Model Curriculum

QP Name: Vineyard Grower

QP Code: AGR/Q0304

Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

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	Agriculture Crop Production
Occupation	Fruit Crops Cultivation
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/6111.1200
Minimum Educational Qualification and Experience	12th grade pass OR 10th grade pass with 2 years of relevant experience OR 10th grade pass and pursuing continuous schooling OR Previous relevant qualification of NSQF Level 3.0 with minimum education as 8th grade pass with 3 years of relevant experience OR Previous relevant qualification of NSQF Level 3.5 with 1.5 years of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	29/03/2023
Next Review Date	29/03/2026
NSQC Approval Date	29/03/2023
QP Version	2.0
Model Curriculum Creation Date	29/03/2023
Model Curriculum Valid Up to Date	29/03/2026
Model Curriculum Version	1.0
Minimum Duration of the Course	390 Hours
Maximum Duration of the Course	390 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 to:

- Explain the criteria of selecting the site and preparing for grape cultivation.
- Demonstrate the process of planting and performing health management of grape vines.
- Demonstrate the process of training and pruning the grape vines.
- Explain the process of training and supervising vineyard workers.
- Elucidate ways to coordinate the harvesting, storage and transportation of grapes.
- Demonstrate various practices to ensure health and safety at work.

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
Bridge Module	**05:00**	**00:00**	**0:00**	**00:00**	**05:00**
Module 1: Introduction to the role of a Vineyard Grower	05:00	00:00	0:00	00:00	05:00
AGR/N0318: Select the site and prepare for grape cultivation **NOS Version- 2.0** **NSQF Level- 4**	**20:00**	**35:00**	**0:00**	**00:00**	**55:00**
Module 2: Process of selecting the site and preparing for grape cultivation	20:00	35:00	0:00	00:00	55:00
AGR/N0319: Plant and perform health management of grape vines **NOS Version- 2.0** **NSQF Level- 4**	**30:00**	**30:00**	**0:00**	**00:00**	**60:00**
Module 3: Process of planting and performing health management of grape vines	30:00	30:00	0:00	00:00	60:00
AGR/N0320: Train and prune the grape vines	**15:00**	**15:00**	**0:00**	**00:00**	**30:00**

NOS Version- 2.0 NSQF Level- 4					
Module 4: Process of training and pruning the grape vines	15:00	15:00	0:00	00:00	30:00
AGR/N0321: Train and supervise vineyard workers **NOS Version- 2.0** **NSQF Level- 4**	**15:00**	**15:00**	**0:00**	**00:00**	**30:00**
Module 5: Process of training and supervising vineyard workers	15:00	15:00	0:00	00:00	30:00
AGR/N0322: Coordinate the harvesting, storage and transportation of grapes **NOS Version- 2.0** **NSQF Level- 4**	**30:00**	**30:00**	**0:00**	**00:00**	**60:00**
Module 6: Process of coordinating the harvesting, storage and transportation of grapes	30:00	30:00	0:00	00:00	60:00
AGR/N9903 Maintain health and safety at the workplace **NOS Version- 3.0** **NSQF Level- 4**	**05:00**	**25:00**	**0:00**	**00:00**	**30:00**
Module 7: Hygiene and cleanliness	02:00	10:00	0:00	00:00	12:00
Module 8: Safety and emergency procedures	03:00	15:00	0:00	00:00	18:00
DGT/VSQ/N0102: Employability Skills (60 Hours) **NOS Version- 1.0** **NSQF Level- 4**	**60:00**	**00:00**	**0:00**	**00:00**	**60:00**
Module 9: Employability Skills	60:00	00:00	0:00	00:00	60:00
Total Duration	**180:00**	**150:00**	**0:00**	**00:00**	**330:00**
OJT: 60 Hours					

Module Details

Module 1: Introduction to the role of a Vineyard Grower
Bridge Module

Terminal Outcomes:

- Discuss the job role of a Vineyard Grower.

Duration: 05:00	Duration: 0:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the size and scope of the agriculture industry and its sub-sectors. - Discuss the role and responsibilities of a Vineyard Grower. - Identify various employment opportunities for a Vineyard Grower.	
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of selecting the site and preparing for grape cultivation
Mapped to AGR/N0318 v2.0

Terminal Outcomes:

- Explain the criteria of selecting the appropriate site for the vineyard.
- Explain the process of preparing the land for the vineyard.
- Elucidate ways to procure the planting material.

Duration: 20:00	Duration: 35:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the criteria for selecting a site for establishing a vineyard. - State different grape varieties grown in different regions and the suitable agro-climatic conditions for their cultivation. - Explain how environmental conditions, i.e. temperature, humidity, and sunlight, affect the growth of plants. - State the types of soils and soil conditions (i.e. pH and organic matter) suitable for grape cultivation. - Explain how to prepare the layout of a vineyard. - Explain different types of planting systems and the suitable planting systems for a vineyard. - Describe the process of preparing the land for grape cultivation and the use of relevant machinery, tools and equipment. - State the recommended dimensions of pits to be created to transplant grape vines. - State the irrigation systems suitable for vineyards. - List the appropriate fencing for vineyards to protect the vines and produce from external threats. - Explain the importance of ensuring efficient drainage in vineyards. - List various inputs required for establishing a vineyard.	- Demonstrate how to prepare a layout of the field, planning appropriate spacing as per the training system to be adopted, e.g. bower system, T-trellis system, and Y-trellis system. - Show how to remove all the weeds, debris and waste materials from the field. - Describe the process of carrying out ploughing in the field to achieve a fine soil tilth. - Describe the process of performing sub-soiling as per the site conditions. - Describe the process of applying the appropriate quantity of compost/Farmyard Manure (FYM)/manure, lime and any other treatment to the soil as per the recommendations of the soil-testing laboratory. - Describe the process of carrying out levelling in the field using the field leveller. - Show how to create pits of the recommended dimensions with the appropriate spacing as per the layout, incorporating well-decomposed FYM or compost in them. - Describe the process of installing the appropriate type of fencing around the field to protect it from external threats, such as stray animals and predators. - Show how to create water channels in the field for irrigation or install an

	appropriate type of irrigation system.
• Explain the importance of procuring healthy planting material from reliable sources, such as government nurseries • the appropriate conditions required for storing the planting material.	• Show how to create drainage channels for effective drainage of excess water from the field. • Describe the process of installing the appropriate structures according to the selected training system, e.g. bower system, T-trellis, Y-trellis, to train grape vines and support the crop load.

Classroom Aids

Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements

Installed Video camera with high resolution and recording facility, Grape Lug Boxes/Bucket, Gripple Tool, Fruit Picking Shears, Soil Auger, Respiratory Masks, Grape Bins, Cultivator/Seed Drill, Soil Spader

Module 3: Process of planting and performing health management of grape vines
Mapped to ARG/N0319 v2.0

Terminal Outcomes:

- Explain the process of planting the grape vines.
- Describe the process of performing irrigation and integrated pest and disease management.
- Describe the process of performing nutrient and weed management.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe different methods of propagating grape vines. - Explain how to prepare different types of grapevine stem cuttings. - Describe the quick dip method of treating stem cuttings. - State the planting schedule for different grape varieties in different regions. - State the immediate care that should be given to grape vines after planting. - Explain the factors that influence the irrigation requirement of different grape varieties. - Elucidate different types of irrigation systems and the benefit of automating irrigation. - List the common pests and diseases that affect grape vines and grapes. - Explain the relevant preventive measures to be followed to protect the grape vines and crops from pest and disease infestation. - List the symptoms of pest and disease infestation in grape vines and grapes. - Explain how to determine the type of pest and disease infestation. - Discuss the appropriate Integrated Pest and Disease Management (IPDM) techniques to be followed to remove grapevine pests and diseases. - Explain the appropriate treatment to	- Demonstrate how to propagate grape vines through grafting, layering and using greenwood cuttings as appropriate. - Show how to treat the stem cuttings with Indole Butyric Acid (IBA) following the quick dip method. - Demonstrate how to plant the rooted cuttings in the pits at the recommended angle and fill the pits with topsoil and well-decomposed compost or FYM. - Demonstrate the process of applying mulch and recommended inorganic fertilizers in an appropriate quantity, as required. - Demonstrate the process of carrying out regular repair and maintenance of the irrigation system. - Show how to remove the pest-infested parts of grape vines to prevent the spread of pests and disease to the healthy vines. - Demonstrate the process of applying the recommended treatment as per the prescription to grape vines to remove pests and diseases. - Prepare a sample record of the use of any pesticides, insecticides and any other treatment. - Show how to prepare organic fertilizers such as farmyard manure, vermicompost, etc.

be applied to grape vines to remove pests and diseases.

- Explain the appropriate safety measures to be taken while applying pesticides.

- Describe the recommended combinations of biological, mechanical and chemical control methods for effective pest and disease prevention.

- Explain the use of different types of fertilizers.

- Explain how to determine the macro and micronutrient requirements of the grown grape varieties according to the stages of their growth.

- Discuss the recommended practices to be followed for soil conservation.

- List the common types of weeds found in vineyards.

- Describe different types of intercultural and mechanical methods for effective weed control.

- Explain the use of relevant tools and implements to remove weeds manually.

- Explain the benefit of retaining the weeds of importance during the weeding process.

- Show how to prepare the mixture of liquid fertilizers for application in the vineyard, ensuring they contain the required macro and micronutrients.

- Demonstrate the process of applying organic and inorganic fertilizers in the vineyard, using them in the recommended quantity according to the stages of growth of the grape crop.

- Prepare a sample record of fertilizers used in the vineyard.

- Show how to remove weeds manually using the appropriate tools and implements, retaining the weeds of importance during the weeding process.

- Show how to prepare the recommended herbicide/ bio-herbicide solution suitable to the crop.

- Demonstrate the process of applying the recommended herbicide/ bio-herbicide safely in the recommended dose using the appropriate equipment.

Classroom Aids
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements
Knapsack Sprayer, Vine Hedger, Buckets, Shovel, Wire Cutter Fence Hammer, Tractor

Module 4: Process of training and pruning the grape vines
Mapped to AGR/N0320 v2.0

Terminal Outcomes:

- Describe the process of training and pruning the grape vines.

Duration: 15:00	Duration: 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the importance of exposing maximum leaf area to the sunlight. - Explain how to induce maximum bud break grape vines through training. - State the appropriate measures to be followed to achieve the desired growth of grafted vines, shoots and trunks on the training system infrastructure. - Explain the regular repair and maintenance requirement of the training system infrastructure. - Explain the use of appropriate pruning tools and implements, such as pruning knife and secateurs. - State the appropriate pruning season to be followed for grape vines according to the region. - Explain the benefit of pruning grape vines to a single node. - Explain the importance of pruning grape vines according to the selected training system. - List the recommended fungicide to be applied to grape vines after pruning to protect them from fungal infection.	- Demonstrate how to train the grape vines on the training system infrastructure installed in the vineyard, ensuring no damage to the vines. - Demonstrate the process of carrying out regular repair and maintenance of the training system infrastructure. - Demonstrate the process of preparing the appropriate pruning tools and implements, such as pruning knife and secateurs. - Show how to prune the grape vines to a single node appropriately to increase the fruiting area on the vines. - Demonstrate the process of applying the recommended fungicide to grape vines in an appropriate quantity after pruning to protect them from fungal infection.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Prunning Tools - Pruners, Loppers , Folding Saws, Hand Held Scale, Installed Video camera with high resolution and recording facility	

Module 5: Process of training and supervising vineyard workers
Mapped to AGR/N0321 v2.0

Terminal Outcomes:

- Elucidate ways to train the vineyard workers.
- Explain the importance of supervising the vineyard workers.

Duration: 15:00	Duration: 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the standard training methods and practices to impart knowledge to vineyard workers. - List various activities carried out in vineyards. - Explain how to perform and train on various vineyard activities, such as land preparation, training, pruning, application of pesticides and fertilizers, etc. - Explain the use of relevant tools, implements and equipment used in vineyards. - Elucidate the use of relevant PPE and the importance of ensuring the vineyard workers understand their use and other appropriate health and safety practices. - Elucidate how to prepare a work plan and allocate tasks to vineyard workers according to their skills and roles. - Elucidate the importance of arranging necessary support and resources to help the vineyard workers perform their duties. - Explain the importance of monitoring the workers while they perform their assigned tasks to ensure work quality and completion of tasks on time. - Explain the importance of identifying and resolving any conflicts that arise among the workers. - Discuss different conflict resolution techniques. - Explain the importance of conducting	- Demonstrate how to train vineyard workers on various vineyard activities, such as land preparation, training, pruning, application of pesticides and fertilizers, etc. - Demonstrate the use of relevant tools, implements and equipment to the vineyard workers and assist them in learning their use through practice. - Prepare a sample work plan according to the tasks and the number of available vineyard workers. - Roleplay how to conduct regular meetings/ briefings with the workers to discuss their work objectives, projects, work progress, work-related issues, etc.

regular meetings/ briefings with the workers.	
• Explain the importance of arranging relevant training and upskilling of the workers for their professional development.	

Classroom Aids

Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements

Module 6: Process of coordinating the harvesting, storage and transportation of grapes
Mapped to AGR/N0322 v2.0

Terminal Outcomes:

- Describe the process of harvesting the grapes.
- Describe the process of sorting, grading and storing the harvested grapes.
- Elucidate ways to market the grapes.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the maturity indices of different grape varieties. - Explain the use of appropriate tools and implements for harvesting grapes. - State the appropriate time of the day to harvest grapes to protect them from high temperature. - Elucidate the recommended measures to be followed to maintain the quality of grape harvest during periods of dew and rainfall. - Explain the benefit of collecting the harvested grapes in clean perforated plastic crates. - Elucidate the importance and process of removing field heat from the harvested grapes. - Elucidate the importance and process of clipping the damaged, immature, diseased, shrivelled, undersized, underdeveloped and uneven-sized berries from the lots of harvested grapes. - Explain the importance of storing grapes in safe and hygienic cold storage. - Explain the necessary treatment to be applied in the storage to remove any pests. - State the appropriate temperature and humidity to be maintained in grape storage.	- Demonstrate the process of harvesting the fully ripe bunches of grapes, ensuring no damage to grapes. - Show how to identify and clip the damaged, immature, diseased, shrivelled, undersized, underdeveloped and uneven-sized berries from the lots of harvested grapes, using the appropriate tools. - Demonstrate the process of carrying out sorting and grading of grapes on the applicable parameters. - Demonstrate the process of applying the necessary treatment in the storage to remove any pests, such as rodents. - Show how to pack grapes in Corrugated Fibre Board (CFB) boxes for being transported. - Demonstrate how to process the payments using the buyer-preferred e-payment method. - Show how to calculate the benefit-cost (B:C) ratio. - Prepare sample manual and/or electronic records of sales and payments using the physical registers and/or the relevant computer application.

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Corporation
Transforming the skill landscape

• List different types of buyers of grapes. • Describe the process of negotiating with buyers. • State the appropriate packing material and mode of transport for grapes. • Explain the recommended measures to be followed to protect the harvested grapes from damage and contamination while handling and transporting them. • Explain the use of different e-payments methods. • Explain the importance of maintaining records of sales and payments.	

Classroom Aids

Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements

Shovel, Buckets, Tractor, Gripple Tool, Wire Cutter, Fruit Picking Shears, Grape Lug Boxes/Bucket, Prunning Tools - Pruners, Loppers , Folding Saws, Hand Held Scale, Grape Bins

Module 7: Hygiene and cleanliness

Mapped to NOS AGR/N9903 v3.0

Terminal Outcomes:

- Discuss how to adhere to personal hygiene practices.
- Demonstrate ways to ensure cleanliness around the workplace.

Duration: 02:00	Duration: 10:00
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 workplace sanitization norms. - Show how 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 8: 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: 03:00	Duration: 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- 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/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 implement it 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 the 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 9: Employability Skills

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 analyzing 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 10: On-the-Job Training

Mapped to Vineyard Grower

Mandatory Duration: 60:00	Recommended Duration: 00:00
Location: On-Site	

Terminal Outcomes

- Explain the criteria for selecting a site for establishing a vineyard.
- Prepare a layout of the field, planning appropriate spacing as per the training system to be adopted, e.g. bower system, T-trellis system, and Y-trellis system.
- Install the appropriate structures according to the selected training system, e.g. bower system, T-trellis, Y-trellis, to train grape vines and support the crop load.
- Propagate grape vines through grafting, layering and using greenwood cuttings as appropriate.
- Prepare organic fertilizers such as farmyard manure, vermicompost, etc.
- Train the grape vines on the training system infrastructure installed in the vineyard.
- Prune the grape vines to a single node appropriately to increase the fruiting area on the vines.
- Conduct regular meetings/ briefings with the workers to discuss their work objectives, projects, work progress, work-related issues, etc.
- Harvest the fully ripe bunches of grapes, ensuring no damage to grapes.
- Pack grapes in Corrugated Fibre Board (CFB) boxes for being transported.

Annexure

Trainer Requirements

Trainer Prerequisites					
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
10th Class	Class 10th	7	Agriculture Crop Production	0		Vineyard Grower with 7 Years' experience of working with registered Vineyard after 10th Pass
12th Class	Class 12th	4	Agriculture Crop Production	0		Ex-Service-Man including Ex-Paramilitary personnel: Minimum Qualification is 10+2 with an Honourable Discharge/Pension. SSC would consider a relaxation/waiver of sector specific experience on case-to-case basis.
Diploma	Diploma in Agriculture	3	Agriculture Crop Production	0		
Graduate	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	Graduate (Agriculture / Horticulture/ Forestry)	0.5	Agriculture Crop Production	0		

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "**Vineyard Grower**", mapped to QP: "AGR/Q0304, v2.0", 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	
Graduation	B.Sc (Agriculture/ Horticulture and related streams)	5	Horticulture crop production activities/ Viticulture and other related experience	0		Practical skills and knowledge required in Viticulture
Post-graduation	M.Sc (Horticulture and related streams)	2	Horticulture crop production activities/ Viticulture and other related experience	0		Practical skills and knowledge required in Viticulture
PhD	PhD (Horticulture and related streams)	1	Horticulture crop production activities/ Viticulture and other related experience	0		Practical skills and knowledge required in Viticulture

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "**Vineyard Grower**", mapped to QP: "AGR/Q0304, v2.0", 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. The assessment strategy consists of the following:

1. <u>Multiple Choice Questions</u>: To assess basic knowledge (Objective/Subjective)
2. <u>Viva:</u> To assess awareness on processes (Oral and/or written questioning)
3. <u>Practical:</u> 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 empaneled 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

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- o Assessment checklist for assessor
- o Candidate Aadhar/ID card verification
- o Pictures of the classroom, labs to check the availability of adequate equipment's and tool to conduct the training and assessment
- o 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

- <u>Morning Check (Pre-Assessment)</u>: 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.

- <u>Video Calls</u>: 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

- <u>Aadhar verification</u> of candidates

- <u>Evening Check (Post Assessment)</u>: Calls are made to the ground team to ensure the event is over by what time and the documentation is done properly or not.

- <u>TP Calling</u>: 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

- <u>Video and Picture Evidence</u>: 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.

- <u>Surprise Visit</u>: 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.

- <u>Geo Tagging</u>: 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
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