



Model Curriculum

QP Name: Poultry Hatchery Supervisor

QP Code: AGR/Q4401

QP Version: 4.0

NSQF Level: 5

Model Curriculum Version: 3.0

Agriculture Skill Council of India || Agriculture Skill Council of India (ASCI), 6th Floor, GNG Tower, Plot No. 10, Sector -44

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Training Parameters

Sector	Agriculture
Sub-Sector	Poultry
Occupation	Poultry Hatchery Operations
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/6122.4401
Minimum Educational Qualification and Experience	UG Diploma or equivalent in Poultry and related courses OR UG certificate in Poultry and related courses with 1.5 years of relevant experience in agriculture and allied sectors OR 10 grade pass with 6 years of relevant experience in agriculture and allied sectors OR 12th or equivalent with 3 years of relevant experience in agriculture and allied sectors OR Previous NSQF level 4.5 certification with 1.5 years of relevant experience in agriculture and allied sectors OR Previous NSQF level 4 certification with 3 years of relevant experience in agriculture and allied sectors
Pre-Requisite License or Training	N/A
Minimum Job Entry Age	19 Years
Last Reviewed On	26/11/2024
Next Review Date	26/11/2027
NSQC Approval Date	26/11/2024

QP Version	4.0
Model Curriculum Creation Date	26/11/2024
Model Curriculum Valid Up to Date	26/11/2027
Model Curriculum Version	3.0
Minimum Duration of the Course	480 Hours
Maximum Duration of the Course	480 Hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the Listed knowledge and skills.

- Carry out incubation process: Receiving and storing of eggs, incubation process
- Perform Grading and Packing of Chicks: Grading of chicks, identify the sex of chicks, packing of chicks
- Estimate and procure required resources: Identify the inputs, estimate the inputs, identify and select the vendors, procure the inputs
- Maintain hatchery equipment, building and environment: Record Keeping, observation, maintenance of hatchery equipment
- Maintain health and safety: Hatchery sanitation, hygiene environment, worker health, worker safety at work place, hazard analysis etc.

Compulsory Modules

The table Lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N4401: Receive and store eggs at the hatchery NOS Version No. 3.0 NSQF Level 5	10:00	20:00	0:00	00:00	30:00
Module 1: Introduction to the role of a Poultry Hatchery Supervisor	5:00	0:00	0:00	0:00	5:00
Module 2: Process of receiving and storing eggs at the Hatchery	05:00	20:00	0:00	00:00	25:00
AGR/N4402: Supervise the hatchery operations NOS Version No. 3.0 NSQF Level 5	10:00	20:00	0:00	00:00	30:00
Module 3: Incubation process	10:00	20:00	0:00	00:00	30:00
AGR/N4403: Ensure proper grading and packing of chicks NOS Version No. 3.0 NSQF Level 5	10:00	20:00	0:00	00:00	30:00
Module 4: Grading and packing of chicks	10:00	20:00	0:00	00:00	30:00

AGR/N4404: Estimate and procure required inputs for hatching process NOS Version No. 3.0 NSQF Level 5	10:00	20:00	0:00	00:00	30:00
Module 5: Estimation and procurement of required resources for hatching process	10:00	20:00	0:00	00:00	30:00
AGR/N4405: Ensure maintenance of hatchery equipment, infrastructure and environment NOS Version No. 3.0 NSQF Level 5	10:00	20:00	0:00	00:00	30:00
Module 6: Maintenance of hatchery equipment, building and environment	10:00	20:00	0:00	00:00	30:00
AGR/N4406: Carry out sanitation management of the hatchery unit NOS Version No. 4.0 NSQF Level 5	20:00	40:00	0:00	00:00	60:00
Module 7: Sanitation Management of the hatchery unit	10:00	20:00	0:00	00:00	30:00
Module 8: Effective Team Supervision	10:00	20:00	0:00	0:00	30:00
AGR/N9903: Maintain health and safety at the workplace NOS Version No. 4.0 NSQF Level 4	20:00	10:00	0:00	00:00	30:00
Module 9: Hygiene and cleanliness	3:00	3:00	0:00	00:00	06:00
Module 10: Safety and emergency procedures	17:00	7:00	0:00	00:00	24:00
DGT/VSQ/N0103 Employability Skills NOS Version-1.0 NSQF Level-5	90:00	00:00	0:00	0:00	90:00
Module 11: Employability Skills	90:00	00:00	0:00	0:00	90:00
Module 12: OJT	00:00	00:00	150:00	0:00	150:00
Total Duration	180:00	150:00	150:00	00:00	480:00

Module Details

Module 1: Introduction to the role of a Poultry Hatchery Supervisor

Bridge Module Mapped to NOS AGR/N4401 v3.0

Terminal Outcomes:

- Describe the role and responsibilities of a Poultry Hatchery Supervisor

Duration: 05:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Describe the size, scope and opportunities and importance of the poultry industry and its sub-sectors. Describe role, responsibility and personal attributes of a Poultry Hatchery Supervisor and their career progression List important Poultry Breeds Explain the hatchery management and activities involved in it Explain working area pre-requisites for incubation and their safety requirements 	
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of receiving and storing eggs at the hatchery

Mapped to NOS AGR/N4401 v3.0

Terminal Outcomes:

- Manage the storage of eggs and accessing quality of eggs

Duration: 05:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the characteristics and quality of good hatching eggs • Explain the need and importance of receiving eggs in temperature and humidity controlled vehicle • Explain guidelines on selection of hatching eggs • Explain quality characteristics of good hatching eggs • Discuss about the eggs segregation process • Explain the methods and process of fumigation and cooling of eggs • Explain the procedure for proper handling of eggs and correct the methods of storage • Describe optimum conditions for storing the eggs • Explain temperature, humidity and sanitation requirements of eggs at different stages of hatchery management • Explain method of proper storage of eggs • Explain how to maintain controlled environment in hatchery • Explain relevant legislation, standards, policies and procedures for management of hatchery • Explain relevant health and safety requirements applicable to the work environment • Explain the importance of following health, hygiene, safety and quality 	<ul style="list-style-type: none"> • Inspect the purchase order against the eggs received on delivery • Demonstrate the procedure for unloading of eggs as per SOP • Analyze the damaged eggs and maintain record • Demonstrate the procedure to clean the eggs thoroughly in controlled environment to remove any foreign matter on them as per SOP • Demonstrate the procedure for fumigation of eggs • Demonstrate proper handling of eggs • Demonstrate separation of unsuitable eggs for hatching • Demonstrate the transfer of hatching eggs to the cool room without any damage • Demonstrate the storage of eggs in the cool room • Examine the temperature and humidity level of the cool room • Demonstrate the procedure to record the number of eggs received, hatchable and non-hatchable eggs post segregation

standards on consumers and the business	
<ul style="list-style-type: none"> Explain the record keeping methods 	
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Fumigants, and egg samples or photographs (dirty/cracked/very small/very large/elongated/rounded/toe punched/wrinkled/poor shell)	

Module 3: Supervise the Hatchery Operations

Mapped to NOS AGR/N4402 v3.0

Terminal Outcomes:

- Manage the process of incubation with maintaining standards

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss functions of setter incubator and hatcher incubator • Explain the method of setting of eggs in setter incubator • Discuss about the monitoring & control of temperature, humidity, oxygen, carbon dioxide levels, turning of eggs and sanitation requirements for good hatchery management • Describe the method of placing the eggs from setter to hatcher incubators • Explain incubation process and candling process • Discuss the equipment needed for incubation process and candling process • Explain the pre-incubation process • Explain about sexing process according to the variety. • Explain egg formation in the hen and its structure • Explain effect of egg storage period and conditions such as temperature and relative humidity on hatchability • Explain safe handling of eggs • Explain relevant legislation, standards, policies and procedures for hatchery management • Explain relevant health and safety requirements applicable 	<ul style="list-style-type: none"> • Supervise the activities of hatchery staff, including egg collectors, incubator operators, and chick handlers. • Develop work schedules and assign tasks • Train staff on Hatchery procedures, safety regulations • Select hatchable eggs • Inspect eggs to check their fertility through candling method by putting a bright light source behind setter tray and viewing the eggs • Segregate fertile and unfertile eggs, and isolate unfertile & dead germ eggs as per the organization's policy • Demonstrate the procedure for Formalin evaporation in the hatchery by placing a cloth soaked in formalin • Demonstrate how to maintain the optimum temperature and relative humidity in the setter incubator and hatcher incubator • Demonstrate the procedure to set eggs vertically with small (pointed) end down • Demonstrate the method to place the setter trays in the setter incubator • Demonstrate procedure for taking out the eggs from the incubator for candling • Inspect the eggs for their fertility through the candling method • Demonstrate the procedure to segregate fertile egg (eggs through which light cannot pass) and unfertile egg (light passes through them) and isolate unfertile & dead germ eggs as per the organization's policy

<p>to the work environment</p> <ul style="list-style-type: none"> • Discuss the industry quality standards and customer requirements • Explain the impact of not following the health, hygiene, safety and quality standards on consumers and the business • Explain benefit of health, hygiene, safety and quality standards on consumers and the business • Explain benefit of documentation and record keeping in incubation process 	<ul style="list-style-type: none"> • Demonstrate transfer of fertile eggs with live embryos from the setter to the hatcher incubator • Demonstrate procedure for taking out newly hatched chicks out of the hatcher incubator after 21 days • Document the hatchability rates, identify issues and implement the corrective actions • Demonstrate quality control measures and conduct inspections to ensure high operational standards • Analyse the optimum temperature, relative humidity and oxygen for the chicken egg in the setter room and in the hatcher • Demonstrate process of documentation and record keeping for incubation process by appropriate means • Demonstrate safe handling of eggs
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Classroom Aids:

Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements

Incubator, hatchery rooms, egg holding rooms, setter room, egg candling room, hatcher room, chick holding room

Module 4: Grading and packing of chicks

Mapped to NOS AGR/N4403 v3.0

Terminal Outcomes:

- Carry out the post-harvest practices of grading and packing and transporting

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss criterion and parameters for assessment and grading of chicks • Describe appropriate packing method of chicks for transportation with minimal loss • Discuss the process of vaccination of chicks and their timelines • Discuss the transportation of chicks in different seasons • Explain guidelines on management, grading, packing and transportation of chicks • Explain characteristics of healthy and unhealthy chicks • Explain the sexing methods for differentiating male from female chicks • Explain best practices of grading of chicks and newly hatched chick management • Explain recommended packaging materials and their characteristics • Discuss safe handling of chicks and their packing • Discuss transportation of chicks in different seasons by maintaining optimal condition in transportation vehicle • Explain the importance of sanitation of the vehicle before loading • Explain relevant legislation, standards, policies and procedures for grading and packing of chicks 	<ul style="list-style-type: none"> • Identify and isolate the healthy and the unhealthy chicks • Demonstrate the procedure for feather sexing (male and female) • Demonstrate segregation of chicks in batches according to age groups and breeds while loading • Demonstrate the timely vaccination of healthy chicks as per the organization's SOP • Demonstrate the procedure to maintain records of vaccination, sexing of DOC, grading, packing and transportation of chicks • Identify and use the packing material as per industry standards • Demonstrate packing of chicks and how to facilitate transportation • Demonstrate the use of new packing boxes as per SOP • Analyse the climatic conditions and place appropriate number of chicks per box • Demonstrate the procedure to clean and sanitize the transport vehicle • Demonstrate the procedure to maintain sufficient space between two boxes and the sides of the van while loading • Demonstrate the procedure to transport chicks quickly, comfortably and under optimum sanitary conditions

<ul style="list-style-type: none"> • Explain the impact of not following the health, hygiene, safety and quality standards on consumers and the business • Explain importance of the health, hygiene, safety and quality standards on consumers and the business in grading, packing and transportation of chicks • Explain benefit of documentation and record keeping in grading, packing and transportation of chicks • Discuss the compliances & safety protocols of hatchery unit 	
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Vaccines, vaccine schedule, different packing material	

Module 5: Estimation and procurement of required resources for hatching process

Mapped to NOS AGR/N4404 v3.0

Terminal Outcomes:

- Estimation of quantity of input and their cost
- Manage the procurement of resources for hatching process
- Explain about vendor and inventory management

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the various inputs required for the hatching and explain their utility and sources of procurements • List the vendors that are available for inputs and their prevailing rates • Discuss about importance of efficient procurement in hatchery • Explain method for calculation of quantity of inputs required for a specific unit size and their cost estimation as per organization norm • Explain about vendor and inventory management • Explain applicable guidelines on purchase of materials, vendor selection and inventory management • Explain relevant legislation, standards, policies and procedures for input procurement in the hatchery • Explain the importance of the health, hygiene, safety and quality standards necessary for input procurements • Describe the process of negotiating with suppliers and procuring inputs according to the demand. • Explain the impact of not following the health, hygiene, safety and quality standards on consumers and the business 	<ul style="list-style-type: none"> • Analyze the hatchery unit's capacity to hatch eggs in a single batch and requirements of necessary inputs accordingly. • Analyze the market rates for various inputs • Estimate the quantity of inputs required and their costs of procurements like eggs, incubator, equipment, manpower, vaccines, disinfectants etc. • Identify and select the vendors and place order and procure the inputs • Demonstrate negotiation with suppliers Document and maintain records of Estimation and procurement of required resources for hatching process • Analyse the quality of the inputs procured • Demonstrate the procedure to record the activities as per organization's policy

<ul style="list-style-type: none"> • Explain the importance of ensuring the supply meets the demand without interruption. • Explain the use of the relevant tracking and tracking system to ensure transparency in the flow of inputs and produce. • List the relevant details to be recorded while procuring the input. 	
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Sterilization fogger/sprayer, chick gas culling kit without gas cylinder, setting trays, hatching baskets, digital hygrometer, ICBH controller	

Module 6: Maintenance of hatchery equipment, building and environment

Mapped to NOS AGR/N4405 v3.0

Terminal Outcomes:

- Maintain the hatchery equipment, physical infrastructure and hatchery environment required for hatchery operations as per quality standards

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe hatchery building design specifications, optimum distance required between poultry farm and between the residential houses from the hatchery • Discuss about importance of maintaining of farm tools and equipment, physical infrastructure and optimum hatchery environment • Discuss the precaution to take care before and after the starting the production cycle • Explain the Standard Operating Procedure used for disinfecting, safety and decontaminating the hatchery unit • Explain the infrastructure requirement for protection of chicks • Explain the preventive measure taken during hatchery operation and optimal condition required for efficient hatchery process • Explain ideal range of temperature, humidity, oxygen and carbon dioxide levels for hatching • Discuss pests and insects in hatchery unit and their control measure • Explain the effect of automatic turning device on hatchability • Explain the importance of sanitization, cleaning, washing and disinfecting of the hatchery unit and the surrounding area • Explain bio-security measures to prevent transmission of disease-causing organisms • Explain the impact of not following the health, hygiene, safety and quality standards on consumers and the business 	<ul style="list-style-type: none"> • Demonstrate key consideration to be taken into account as per standard while performing periodic visual inspection or monitoring of various hatchery tools and equipment, physical infrastructure and hatchery environment • Demonstrate functions and maintenance of various hatchery tools and equipment viz. incubators, fogging machine, vaccination equipment, sanitation equipment etc.) • Demonstrate how to maintain the hatchery optimum environment including cleaning, disinfection, sanitization, cleaning of setter trays, disposal of unhealthy chicks, optimum moisture level, temperature, light intensity, ventilation etc. in hatchery as per standard for efficient and effective operations • Inspect the electrical system for any damaged wires • Inspect the main plug of electrical board for any loose or damaged screws • Demonstrate the procedure for maintenance and inspection of physical infrastructure of farm • Inspect the walls of the farm for any seepages • Demonstrate the management of disinfection hatchery unit, setter trays by fumigation/ spray • Demonstrate the appropriate waste and dead chicks disposal methods as per the organization's SOP/regional regulations

<ul style="list-style-type: none"> • Explain hatchery unit's waste disposal practices • Explain applicable and relevant legislation, standards, policies and procedures at work place in the farm • Explain the importance of health, hygiene and safety requirements at workplace and in the farm and also their cascading effect on consumers and business 	
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Sprayer, disinfectant	

Module 7: Sanitation Management of the hatchery unit

Mapped to NOS AGR/N4406 v4.0

Terminal Outcomes:

- Maintain cleanliness in the hatchery
- Describe bio-security measures in the hatchery

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the sanitation and safety guidelines for hatchery • Discuss the importance of hygiene in hatchery • Explain the importance of having appropriate physical infrastructure e.g separate doors for the movement of workers, materials/ equipment and waste disposal • List the bio-security measures that is required to be implemented in hatchery • Explain benefit of footbath (chemicals/ disinfectants) at the entrance • Explain appropriate waste management and methods of disposal • Explain the types of disinfectant and their properties • Discuss importance and economics of recycling of reusable material • Explain different scientific hygienic and sanitation practices employed in the hatchery unit as per standard • Explain gender concepts, gender sensitization, PwD related Laws/Schemes/Acts/Provisions • Explain the benefits of documentation and record keeping of various activities related to sanitation management and inclusive workplace practice at hatchery unit viz. implemented bio-security measures in the hatchery, 	<ul style="list-style-type: none"> • Demonstrate the implement the bio-security measures in the hatchery unit • Demonstrate the procedure to clean, disinfect, sanitize and fumigate the tools/ equipment, drains, trays, and hatchery unit • Demonstrate the procedure to clean equipment and premises by disinfectants • Examine temperature level, light intensity, moisture level, ventilation etc. • Demonstrate measures for lesser mortality of birds • Demonstrate the implementation of strict rules for maintaining the hygiene of workers and equipment • Demonstrate division of hatchery into different zones for hygiene purpose • Demonstrate the procedure for cleaning and fumigation of egg receiving room, egg segregation room, cold storage room, chick grading and packing rooms as per the guidelines • Demonstrate the key considerations to divide hatchery divided into different zones for hygiene purpose as per the organization's SOP • Demonstrate proper segregation of waste into different categories • Demonstrate the procedure for recycling and disposing different

<p>arrangements for PwD etc.</p> <ul style="list-style-type: none"> • Explain the impact of not following the health, hygiene, safety and quality standards on consumers and the business • Explain the importance of verbal and non-verbal communication while interacting with PwD and with people across genders • Explain relevant legislation, standards, policies and procedures at work • Explain the importance of the health, hygiene, safety and quality standards on consumers and the business • Discuss biosecurity protocols and its importance 	<p>types of waste appropriately.</p> <ul style="list-style-type: none"> • Document action taken and communicate effectively to all workers • Demonstrate the how to conduct role-play maintain a conducive environment for all the genders and Persons with Disabilities (PwD) at the workplace • Examine signs of illness or disease in chicks/eggs and take appropriate action
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Vaccines, Balanced Feed Chart, Record book, Sprays and disinfectant	

Module 8: Effective team supervision

Mapped to NOS AGR/N4406 v4.0

Terminal Outcomes:

- Apply techniques for effective communication with the stakeholders.
- Explain how to mentor an apprentice.
- Discuss ways to promote diversity and inclusion at the workplace.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the importance of verbal and non-verbal communication at the workplace. • Explain the effective methods of sharing and seeking information and feedback at the workplace. • Explain the procedure for completing work-related documentation. • Describe the process of mentoring an apprentice at the workplace. • Explain the importance of inclusion of all genders and People with Disability (PwD) at the workplace. • Explain gender concepts (gender as a social construct, gender sensitivity, gender equality etc.), issues and applicable legislation. • Explain ways in which a conducive working environment can be created for all genders and PwD. • Define the need for appropriate verbal and non-verbal communication while interacting with all genders and PwD. • Explain the applicable PwD related regulations. • Explain the procedure to report inappropriate behaviour e.g., harassment. 	<ul style="list-style-type: none"> • Demonstrate the requisite level of proficiency in verbal and non-verbal communication at the workplace. • Demonstrate different approaches to mentoring an apprentice at the workplace. • Prepare a sample training schedule for an apprentice. • Demonstrate appropriate verbal and non-verbal communication that is respectful of gender and disability.
Classroom Aids:	
Trainee's Training Kit and Guide, Power-Point Presentation, Computer, Projector, Black/Whiteboard. Charts and Videos on Workplace Communication.	
Tools, Equipment and Other Requirements	
Workplace Records and Documents.	

Module 9: Hygiene and cleanliness

Mapped to NOS AGR/N9903 v4.0

Terminal Outcomes:

- Discuss the hygiene and cleanliness requirements at hatchery unit
- Discuss how to adhere to personal hygiene practices.
- Demonstrate ways to ensure cleanliness around the workplace.

Duration: 03:00	Duration: 03:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the requirements of personal health, hygiene and fitness at work. • Describe common health-related guidelines laid down by the organizations/ Government at the workplace. • Explain the importance of good housekeeping at the workplace. • Explain the importance of informing the designated authority on personal health issues related to injuries and infectious diseases. • Explain the importance of adherence to workplace sanitization norms 	<ul style="list-style-type: none"> • Demonstrate personal hygiene practices to be followed at the workplace. • Demonstrate the correct way of washing hands using soap and water, and alcohol-based hand rubs. • Demonstrate the correct way to wash worn clothes with approved detergents as per SOP • Demonstrate the steps to follow to put on and take off a mask safely. • Demonstrate the procedure to sanitize and disinfect one's work area regularly. • Demonstrate the measures to ensure the cleanliness of the work area.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Personal Protective Equipment, Cleaning Equipment and Materials, Sanitizer, Soap, Mask	

Module 10: Safety and emergency procedures

Mapped to NOS AGR/N9903 v4.0

Terminal Outcomes:

- Describe how to adhere to safety guidelines.
- Show how to administer appropriate emergency procedures.

Duration: 17:00	Duration: 7:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the Personal Protective Equipment (PPE) required at the workplace • Describe the commonly reported hazards at the workplace • Describe the hazards caused due to chemicals /fumigants • Describe the basic safety checks to be done before the operation of any equipment/machinery • Describe the common first aid procedures to be followed in case of emergencies. • State measures that can be taken to prevent accidents and damage s at the workplace. • Explain about contagious diseases and the measures to be taken to control those risks in the area of work • Explain the importance of reporting details of first aid administered, to the reporting officer/doctor, in accordance with workplace procedures. • State common health and safety guidelines to be followed at the workplace. • List the hygiene standards, disinfectants, cleaning agents, cleaning techniques, storage procedure cleaning equipment and materials. • Discuss the safe waste disposal methods • Explain types of Personal Protective Equipment (PPE) required at the workplace and their importance • Explain the importance of good 	<ul style="list-style-type: none"> • Inspect various areas of the workplace for leakages, water-logging, pests, fire, etc. • Demonstrate the use of PPE and implements it as applicable to the workplace. • Demonstrate the correct way of donning, doffing and discarding PPE such as face masks, hand gloves, face shields, PPE suits, etc. • Demonstrate the procedure to sanitize the tools, equipment and machinery properly. • Demonstrate the safe disposal of waste. • Demonstrate the treatment appropriate to the patient's injuries in accordance with recognized first aid techniques • Demonstrate the procedure for dealing with accidents, fires and emergencies. • Demonstrate the emergency procedures to the given workplace requirements. • Demonstrate the use of emergency equipment in accordance with manufacturers' specifications and workplace requirements. • Demonstrate the administration of first aid • Demonstrate the preparation of list of relevant hotline/ emergency numbers. • Estimate risk prior to performing manual handling jobs, and work according to currently recommended safe practices

<p>housekeeping at the workplace</p> <ul style="list-style-type: none"> • Explain government / workplace advisories incase of outbreak of any disease/disaster • Explain methods for minimizing environmental damage during work 	
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Personal Protective Equipment, First Aid Kit, Equipment used in Medical Emergencies.	

Module 11: Employability Skills (90 hours)

Mapped to NOS DGT/VSQ/N0103 v1.0

Duration: 90:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 3 Hours

After completing this programme, participants will be able to:

1. Outline the importance of Employability Skills for the current job market and future of work
2. List different learning and employability related GOI and private portals and their usage
3. Research and prepare a note on different industries, trends, required skills and the available opportunities

Constitutional values - Citizenship Duration: 1.5 Hours

4. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
5. Demonstrate how to practice different environmentally sustainable practices

Becoming a Professional in the 21st Century Duration: 5 Hours

6. Discuss relevant 21st century skills required for employment
7. Highlight the importance of practicing 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life
8. Create a pathway for adopting a continuous learning mindset for personal and professional development

Basic English Skills Duration: 10 Hours

9. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
10. Read and understand text written in basic English
11. Write a short note/paragraph / letter/e -mail using correct basic English

Career Development & Goal Setting Duration: 4 Hours

12. Create a career development plan
13. Identify well-defined short- and long-term goals

Communication Skills Duration: 10 Hours

14. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette
15. Write a brief note/paragraph on a familiar topic
16. Explain the importance of communication etiquette including active listening for effective communication
17. Role play a situation on how to work collaboratively with others in a team

Diversity and Inclusion Duration: 2.5 Hours

18. Demonstrate how to behave, communicate, and conduct appropriately with all genders and PwD

19. Discuss the significance of escalating sexual harassment issues as per POSH act

Financial and Legal Literacy Duration: 10 Hours

- 20. Discuss various financial institutions, products, and services
- 21. Demonstrate how to conduct offline and online financial transactions, safely and securely and check passbook/statement
- 22. Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), tax deductions
- 23. Calculate income and expenditure for budgeting
- 24. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 20 Hours

- 25. Describe the role of digital technology in day-to-day life and the workplace
- 26. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
- 27. Demonstrate how to connect devices securely to internet using different means
- 28. Follow the dos and don'ts of cyber security to protect against cyber crimes
- 29. Discuss the significance of displaying responsible online behavior while using various social media platforms
- 30. Create an e-mail id and follow e-mail etiquette to exchange e-mails
- 31. Show how to create documents, spreadsheets and presentations using appropriate applications
- 32. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

- 33. Explain the types of entrepreneurship and enterprises
- 34. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
- 35. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
- 36. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 9 Hours

- 37. Classify different types of customers
- 38. Demonstrate how to identify customer needs and respond to them in a professional manner
- 39. Discuss various tools used to collect customer feedback
- 40. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for apprenticeship & Jobs Duration: 8 Hours

- 41. Draft a professional Curriculum Vitae (CV)
- 42. Use various offline and online job search sources to find and apply for jobs
- 43. Discuss the significance of maintaining hygiene and dressing appropriately for an interview
- 44. Role play a mock interview
- 45. List the steps for searching and registering for apprenticeship opportunities

Module 12: On-the-Job Training

Mapped to QP AGR/Q4401 v3.0

Mandatory Duration: 150:00	Recommended Duration: 00:00
Location: On Site	
Terminal Outcomes <ul style="list-style-type: none"> • Demonstrate various operations of the Poultry Hatchery and their effective measures and suitable management practices as per quality standard for better results • Show how to receive eggs from the farm safely • Demonstrate how to assess the quality of the eggs as per standard • Show the proper storage of hatching eggs • Show how to set the eggs in the setter incubator • Demonstrate how to transfer the eggs in the hatcher incubator safely and accurately • Show how to operates incubators to hatch eggs. • Show how to carry out incubation process efficiently and effectively • Demonstrate how to sets and adjusts mechanism of incubators to maintain required degree of temperature at different stages of incubation. • Show disinfection technique to avoid contamination of hatchery. • Show how to operate electrical incubator having automatic devices of controlling temperature and turning eggs. • Demonstrate operations of various types of hatchery plants to develop hatching of eggs • Show how to keep and maintain breeding records. • Show how to removes newly born chicks to Foster-mother (chamber containing two parts having one burning lamp beneath to provide required extent of heat). • Show how to carry out proper assessment and grading of chicks • Demonstrate how to carry out proper packing of chicks for transportation • Show how to estimate various inputs required for hatching process and then procuring them from authorized source • Show how to maintain properly hatchery equipment, infrastructure and environment. • Demonstrate implementation of relevant bio-security measures in the hatchery • Show how to practice inclusion at the workplace • Show maintain health and safety at the workplace and administer appropriate emergency procedures 	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Certificate-NSQF	Poultry Hatchery Supervisor	5	Poultry Farming	0		Poultry Hatchery Supervisor with 5 Years' experience with corporates
Diploma	Veterinary /Animal Husbandry / Poultry	3	Poultry Farming	0		Regular Diploma more than 15 months in veterinary /Animal Husbandry / Poultry
Graduate	Graduate with 10+2 in Science	3	Poultry Farming	0		For the school Program minimum qualification of the Trainer should be Graduate in Zoology with Teaching experience of minimum 3 years. (will be considered industry experience)
Graduate	Animal Husbandry/Poultry Production and Business Management	1				
Post Graduate	Animal Science/Poultry Production/Poultry Science/Applied Poultry Science	0		0		
Trainer Certification						
Domain Certification				Platform Certification		
Certified for Job Role: "Poultry Hatchery Supervisor" mapped to QP: "AGR/Q4401, v4.0". Minimum accepted score is 80%				Recommended that the Trainer is certified for the Job Role: "Trainer (Vet and Skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". The minimum accepted score as per MEPSC guidelines is 80%.		

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B. V. Sc.		4	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in Hatchery Operation, Monitoring and Control
B. Tech	Poultry Production Technology	4	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in Hatchery Operation, Monitoring and Control
B. Sc	Animal Husbandry/Poultry Production and Business Management	5	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in Hatchery Operation, Monitoring and Control
M.Tech	Poultry Technology	2	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in Hatchery Operation, Monitoring and Control
M. Sc	Animal Science/Poultry Production/Poultry Science/Applied Poultry Science	2	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in Hatchery Operation, Monitoring and Control
M. V. Sc		2	In Animal Science/Veterinary Science /Poultry Science and	0		Practical skills and knowledge required in

			related streams			Hatchery Operation, Monitoring and Control
Ph. D	Poultry Science/Animal Science/Veterinary Science/Animal Genetics and Breeding	1	In Animal Science/Veterinary Science/Poultry Science and related streams	0		Practical skills and knowledge required in Hatchery Operation, Monitoring and Control

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role “ Poultry Hatchery Supervisor ”, mapped to QP: “AGR/Q4401, v4.0”, Minimum accepted score is 80%	Certified for the Job Role: “Assessor (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, v2.0”, with a minimum score of 80%.

Assessment Strategy

Assessment System Overview

In Agriculture Sector it is of ultimate importance that individuals dealing with crop production or livestock have the requisite knowledge and competencies to undertake the task. Based on the Assessment Criteria, SSC in association with empaneled AAs, define the test structure for the given job roles to cover the required skills and competencies. Assessment strategy consists of the following:

1. Multiple Choice Questions: To assess basic knowledge (Objective/Subjective)
2. Viva: To assess awareness on processes (Oral and/or written questioning)
3. Practical: To evaluate skills and identify competencies. (Observation)

Assessments for knowledge and awareness on processes may be conducted through 'real-time' internet-based evaluation or by conducting the same 'offline' through TABs. Skills and competencies are to be assessed by conducting 'practical' on the ground through qualified and ToA certified assessors.

An individual must have adequate knowledge and skills to perform a specific task, weightage for different aspects of the assessment is given as follows:

- Multiple Choice Questions: 20%-30%, depending on the specific QP
- Viva: 20%
- Practical: 50% - 60% (Involves demonstrations of applications and presentations of procedures/tasks and other components)
- Assessment will be carried out by certified assessors through empanelled assessment partners. Based on the results of the assessment; ASCI will certify the learners/candidates

Testing Environment

Assessments are conducted on laptops, Mobiles and android tablets via both offline and online mode depending on the internet connectivity at the assessment location.

In remote locations/villages, assessments get delivered through tablets without the requirement of the Internet.

- Multilingual assessments (ASCI is conducting the assessments in 13 + languages pan India)
- Rubric driven assessments in Practical/Viva sections and responses recorded accordingly
- All responses, data, records and feedback stored digitally on the cloud
- Advanced auto-proctoring features – photographs, time-stamp, geographic-tagging, toggle- screen/copy-paste disabled, etc.
- Android-based monitoring system
- End to end process from allocation of a batch to final result upload, there is no manual intervention

- Assessment will normally be fixed for a day after the end date of the training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- The room where assessment is conducted will be set with proper seating arrangements with enough space to curb copying or other unethical activities
- Question bank of theory and practice will be prepared by ASCI /assessment agency and approved ASCI. Only from approved Question Bank assessment agency will prepare the question paper. Theory testing will include multiple-choice questions, pictorial questions, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on the same day. In case of a greater number of candidates, the number of assessors and venue facilitation be increased and facilitated

Assessment			
Assessment Type	Formative or Summative	Strategies	Examples
Theory	Summative	MCQ/Written exam	Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions
Practical	Summative	Structured tasks/Demonstration	Practical application /Demonstration /Application tasks
Viva	Summative	Questioning and Probing	Mock interviews on the usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling the job situation

The question paper pre-loaded in the computer /Tablet and it will be in the language as requested by the training partner.

Assessment Quality Assurance framework

Assessment Framework and Design:

Based on the Assessment Criteria, SSC in association with AAs will define the test structure for the given roles to cover the required skills and competencies. ASCI offer a bouquet of tools for multi-dimensional evaluation of candidates covering language, cognitive skills, behavioural traits and domain knowledge.

Theoretical Knowledge - Item constructs and types are determined by a theoretical understanding of the testing objectives and published research about the item types and constructs that have shown statistical validity towards measuring the construct. Test item types that have been reported to be coachable are not included. Based on these, items are developed by domain experts. They are provided with comprehensive guidelines of the testing objectives of each question and other quality measures.

Type – Questions based on Knowledge Required, Case-based practical scenario questions and automated simulation-based questions.

Practical Skills - The practical assessments are developed taking into consideration two aspects: what practical tasks is the candidate expected to perform on the job and what aspects of the job cannot be judged through theoretical assessments. The candidates shall be asked to perform either an entire task or a set of subtasks depending on the nature of the job role

Type – Standardized rubrics for evaluation against a set of tasks in a demo/practical task

Viva Voce - Those practical tasks which cannot be performed due to time or resource constraints are evaluated through the viva mode. Practical tasks are backed up with Viva for thorough assessment and complete evaluation

Type – Procedural questions, dos and don'ts, subjective questions to check the understanding of practical tasks.

The assessor has to go through an orientation program organized by the Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. The assessor shall be given a NOS and PC level overview of each QP as applicable. The overall structure of assessment and objectivity of the marking scheme will be explained to them. The giving of marks will be driven by an objective framework that will maintain the standardization of the marking scheme.

Type of Evidence and Evidence Gathering Protocol:

During the assessment the evidence collected by AAs and ASCI are:

- GeoTagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidence (photos and videos) to the assessor one day before the assessment. The list is mentioned below:
 - Signed Attendance sheet
 - Assessor feedback sheet

- Candidate feedback sheet
- Assessment checklist for assessor
- Candidate Aadhar/ID card verification
- Pictures of the classroom, labs to check the availability of adequate equipment's and tool to conduct the training and assessment
- Pictures and videos of Assessment, training feedback and infrastructure.
- Apart from the Assessor, a Technical assistant is popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
- To validate their work on the day of the assessment, regular calls and video calls are done.
- On-boarding and training of assessor and proctor is done on a timely basis to ensure that the quality of the assessment should be maintained.
- Training covers the understanding of QP, NSQF level, NOS and assessment structure

Methods of Validation

- Morning Check (Pre-Assessment): Backend team of AA calls and confirms assessor/technical SPOC event status. Assessor/Technical SPOC are instructed to reach the centre on time by 9:30 AM / as decided with TC and delay should be highlighted to the Training Partner in advance.
- Video Calls: Random video calls are made to the technical SPOC/assessor so as to keep a check on assessment quality and ensure assessment is carried out in a fair and transparent manner
- Aadhar verification of candidates
- Evening Check (Post Assessment): Calls are made to the ground team to ensure the event is over by what time and the documentation is done properly or not.
- TP Calling: To keep a check on malpractices, an independent audit team calls the TP on a recorded line to take confirmation if there was any malpractice activity observed in the assessment on part of the AA/SSC team. If calls are not connected, an email is sent to TP SPOC for taking their confirmation
- Video and Picture Evidence: Backend team collects video and pictures for assessment on a real-time basis and highlights any issue such as students sitting idle/ trainer helping the candidates during the assessment.
- Surprise Visit: Time to time SSC/AA Audit team can visit the assessment location and conduct a surprise audit for the assessment carried out by the ground team.
- Geo Tagging: On the day of the assessment, each technical SPOC is required to login into our internal app which is Geotagged. Any deviation with the centre address needs to be highlighted to the assessment team on a real-time basis.

Method for assessment documentation, archiving, and Access:

- ASCI have a fully automated result generation process in association with multiple AAs
- Theory, Practical and Viva marks form the basis of the results and encrypted files generated to avoid data manipulation. All responses were captured and stored in the

System with Time-Stamps at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.

- Maker Checker concept: One person prepares the results and another audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All softcopies of documents are received from the on-ground tech team over email. The same is downloaded by our internal backend team and saved in Repository. The repository consists of scheme-wise folders. These scheme-wise folders have two job role-specific folders. These specific folders have Year wise and Month wise folders where all documents are saved in Batch specific folders. All Hard copies are filed and stored in the storeroom.

Result Review & Recheck Mechanism –

- Time-stamped assessment logs
- Answer/Endorsement sheets for each candidate
- Attendance Sheet
- Feedback Forms: Assessor feedback form, Candidate feedback form, TP feedback form
- The results for each of the candidate shall be stored and available for review (retained for 5 years/ till the conclusion of the project or scheme)

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
AGR	Agriculture
FYM	Farm Yard Manure
NOS	National Occupational Standard (s)
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
PwD	People with Disability
PPE	Personal Protective Equipment
QP	Qualifications Pack