------------|-----------|
| AGR/N5119.Prepare, pack, store and market the fish and crustacean feed | 30           | 40              | -             | 30         | 100         | 40        |
| <b>Total</b>   | <b>30</b>    | <b>40</b>       | <b>-</b>      | <b>30</b>  | <b>100</b>  | <b>40</b> |

### Elective: 2 Animal

| National Occupational Standards                           | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage |
|---|--------------|-----------------|---------------|------------|-------------|-----------|
| AGR/N4822.Prepare animal feed and maintain the feed plant | 30           | 40              | -             | 30         | 100         | 40        |
| <b>Total</b>  | <b>30</b>    | <b>40</b>       | <b>-</b>      | <b>30</b>  | <b>100</b>  | <b>40</b> |

## Acronyms

|             |   |
|-------------|---|
| <b>NOS</b>  | National Occupational Standard(s)               |
| <b>NSQF</b> | National Skills Qualifications Framework        |
| <b>QP</b>   | Qualifications Pack                             |
| <b>TVET</b> | Technical and Vocational Education and Training |

## Glossary

|  |  |
|--|--|
| <b>Sector</b>                                | Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.  |
| <b>Sub-sector</b>                            | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.   |
| <b>Occupation</b>                            | Occupation is a set of job roles, which perform similar/ related set of functions in an industry.  |
| <b>Job role</b>                              | Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.  |
| <b>Occupational Standards (OS)</b>           | OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
| <b>Performance Criteria (PC)</b>             | Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.  |
| <b>National Occupational Standards (NOS)</b> | NOS are occupational standards which apply uniquely in the Indian context.   |
| <b>Qualifications Pack (QP)</b>              | QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.   |
| <b>Unit Code</b>                             | Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'  |
| <b>Unit Title</b>                            | Unit title gives a clear overall statement about what the incumbent should be able to do.  |
| <b>Description</b>                           | Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.   |
| <b>Scope</b>                                 | Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.  |
| <b>Knowledge and Understanding (KU)</b>      | Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.   |



|   |  |
|---|--|
| <b>Organisational Context</b>           | Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.   |
| <b>Technical Knowledge</b>              | Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.   |
| <b>Core Skills/ Generic Skills (GS)</b> | Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles. |
| <b>Electives</b>                        | Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.  |
| <b>Options</b>                          | Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.  |