Model Curriculum

QP Name: Vegetable Grower
(Electives: Cole Crops / Leafy Vegetables / Underground Crops (Bulb, root, Tuber) / Cucurbit Crops / Solanaceous Crops / Legume Vegetables / Okra)

QP Code: AGR/Q0405

QP Version: 1.0

NSQF Level: 4

Model Curriculum Version: 1.0

Agriculture Skill Council of India || **Unit No. 101, First Floor, Greenwoods Plaza, Block 'B', Greenwoods City, Sector 45, Gurugram -122009, Haryana.**

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Training Parameters

Sector	AGRICULTURE AND ALLIED
Sub-Sector	Agriculture Crop Production
Occupation	Vegetable Crop Cultivation
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 6111.0800
Minimum Educational Qualification and Experience	12th Grade or equivalent OR 10th Grade pass with 3-years of relevant experience in Agriculture and allied sectors OR Previous relevant Qualification of NSQF Level 3.5 with 1.5-years of relevant experience in Agriculture and allied sectors OR Previous relevant Qualification of NSQF Level 3 with 3-years of relevant experience in Agriculture and allied sectors related activities
Pre-Requisite License or Training	NA
Minimum Job Entry Age	NA
Last Reviewed On	22-10-2024
Next Review Date	22-10-2027
NSQC Approval Date	22-10-2024
QP Version	3.0
Model Curriculum Creation Date	22-10-2024
Model Curriculum Valid Up to Date	22-10-2027
Model Curriculum Version	3.0
Minimum Duration of the Course	390 Hours
Maximum Duration of the Course	570 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.

- Prepare land and planting materials for vegetable cultivation
- Plant a vegetable farm
- Perform soil nutrient management in vegetable crops
- Demonstrate how to carry out Weed control and management in vegetable crops
- Demonstrate how to carry out integrated pest and disease management in vegetable crops
- Show how to carry out Irrigation management in vegetable crops
- Discuss ways to utilize the resources optimally in an eco-friendly manner
- Discuss the basic entrepreneurial activities for a small enterprise
- Explain the health, hygiene and safety measures to be adopted at the workplace
- Apply the techniques for cultivation of cole crops
- Apply the techniques for cultivation of leafy vegetables
- Apply the techniques for cultivation of Underground (Bulb, Underground , Tuber) crops
- Apply the techniques for cultivation of cucurbit crops
- Apply the techniques for cultivation of solanaceous crops
- Apply the techniques for cultivation of Legume vegetables
- Apply the techniques for cultivation of okra

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/N0414: Prepare for vegetable cultivation NOS Version 1.0 NSQF Level 4	**15:00**	**15:00**	**00:00**	**00:00**	**30:00**
Module 1: Introduction to the horticulture sector andthe job	05:00	00:00	00:00	00:00	05:00
Module 2: Fundamentals of growing vegetables	02:00	05:00	00:00	00:00	07:00
Module 3: Preparation of land for growing vegetables	04:00	05:00	00:00	00:00	09:00
Module 4: Preparation of planting material	04:00	05:00	00:00	00:00	09:00
AGR/N0415: Carry out sowing/planting of vegetables NOS Version 1.0 NSQF Level 4	**05:00**	**25:00**	**00:00**	**00:00**	**30:00**
Module 5: Preparation for planting	02:00	10:00	00:00	00:00	12:00
Module 6: Planting a vegetable crop	03:00	15:00	00:00	00:00	18:00
AGR/N0401: Soil nutrient management in vegetable crops NOS Version 2.0 NSQF Level 4	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 7: Soil nutrient management	10:00	20:00	00:00	00:00	30:00
AGR/N0402: Weed control and management in vegetable crops NOS Version 3.0 NSQF Level 4	**05:00**	**25:00**	**00:00**	**00:00**	**30:00**
Module 8: Weed control management	05:00	25:00	00:00	00:00	30:00

AGR/N0403: Integrated pest and disease management in vegetable crops **NOS Version 2.0** **NSQF Level 4**	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 9: Integrated pest and disease management	10:00	20:00	00:00	00:00	30:00
AGR/N0404: Irrigation management in vegetable crops **NOS Version 2.0** **NSQF Level 4**	**05:00**	**25:00**	**00:00**	**00:00**	**30:00**
Module 10: Irrigation management	05:00	25:00	00:00	00:00	30:00
AGR/N9908: Undertake basic entrepreneurial activities for small enterprise **NOS Version 3.0** **NSQF Level 4**	**15:00**	**15:00**	**00:00**	**00:00**	**30:00**
Module 11: Basic entrepreneurial activities	15:00	15:00	00:00	00:00	30:00
AGR/N9903: Maintain health and safety at the workplace **NOS Version 4.0** **NSQF Level 4**	**15:00**	**15:00**	**00:00**	**00:00**	**30:00**
Module 12: Hygiene and Cleanliness	03:00	03:00	00:00	00:00	06:00
Module 13: Safety and emergency procedures	12:00	12:00	00:00	00:00	24:00
DGT/VSQ/N0102 Employability Skills **NOS Version-1.0** **NSQF Level-4**	**60:00**	**00:00**	**0:00**	**0:00**	**60:00**
Module 14: Employability Skills	60:00	00:00	0:00	0:00	60:00
Total Duration	**140:00**	**160:00**	**60:00**	**00:00**	**360:00**

Elective Modules

The table lists the modules and their duration corresponding to the Elective NOS of the QP.

Elective 1:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0416: Grow cole crops in a farm **NOS Version 1.0** **NSQF Level 4**	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 15: Preparation for a cole crop cultivation	03:00	04:00	00:00	00:00	07:00
Module 16: Planting a cole crop	02:00	02:00	00:00	00:00	04:00
Module 17: Nurturing a cole crop	02:00	06:00	00:00	00:00	08:00
Module 18: Harvesting a cole crop	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

Elective 2:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0417: Grow leafy crops in a farm **NOS Version 1.0** **NSQF Level 4**	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 19: Preparation for a leafy vegetable cultivation	03:00	04:00	00:00	00:00	07:00
Module 20: Planting a leafy vegetable	02:00	02:00	00:00	00:00	04:00
Module 21: Nurturing a leafy vegetable	02:00	06:00	00:00	00:00	08:00
Module 22: Harvesting a leafy vegetable	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

Elective 3:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0419: Grow Underground Crops (Bulb, Underground, Tuber) vegetables in a farm NOS Version 1.0 NSQF Level 4	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 23: Preparation for a Underground crop cultivation	03:00	04:00	00:00	00:00	07:00
Module 24: Planting a Underground crop	02:00	02:00	00:00	00:00	04:00
Module 25: Nurturing a Underground crop	02:00	06:00	00:00	00:00	08:00
Module 26: Harvesting a Underground crop	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

Elective 4:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0420: Grow cucurbit crops in a farm NOS Version 1.0 NSQF Level 4	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 27: Preparation for a cucurbit crop cultivation	03:00	04:00	00:00	00:00	07:00
Module 28: Planting a cucurbit crop	02:00	02:00	00:00	00:00	04:00
Module 29: Nurturing a cucurbit crop	02:00	06:00	00:00	00:00	08:00
Module 30: Harvesting a cucurbit crop	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

Elective 5:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0421: Grow solanaceous crops in a farm NOS Version 1.0 NSQF Level 4	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 31: Preparation for a solanaceous crop cultivation	03:00	04:00	00:00	00:00	07:00
Module 32: Planting a solanaceous crop	02:00	02:00	00:00	00:00	04:00
Module 33: Nurturing a solanaceous crop	02:00	06:00	00:00	00:00	08:00
Module 34: Harvesting a solanaceous crop	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0422: Grow Legume vegetables in a farm NOS Version 1.0 NSQF Level 4	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 35: Preparation for a Legume vegetable cultivation	03:00	04:00	00:00	00:00	07:00
Module 36: Planting a legume vegetable	02:00	02:00	00:00	00:00	04:00
Module 37: Nurturing a Legume vegetable	02:00	06:00	00:00	00:00	08:00
Module 38: Harvesting a Legume vegetable	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

Elective 7:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N0426: Grow okra vegetables in a farm NOS Version 1.0 NSQF Level 4	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 39: Preparation for okra cultivation	03:00	04:00	00:00	00:00	07:00
Module 40: Planting an okra crop	02:00	02:00	00:00	00:00	04:00
Module 41: Nurturing an okra crop	02:00	06:00	00:00	00:00	08:00
Module 42: Harvesting an okra crop	03:00	08:00	00:00	00:00	11:00
Total Duration	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**

Module Details

Module 1: Introduction to the horticulture sector and the job
Bridge Module, Mapped to NOS AGR/N0414 v1.0

Terminal Outcomes:

- Describe the agriculture industry and its various sub-sectors
- List the career options available for a vegetable grower.
- Discuss the key responsibilities of a vegetable grower

Duration: 05:00	Duration: 00:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Discuss the agriculture industry and the horticulture sub-sector. - Explain the career opportunities in commercial vegetable cultivation - List the key responsibilities of a vegetable grower.	
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Fundamentals of growing vegetables
Mapped to NOS AGR/N0414 v1.0

Terminal Outcomes:

- Describe the vegetable growing scenario in India
- Describe the criteria and conditions for vegetable growing

Duration: 02:00	Duration: 05:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the classification of vegetables grown in India and their common varieties. - List the various agro-climatic zones of India along with the types of vegetables grown there. - Explain the criteria for selection of vegetables and their varieties for cultivation. - Describe basics of plant anatomy, morphology, physiology - photosynthesis, respiration, water relations, transpiration.	- Categorize given set of vegetables based on the cultural and climatic requirements. - Create a chart of agro-climatic zones of India and vegetables grown there. - Draw diagrammatic representations of a plant and its processes.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Nil	

Module 3: Preparation of land for vegetable growing
Mapped to NOS AGR/N0414 v1.0

Terminal Outcomes:

- Prepare the site for growing vegetables

Duration: *04:00*	Duration: *05:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the site conditions suitable for vegetable growing. - Explain the climate, soil-type, fertility and depth suited for growing various vegetables. - State the primary and secondary sources of water. - Explain the importance of quality of water required for vegetable growing. - Explain how topography of the landscape affects water flow, rainfall pattern, irrigation and drainage. - Evaluate the risks associated with vegetable growing and the accompanying precautions.	- Analyze soil sample to determine its suitability for vegetable growing. - Evaluate the given vegetable(s) and their variety to check their suitability to the local biotic and abiotic conditions. - Prepare the site to make it suitable for vegetable growing.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Soil samples	

Module 4: Preparation of the planting material
Mapped to NOS AGR/N0414 v1.0

Terminal Outcomes:

- Prepare planting materials for growing vegetables

Duration: *04:00*	Duration: *05:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Classify different planting materials such as seeds, seedling, bulbs, tubers, Underground stock, etc. as per the type of vegetable and agro- climatic conditions. - Describe how pests, diseases and abiotic stress affect resistance and vulnerability of planting material. - Distinguish between transplanting and direct sowing methods. - Describe the criteria for selecting healthy planting material. - Describe methods of treatment of planting material. - Explain the procedure for grafting, budding and inarching of planting materials - Describe appropriate storage methodology for the planting material.	- Segregate healthy and unhealthy planting material from a given sample. - Apply pesticides and fungicide as per the prevalent pests and diseases. - Demonstrate grafting, budding and inarching of planting materials. - Demonstrate the steps of storing the planting material in a safe and hygienic manner.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Vegetable seeds and seedlings, planting material, pesticide and fungicide, grafting and budding knives, storage bags for seedlings.	

Module 5: Preparation for planting
Mapped to NOS AGR/N0415 v1.0

Terminal Outcomes:

- Discuss how to plan for planting a vegetable crop
- Prepare the beds for vegetable planting

Duration: *02:00*	Duration: *10:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe various types of vegetable farms, their land characteristics and planning considerations. - Explain the basic layout for farms. - Describe the various factors (tilth, soil structure, depth of preparation, seasonality, timing of cultivation, etc.) that affect the establishment of plants. - Describe the methods of soil preparation and improvement. - Describe the tools and techniques used for land preparation. - Determine the types of beds prepared as per vegetable crop and external conditions.	- Design a layout of a farm. - Prepare a sample crop calendar for a specific crop as per given climatic conditions. - Mark the positions of plants and farm features on field from the plan. - Demonstrate primary cultivation methods such as ploughing, harrowing, digging, etc. - Demonstrate secondary cultivation methods such as hoeing, raking, mulching, etc. - Demonstrate the preparation of seedbeds for the planting material as per the soil type. - Study a Soil Health Card and apply its recommendations. - Apply organic or other recommended nutrients to improve the nutrient levels in the soil.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Hoe, rake, sickle, scythe, spade, weeder, mulching materials, fertilizer, organic soil nutrients, rope, tapes, ranging poles/rods, sand, pegs, Personal protective equipment used during cultivation operations e.g. Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, sun protection (sun hat, sunscreen).	

Module 6: Planting a vegetable crop
Mapped to NOS AGR/N0415 v1.0

Terminal Outcomes:

- Plant the vegetable crop as per the plan

Duration: *03:00*	**Duration**: *15:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe appropriate planting conditions required for vegetable crops. - Describe various vegetable planting systems. - Describe various planting techniques to ensure proper support to the plant such as using a planting board, using stakes, etc. - Discuss the permaculture principles for planting. - Explain the importance of planting depth and spacing to achieve the optimum planting density. - Describe the immediate aftercare required by vegetable crops post sowing/planting.	- Select the planting material from a given sample that is in an appropriate condition for planting. - Plant the seeds/planting material as per the given plan. - Demonstrate transplantation of seedlings at appropriate time, stage and with appropriate spacing. - Demonstrate aftercare for the new plantings.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Hoe, rake, sickle, scythe, spade, weeder, mulching materials, planting materials like seeds or seedlings, watering can, Personal protective equipment used during cultivation operations e.g. Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, sun protection (sun hat, sunscreen).	

Module 7: Soil nutrient management
Mapped to NOS AGR/N0401 v 2.0

Terminal Outcomes:

- Identify the macro and micronutrients in soil
- Test the soil nutrition levels
- Apply organic and chemical fertilizers

Duration: *10:00*	**Duration**: *20:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the basic macro and micro-nutrients and their role in plant growth. - Describe the importance of soil testing. - Explain the need and process of application of farmyard manure. - Describe the method of preparation of vermicompost. - Discuss the recommended dosage and application time of fertilizer for different vegetable crops. - Describe various methods of fertilizer application. - Describe the land use practices that improve the soil organic matter such as crop rotations, manure application, pasture management, tillage practices, mulching etc.	- Demonstrate the method of soil sampling. - Calculate the quantity of fertilizers required for a given crop with inputs from the Soil Health Card. - Prepare a sample integrated nutrient management system for a vegetable crop i.e. efficient utilization of chemical fertilizers, use of bio-fertilizers and addition of organic material. - Demonstrate the application of organic and inorganic fertilizer in correct dosage. - Demonstrate land use practices that improve the soil organic matter such as tillage practices, mulching, etc. - Demonstrate measures to minimize losses of soil, nutrients, and agrochemicals through erosion, runoff and leaching. - Prepare a sample record of the soil health and plant nutrition activities undertaken.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Organic and inorganic fertilizers; rake, hoe and spray, micronutrients, agrochemicals;	

Module 8: Weed control and management
Mapped to NOS AGR/N0402 v3.0

Terminal Outcomes:

- Identify weeds and maintain their records
- Discuss how to manage weeds at various stages of plant cycle

Duration: 05:00	Duration: 25:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe various types of weeds (broadleaf, grass weed etc) and the need for maintaining the record of weeds. - Describe different weed control methods, their advantages and disadvantages. - Describe the critical stages of weed control. - Describe procedures involved in soil solarization and pasteurization.	- Prepare a weed herbarium for keeping records of the weed - Demonstrate the process of controlling weeds during ploughing. - Demonstrate the use of bio and chemical herbicides for weed control. - Demonstrate the use of new and innovative methods of soil solarization and pasteurization. - Demonstrate the use of mechanized weed control equipment.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Weedicides, Pesticides, fungicides, weeding machine, sickle, mulching materials.	

Module 9: Integrated pest and disease management
Mapped to NOS AGR/N0403 v2.0

Terminal Outcomes:

- Identify the common vegetable pests, diseases and their control methods
- Apply organic and chemical pesticides for the treatment of pests and diseases

Duration: *10:00*	**Duration**: *20:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the major vegetable crop diseases such as leaf spot, purple blotch, bacterial wilt, common scab, late blight etc. and how to identify them. - Describe the different modes of transmissions of disease such as implements, vectors, water, rain, wind. - Describe the types of pests (cutworm, nematode, leaf miner fly, potato tuber moth, aphid) found in vegetable crops. - Identify stages of crop and disease and pest incidence. - Discuss how to adopt the natural enemies of the pest such as lady bird, ground beetles, hoverfly etc. for pest control. - Describe the use of resistant varieties and crop rotation for infestation prevention. - Describe various types of biological, mechanical and chemical control along with their advantages and disadvantages.	- Identify symptoms of disease and extent of damage on infested plant samples. - Demonstrate the cultural practices adopted for the prevention of pest and diseases. - Prune the plants affected by diseases. - Demonstrate the use of various types of traps (mechanical and manual). - Demonstrate the use of various types of biological, mechanical and chemical control measures. - Demonstrate the safe use of various sprays for pest and disease control.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Pesticides, traps, sprayer, masks, gloves.	

Module 10: Irrigation management
Mapped to NOS AGR/N0404 v 3.0

Terminal Outcomes:

- Schedule irrigation for the vegetable crop
- Irrigate the vegetable crop

Duration: *05:00*	Duration: *25:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the importance of water testing - Describe characteristics of good irrigation system. - Explain different methods of irrigation. - Explain the frequency of irrigation required at various stages of plant growth. - Explain the ill-effects of excess moisture/water content. - Describe importance of spread of water in the Underground zone. - Describe various types of micro irrigation equipment (misters, drippers, sprinklers, foggers, etc). - Describe the various moisture measurement equipment. - Discuss the purpose, usage and advantages of irrigation practices for specific crops. - Explain methods that can be adopted for conserving water.	- Calculate the number of days of irrigation required for the given vegetable crop based on the crop stage. - Prepare sample irrigation schedules as per water requirements of the plant and its holding capacity. - Demonstrate preparation of irrigation channels. - Demonstrate working of the micro irrigation systems such as drip irrigation, etc. - Demonstrate the use of moisture measurement tools. - Demonstrate water drainage techniques to be adopted in the field.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Micro irrigation system, irrigation equipment, hose, bucket.	

Module 11: Basic entrepreneurial activities
Mapped to NOS AGR/N9908 v 3.0

Terminal Outcomes:

- Explain how to handle accounts and marketing activities
- Discuss how to gather information relevant to sales and marketing

Duration: *15:00*	Duration: *15:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe how to do basic accounting practices such as calculating expenses incurred, total cost of production etc. • Explain how to determine market value of the produce. • Explain how to determine the demand and supply of produce in the market. • Describe how to identify target customers and assess their needs such as amount required, purpose, quality, expectations, etc. • Explain relevant regulations related to marketing and sale of the produce. • List various trading channels of produce and their margin of profit. • Discuss various subsidies/ funds offered by the Government, authorized state units and other financial institutions involved with the promotion and sale of produce. • Describe strategies for choosing and exploiting marketing channels related to the produce such as retailers, vendors, whole-sellers (mandi), e-trading platforms, related companies, marketing associations, cold storage owners, exporters, etc.	• Prepare a sample market survey report related to the supply and demand of the price, prevailing prices in different markets, etc. • Calculate the cost of production, transportation and marketing of the sample produce. • Prepare the pricing scheme for the produce for different type of buyers. • Collect information related to various subsidies/funds offered by the government, authorized state units and other financial institutions involved with the promotion of the produce. • Demonstrate the method of recording sale and purchase of items in the given format. • Demonstrate the method of recording quantity, quality, date of manufacture and batch number of the sample produce.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Nil	

Module 12: Hygiene and cleanliness
Mapped to NOS AGR/N9903 v4.0

Terminal Outcomes:

- 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**
• 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.	• 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 steps to follow to put on and take off a mask safely. • Show how to sanitize and disinfect one's work area regularly. • Demonstrate adherence to the workplace sanitization norms. • Show how to ensure 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 13: Safety and emergency procedures
Mapped to NOS AGR/N9903 v3.0

Terminal Outcomes:

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

Duration: *12:00*	**Duration**: *12:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List the PPE required at the workplace. - Describe the common reported hazards at the workplace. - Describe the hazards caused due to chemicals/pesticides/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 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.	- Check various areas of the workplace for leakages, water logging, pests, fire, etc. - Demonstrate how to safely use the PPE and implements as applicable to the workplace. - Display the correct way of donning, doffing and discarding PPE such as face masks, hand gloves, face shields, PPE suits, etc. - Sanitize the tools, equipment and machinery properly. - Demonstrate safe disposal of waste. - Demonstrate procedures for dealing with accidents, fires and emergencies. - Demonstrate 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. - Prepare a list of relevant hotline/ emergency numbers
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 14: Employability Skills (60 hours)
Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 60:00
Key Learning Outcomes

Introduction to Employability Skills Duration: 1.5 Hours

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1.5 Hours

3. 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
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 2.5 Hours

5. Discuss importance of relevant 21st century skills.
6. Exhibit 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.
7. Describe the benefits of continuous learning.

Basic English Skills Duration: 10 Hours

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

Career Development & Goal Setting Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration:5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.

20. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 10 Hours
21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours
26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 5 Hours
30. Describe the significance of analysing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 8 Hours
33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Module 15: Preparation for cole crop cultivation
Mapped to NOS AGR/N0416 v1.0

Terminal Outcomes:

- Discuss how to select appropriate site for cole crop farming
- Prepare the land for cole crop farming

Duration: *03:00*	Duration: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List common cole crops grown in commercial farming. - List the agro-climatic conditions required for cole crop farming. - Describe the criteria for selecting the land for cole crop farming. - Describe the land preparation specifications for commercial cole crop farming. - Identify commercially viable cole crop type and variety suitable to the region.	- Evaluate the suitability of site for growing cole crop. - Demonstrate land preparation practices such as fine tilth and application of lime. - Demonstrate preparation of soil for cole crop growing. - Select appropriate planting material for the cole crop. - Demonstrate preparation of raised bed or ridges to prevent waterlogging.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land-leveler, digger, spade, watering equipment, sample soil lab reports.	

Module 16: Planting a cole crop
Mapped to NOS AGR/N0416 v1.0

Terminal Outcomes:

- Plant the seedlings for cole crops

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for cole crop planting. - Describe the recommended planting density in a cole crop farm.	- Demonstrate appropriate seed germinating and transplantation method for the cole crop under polytunnel or nursery. - Demonstrate sowing of the seedlings, ensuring optimum planting density.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Cole crop seedlings; seedling tray; trowel; rake; polybags; hand cutter; long cutter; watering can; sprinkler system; drip irrigation system; hand gloves; masks; pair of boots; apron.	

Module 17: Nurturing a cole crop
Mapped to NOS AGR/N0416 v1.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Explains ways to prevent and control pests and diseases

Duration: 02:00	Duration: 02:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the benefits of crop rotation and types of crop to be rotated with cole crop. - Describe irrigation best practices for cole crop plants. - Describe the requirement, preparation and application of manure and fertilizers for cole crop. - Explain the indicators of disease and infestation to the cole crop like damping off, black leg and leaf spot. - Describe various methods to protect cole crop plants from pests and diseases.	- Prepare sample irrigation schedule for the cole crops. - Demonstrate the methods of irrigation of cole crops. - Demonstrate the preparation and application of correct mixture of manure. and fertilizer for the particular cole crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

Module 18: Harvesting and Post-harvest management in a cole crop
Mapped to NOS AGR/N0416 v1.0

Terminal Outcomes:

- Harvest the cole crop ensuring best practices
- Carry out post-harvest activities
- Manage waste effectively

Duration: *03:00*	Duration: *08:00*
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
- Describe the cole crop harvesting schedule and process. - List different markets available for cole crops in the region. - Identify market requirements for cole crops in terms of stage of harvest, stem length, curd size, quality and quantity of produce, type of packaging, etc. - Describe cole crop sorting and grading criteria. - List the considerations taken while packing cole crops so that they remain fresh and damage free for a long time. - Describe cole crop storage and transportation requirements to prevent damage and spoilage. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Select appropriate harvesting methods such as hand-picked or machine. - Demonstrate harvesting of the cole crops as per the market requirement. - Demonstrate use of weighing machines accurately to weigh the harvested produce. - Sort and grade the cole crop based on quality, colour and size. - Demonstrate the method of packing and storing of the cole crop. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

Module 19: Preparation for leafy vegetable cultivation
Mapped to NOS AGR/N0417 v1.0

Terminal Outcomes:

- Discuss how to select appropriate site for leafy crop farming
- Prepare the land for leafy crop farming

Duration: 03:00	Duration: 04:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List common leafy crops grown in commercial farming. - List the agro-climatic conditions required for leafy crop farming. - State the criteria for selecting the land for leafy crop farming. - Describe the land preparation specifications for commercial leafy vegetable farming. - Identify commercially viable leafy crop type and variety suitable to the region. - Describe the criteria for healthy seed. - Explain the importance of procuring healthy seeds from authorized sources. - Describe the seed treatment with insecticides (chemical as well as biological) as per the dosage. - Explain the need of raised beds and ridges for leafy crops.	- Evaluate the suitability of the site for growing leafy crop. - Demonstrate land preparation activities for leafy vegetable farming. - Demonstrate preparation of soil for leafy vegetable farming. - Demonstrate the treatment of the seeds. - Demonstrate preparation of raised bed and ridges using soil and manure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land leveler, digger, spade, watering equipment, sample soil lab reports.	

Module 20: Planting a leafy vegetable
Mapped to NOS AGR/N0417 v1.0

Terminal Outcomes:

- Plant the seedlings for leafy vegetable

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for leafy crop planting. - Describe seed rate of the leafy vegetables for a given unit of the land. - Describe the spacing and optimum planting density recommended for a leafy crop. - Describe the benefits and process of intercropping and crop rotation of leafy crops with suitable plants. - Describe the advantages and disadvantages of various planting methods such as raising seedling in beds and transplanting, broadcasting of seeds directly.	- Demonstrate broadcasting of the seeds ensuring optimum planting density. - Demonstrate appropriate seed germination and transplantation methods for the leafy crop.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Leafy vegetable seeds/seedlings; seedling tray; trowel; rake; polybags; hand cutter; long cutter; watering can; sprinkler system, drip irrigation system; hand gloves; masks; pair of boots; apron.	

Module 21: Nurturing a leafy vegetable
Mapped to NOS AGR/N0417 v1.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Describe how to prevent and control pests and diseases

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe irrigation best practices for leafy vegetables. - Describe requirement, preparation and application of manure and fertilizers for leafy crop. - Describe the indicators of disease and infestation to the leafy crop like damping off, black leg and leaf spot. - Describe various methods to protect leafy crop plants from pests and diseases.	- Demonstrate the methods of irrigation for the leafy vegetables. - Demonstrate the preparation and application of the correct mixture of manure and fertilizer for the particular leafy crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

Module 22: Harvesting a leafy vegetable
Mapped to NOS AGR/N0417 v1.0

Terminal Outcomes:

- Harvest the leafy crop
- Carry out post-harvest activities
- Manage waste effectively

Duration: *03:00*	**Duration**: *08:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe harvesting schedule and process of the leafy crop. - List different markets available for leafy vegetables in the region. - Describe crop maturity indicators for leafy vegetables. - Describe the sorting and grading criteria for leafy vegetables. - Describe packing methods, processes and materials used for the harvested vegetables. - Describe safe storage, loading, unloading and transportation methods of the marketable produce. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Demonstrate harvesting of the leafy crops, in line with the market requirement. - Demonstrate use of weighing machines accurately to weigh the harvested produce - Demonstrate sorting and grading of the harvested produce based on quality, colour and size. - Demonstrate packing and storing practices of the marketable produce. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

Terminal Outcomes:

- Discuss how to select appropriate site for Underground crop farming
- Prepare the land for Underground crop farming

Duration: *03:00*	Duration: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List common Underground crops grown forcommercial farming. - List the agro-climatic conditions required for Underground crop farming. - Explain the criteria for selecting the land for Underground crop farming. - Describe the land preparation specifications for commercial Underground cropfarming. - Identify commercially viable Underground crop typeand variety suitable to the region.	- Evaluate the suitability of the site for the Underground crop farming. - Demonstrate land preparation activities for Underground crop farming - Demonstrate preparation of soil for Underground crop growing. - Select appropriate planting material such as seeds, seedling transplant, etc. for the Underground crop. - Demonstrate preparation of raised bed and ridges to prevent waterlogging.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land leveller, digger, spade, watering equipment, sample soil lab reports.	

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Module 24: Planting a Underground crop
Mapped to NOS AGR/N0419 v2.0

Terminal Outcomes:

- Plant the seedlings for Underground crops

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for Underground crop planting. - Describe the optimum spacing and planting density recommended for a Underground crop.	- Demonstrate planting of the Underground cropensuring optimum planting density. - Demonstrate transplantation of seedlings
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Underground crop seedlings; seedling tray; trowel; rake; polybags; hand cutter; long cutter; watering can;sprinkler system; drip irrigation system; hand gloves; masks; pair of boots; apron.	

Module 25: Nurturing a Underground crop
Mapped to NOS AGR/N0419 v2.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Explain ways to prevent and control pests and diseases

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe irrigation best practices for Underground crop plants. - Describe benefits of crop rotation and types of crop to be rotated with Underground crop. - Describe requirement, preparation and application of manure and fertilizers for Underground crop. - Describe the indicators of disease and infestation to the Underground crop like dampingoff, black leg and leaf spot. - Describe various methods to protect Underground crop plants from pests and diseases.	- Prepare sample irrigation schedule for Underground crops. - Demonstrate different methods of irrigation for Underground crops - Demonstrate the preparation and application of correct mixture of manure and fertilizer for the particular Underground crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

Module 26: Harvesting a Underground crop
Mapped to NOS AGR/N0419 v1.0

Terminal Outcomes:

- Harvest the Underground crop while ensuring best practices

Duration: *03:00*	**Duration**: *08:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the Underground crop harvesting scheduleand process. - List different markets available for Underground crops in the region. - Explain market requirements for Underground crops. - Describe Underground crop sorting and gradingcriteria. - Describe considerations while packing Underground crops so that they remain fresh and damage free for a long time. - Describe Underground crop storage and transportation requirements to preventdamage and spoilage. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Demonstrate harvesting of the Underground cropsas per the market requirement. - Demonstrate use of weighing machines accurately to weigh harvested produce. - Demonstrate sorting and grading of the harvested produce based on quality, colour and size. - Demonstrate packing and storing of the marketable produce. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

Module 27: Preparation for a cucurbit crop cultivation
Mapped to NOS AGR/N0420 v1.0

Terminal Outcomes:

- Discuss how to select appropriate site for cucurbit crop farming
- Prepare the land for cucurbit crop farming

Duration: 03:00	Duration: 04:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
- List common cucurbit crops grown in commercial farming. - List the agro-climatic conditions required for cucurbit crop farming. - State the criteria for selecting the land for cucurbit crop farming. - Describe the land preparation specifications for commercial cucurbit crop farming. - Identify commercially viable cucurbit crop type and variety suitable to the region.	- Evaluate the suitability of the site for growing cucurbit crop. - Demonstrate land preparation practices for cucurbit crop farming. - Demonstrate preparation of soil for growing of cucurbit crops. - Select appropriate planting material for the cucurbit crop. - Demonstrate preparation of the seedbed.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land leveler, digger, spade, watering equipment, sample soil lab reports.	

Module 28: Planting a cucurbit crop
Mapped to NOS AGR/N0420 v1.0

Terminal Outcomes:

- Plant the seedlings for cucurbit crops

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for cucurbit crop planting. - Describe the optimum spacing and planting density recommended for a cucurbit crop.	- Demonstrate the methods of treatment of seeds - Demonstrate planting of the cucurbit crop ensuring optimum planting density.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Cucurbit crop seedlings, seedling tray, trowel, rake, polybags, hand cutter, long cutter, watering can, sprinkler system, drip irrigation system, hand gloves, masks, pair of boots, apron.	

Module 29: Nurturing a cucurbit crop
Mapped to NOS AGR/N0420 v1.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Discuss how to prevent and control pests and diseases

Duration: 02:00	Duration: 02:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe irrigation best practices for cucurbit crop plants. - Describe requirement, preparation and application of manure and fertilizers for cucurbit crop. - Describe the indicators of disease and infestation to the cucurbit crop like damping off, black leg and leaf spot. - Describe various methods to protect cucurbit crop plants from pests and diseases.	- Prepare sample irrigation schedule for the cucurbit crops. - Demonstrate suitable methods of irrigation for cucurbit crops. - Demonstrate the preparation and application of the correct mixture of manure and fertilizer for the particular cucurbit crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

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Module 30: Harvesting a cucurbit crop
Mapped to NOS AGR/N0420 v1.0

Terminal Outcomes:

- Harvest the cucurbit crop
- Carry out post-harvest activities
- Manage waste effectively

Duration: 03:00	Duration: 08:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the harvesting schedule and process for the cucurbit crop. - List different markets available for cucurbit crops in the region. - Describe the crop maturity indices for the cucurbit crops. - Describe cucurbit crop sorting and grading criteria. - List the considerations taken while packing cucurbit crops so that they remain fresh and damage free for a long time. - Describe cucurbit crop storage and transportation requirements to prevent damage and spoilage. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Demonstrate harvesting of the cucurbit crops as per the market requirement. - Demonstrate use of weighing machines accurately to weigh harvested produce. - Demonstrate sorting and grading of the harvested produce based on quality, colour and size. - Demonstrate packing and storing practices of the marketable produce. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

Module 31: Preparation for solanaceous crop cultivation
Mapped to NOS AGR/N0421 v1.0

Terminal Outcomes:

- Discuss how to select appropriate site for solanaceous crop farming
- Prepare the land for solanaceous crop farming

Duration: *03:00*	**Duration**: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List common solanaceous crops grown in commercial farming. - List the agro-climatic conditions required for solanaceous crop farming. - State the criteria for selecting the land for solanaceous crop farming. - Describe the land preparation activities recommended for commercial solanaceous crop farming. - Identify commercially viable solanaceous crop type and variety suitable to the region.	- Evaluate the suitability of the site for solanaceous crop farming. - Demonstrate land preparation practices required for solanaceous crop farming - Demonstrate preparation of soil for solanaceous crop growing. - Select appropriate planting material such as seeds, seedling transplant, etc. for the solanaceous crop. - Demonstrate nursery and tray method for growing the seedlings. - Demonstrate preparation of ridges and furrows.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land leveller, digger, spade, watering equipment, sample soil lab reports.	

Module 32: Planting a solanaceous crop
Mapped to NOS AGR/N0421 v1.0

Terminal Outcomes:

- Plant the seedlings for solanaceous crops

Duration: 02:00	Duration: 02:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for solanaceous crop planting. - Describe the optimum spacing and planting density recommended for a solanaceous crop.	- Demonstrate appropriate seeding method for solanaceous crop. - Demonstrate transplanting of seedlings ensuring optimum planting density.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Solanaceous crop seedlings, seedling tray, trowel, rake, polybags, hand cutter, long cutter, watering can, sprinkler system, drip irrigation system, hand gloves, masks, pair of boots, apron.	

Module 33: Nurturing a solanaceous crop
Mapped to NOS AGR/N0421 v1.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Discuss how to prevent and control pests and diseases

Duration: *02:00*	**Duration**: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe irrigation best practices for solanaceous crop plants. - Describe requirement, preparation and application of manure and fertilizers for solanaceous crop. - Describe the indicators of disease and infestation to the solanaceous crop like damping off, leaf spot, etc. - Describe various methods to protect solanaceous crop plants from pests and diseases.	- Demonstrate the method of irrigation for the solanaceous crops. - Demonstrate the preparation and application of the correct mixture of manure and fertilizer for the particular solanaceous crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

Module 34: Harvesting a solanaceous crop
Mapped to NOS AGR/N0421 v1.0

Terminal Outcomes:

- Harvest the solanaceous crop
- Carry out post-harvest activities
- Manage waste effectively

Duration: *03:00*	**Duration**: *08:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the solanaceous crop harvesting schedule and process. - List different markets available for solanaceous crops in the region. - Describe the harvesting indices for the solanaceous crop. - Describe solanaceous crop sorting and grading criteria. - List the considerations taken while packing solanaceous crops so that they remain fresh and damage free for a long time. - Describe solanaceous crop storage and transportation requirements to prevent damage and spoilage. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Demonstrate harvesting of the solanaceous crops as per the market requirement. - Demonstrate use of weighing machines accurately to weigh harvested produce - Demonstrate sorting and grading of the harvested produce based on quality, colour and size. - Demonstrate packing and storing practices of the marketable produce. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

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Module 35: Preparation for Legume vegetable cultivation
Mapped to NOS AGR/N0422 v2.0

Terminal Outcomes:

- Discuss how to select appropriate site for Legume crop farming
- Prepare the land for Legume crop farming

Duration: 03:00	Duration: 04:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List common Legume crops grown incommercial farming. - List the agro-climatic conditions required for Legume crop farming. - State the criteria for selecting the land for Legume crop farming. - Describe the land preparation specifications for commercial Legume cropfarming. - Identify commercially viable Legume crop typeand variety suitable to the region.	- Evaluate the suitability of the site for Legumecrop farming. - Demonstrate land preparation activities required for Legume crop farming. - Demonstrate preparation of soil for Legumecrop growing. - Select appropriate planting material such as seeds, seedling transplant, etc. for the Legume crop. - Demonstrate preparation of the seedbed.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land-leveler, digger, spade, watering equipment, sample soil lab reports.	

Module 36: Planting a Legume vegetable
Mapped to NOS AGR/N0422 v2.0

Terminal Outcomes:

- Plant the seedlings for Legume crops

Duration: *02:00*	**Duration**: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for Legume crop planting. - Describe the optimum spacing and planting density recommended for a Legume crop. - List the crops suitable for inter-cropping with Legume crops.	Demonstrate planting the Legume crop using appropriate method such as raising seedling in beds and transplanting, planting Legumes directly and broadcasting of seeds directly
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Legume crop seedlings, seedling tray, trowel, rake, polybags, hand cutter, long cutter, watering can,sprinkler system, drip irrigation system, hand gloves, masks, pair of boots, apron.	

Module 37: Nurturing a Legume vegetable
Mapped to NOS AGR/N0422 v2.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Apply techniques to prevent and control pests and diseases

Duration: *02:00*	**Duration**: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe irrigation best practices for Legumecrop plants. - Describe requirement, preparation and application of manure and fertilizers for Legume crop. - Describe the indicators of disease and infestation to the Legume crop like dampingoff, black leg and leaf spot. - Describe various methods to protect Legumecrop plants from pests and diseases.	- Demonstrate suitable irrigation methods for Legume crop. - Demonstrate the preparation and application of correct mixture of manure and fertilizer for the particular Legume crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

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Module 38: Harvesting a Legume vegetable
Mapped to NOS AGR/N0422 v2.0

Terminal Outcomes:

- Harvest the Legume crop
- Carry out post-harvest activities
- Manage waste effectively

Duration: *03:00*	**Duration**: *08:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the Legume crop harvesting scheduleand process. - List different markets available for Legumecrops in the region. - Describe the maturity indices for the Legumecrops. - Describe Legume crop sorting and gradingcriteria. - List the considerations to be taken while packing Legume crops so that they remain fresh and damage free for a long time. - Describe Legume crop storage and transportation requirements to prevent damage and spoilage. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Demonstrate harvesting of the Legume crops asper the market requirement. - Demonstrate use of weighing machines accurately to weigh harvested produce - Demonstrate sorting and grading of the harvested produce based on quality, colour and size. - Demonstrate packing and storing practices of the marketable produce. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

Module 39: Preparation for okra cultivation
Mapped to NOS AGR/N0426 v1.0

Terminal Outcomes:

- Discuss how to select appropriate site for okra farming
- Prepare the land for okra farming

Duration: *03:00*	Duration: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List common okra crops grown in commercial farming. - List the agro-climatic conditions required for okra crop farming. - State the criteria for selecting the land for okra crop farming. - Describe the land preparation specifications for commercial okra crop farming. - Identify commercially viable okra variety suitable to the region.	- Evaluate the suitability of the site for okra farming. - Demonstrate preparation of soil for okra growing. - Demonstrate land preparation practices recommended for okra farming - Demonstrate the method of seed treatment. - Demonstrate preparation of raised bed or ridges to prevent waterlogging.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Land leveller, digger, spade, watering equipment, sample soil lab reports.	

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Module 40: Planting an okra crop
Mapped to NOS AGR/N0426 v1.0

Terminal Outcomes:

- Plant the seedlings for okra

Duration: 02:00	Duration: 02:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the appropriate season and conditions for okra crop planting. - Describe the optimum spacing and planting density recommended for the okra crop.	Demonstrate sowing of the okra seeds using appropriate method
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Okra crop seedlings, seedling tray, trowel, rake, polybags, hand cutter, long cutter, watering can, sprinkler system, drip irrigation system, hand gloves, masks, pair of boots, apron.	

Module 41: Nurturing an okra crop
Mapped to NOS AGR/N0426 v1.0

Terminal Outcomes:

- Irrigate the crop
- Manage weeds
- Explain how to prevent and control pests and diseases

Duration: *02:00*	Duration: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe irrigation best practices for okra crop plants. - Describe requirement, preparation and application of manure and fertilizers for okra crop. - Describe the indicators of disease and infestation to the okra crop. - Describe various methods to protect okra crop plants from pests and diseases.	- Demonstrate suitable methods of irrigation for okra crop. - Demonstrate the preparation and application of the correct mixture of manure and fertilizer for the particular okra crop. - Demonstrate application of appropriate measures for prevention and treatment of infestation.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Mulching materials, sprayer, fertilizers, bio-fertilizers, weeding machine, sickle, spade, pesticides, traps, gloves, masks, boots, micro irrigation system, hose, bucket.	

Module 42: Harvesting an okra crop
Mapped to NOS AGR/N0426 v1.0

Terminal Outcomes:

- Harvest the okra crop ensuring best practices
- Carry out post-harvest activities
- Manage waste effectively

Duration: *03:00*	Duration: *08:00*
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
- Describe the okra crop harvesting schedule and process. - List different markets available for okra in the region. - Describe the maturity indices for okra crop. - Describe okra crop sorting and grading criteria. - List the considerations taken while packing okra so that they remain fresh and damage free for a long time. - Describe okra storage and transportation requirements to prevent damage and spoilage. - Describe the best practices related to optimization of resources throughout the crop cycle. - Distinguish recyclable, non-recyclable and hazardous waste at the workplace. - Describe waste management and methods of waste disposal.	- Demonstrate harvesting of okra as per the market requirement. - Demonstrate use of weighing machines accurately to weigh harvested produce - Demonstrate sorting and grading of the harvested produce based on quality, colour and size. - Demonstrate packing and storing practices of the marketable produce. - Demonstrate segregation of waste into different categories. - Demonstrate how to dispose-off the waste as per the procedure.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Sickle, knife, picking shears, storage bags, wooden or plastic bulk bins and boxes, weighing machine, sealing machine.	

ANNEXURE

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Agriculture/ Horticulture	3	Agriculture Crop Production	0		Ex-Service-Man including Ex-Paramilitary personnel: Minimum Qualification is 10+2 with an Honorable Discharge/Pension. SSC would consider a relaxation/waiver of sector specific experience on case to case basis.
Graduate		2	Agriculture Crop Production	0		For school Program minimum qualification of Trainer should be Graduate. Their Teaching experience will be considered industry experience
Graduate	Agriculture / Horticulture	1	Agriculture Crop Production	0		
Post Graduate	Agriculture / Horticulture	0.5	Agriculture Crop Production			

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Vegetable Grower" mapped to QP: "AGR/Q0405, v1.0". Minimum accepted score is 80%	Recommended that the Trainer is certified for theJob Role: "Trainer (Vet and Skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". 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	
Graduation	Agriculture/ /Horticulture/Forestry/Botany/olericulture and related streams)	4	Horticulture /Olericulture Crop Production	0		Practical skills and knowledge required in cultivation practices of vegetables
Post - Graduation	Agriculture/ /Horticulture/Forestry/Botany/olericulture and related streams)	2	Horticulture /Olericulture Crop Production	0		Practical skills and knowledge required in cultivation practices of vegetables
PhD	Agriculture/ /Horticulture/Forestry/Botany/olericulture and related streams)	1	Horticulture /Olericulture Crop Production	0		Practical skills and knowledge required in cultivation practices of vegetables

Assessor Certification	
Domain Certification	Platform Certification
Certified for the Job Role: "Vegetable Grower", mapped to QP: "AGR/Q0405, v1.0". Minimum accepted score is 80%	Certified for the Job Role: "Assessor (Vet and Skills)", mapped to the Qualification Pack: "MEP/Q2701, v2.0" with 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 ground through qualified and ToA certified assessors.

While it is important that an individual has adequate knowledge and skills to perform a specific task, weight age for different aspects for assessment are 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 empaneled assessment partners. Based on the results of 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 assessment location.

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

- Multilingual assessments (ASCI is conducting 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 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 training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- 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 practical 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 question, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on same day. In case of more number of candidates, 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 usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling 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, behavioral traits and domain knowledge.

Theoretical Knowledge - Item constructs and types are determined by 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 which 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 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 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, do's and don'ts, subjective questions to check understanding of practical tasks.

Assessor has to go through orientation program organized by Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. Assessor shall be given a NOS and PC level overview of each QP as applicable. 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 which will maintain standardization of marking scheme.

Type of Evidence and Evidence Gathering Protocol:

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

- Geo Tagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidences (photos and videos) to the assessor one day prior to the assessment. List is mentioned below:
  - Signed Attendance sheet
  - Assessor feedback sheet
  - Candidate feedback sheet
  - Assessment checklist for assessor
  - Candidate Aadhar/ID card verification
  - Pictures of 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, Technical assistant popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
- To validate their work on the day of assessment, regular calls and video calls are done.
- On-boarding and training of assessor and proctor is done on timely basis to ensure that 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 check on assessment quality and ensure assessment is carried out in fair and transparent manner
- Aadhar verification of candidates
- Evening Check (Post Assessment): Calls are made to the ground team to ensure event is over by what time and the documentation is done in proper manner or not.
- TP Calling: To keep check on malpractice activity, independent audit team calls to TP on recorded line to take confirmation if there was any malpractice activity observed in assessment on part of AA/SSC team. If calls are not connected, email is send to TP SPOC for taking their confirmation
- Video and Picture Evidence: Backend team collects video and pictures for assessment on real time basis and highlights any issue like, Students sitting idle/trainer allowed for helping out candidates during assessment.
- Surprise Visit: Time to time SSC/AA Audit team can visit the assessment location and do surprise audit for assessment process carried out by ground team.

- **Geo Tagging:** On day of assessment, each technical SPOC is required to login in our internal app which is Geo tagged. Any deviation with centre address needs to be highlighted to assessment team on real-time basis.

Method for assessment documentation, archiving, and Access:

- ASCI has 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 captured and stored in System with Time-Stamps at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.
- Maker Checker concept: 1 person prepares results and other audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All soft copy of documents is received from the on-ground tech team over mail. The same are downloaded by our internal backend team and saved in Repository. The repository consists of scheme wise folders. These scheme wise folders have 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 conclusion of project or scheme)

References

Glossary

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

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

Acronyms and Abbreviations

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