

Model Curriculum

Nursery Worker

SECTOR: AGRICULTURE & ALLIED
SUB-SECTOR: AGRICULTURE CROP PRODUCTION
OCCUPATION: Landscaping, Gardening and Urban Farming
REF ID: AGR/Q0807
NSQF LEVEL: 3



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

AGRICULTURE SKILL COUNCIL OF INDIA

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/Qualification Pack: **'Nursery Worker'** OP No. **'AGR/Qo807 NSQF Level 3'**

Date of Issuance: May 25th, 2017

Valid up to: March 31st, 2020

* Valid up to the next review date of the Qualification Pack



S. S. Anand
Authorised Signatory
(Agriculture Skill Council of India)

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Nursery worker

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Nursery Worker”, in the “Agriculture & Allied” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Nursery Worker		
Qualification Pack Name & Reference ID.	AGR/Q0807		
Version No.	1.0	Version Update Date	
Pre-requisites to Training	Class 5, preferably		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none"> • Carry out nursery chores • Carry out maintenance of the nursery • Maintain Health and safety at the work place. 		

This course encompasses 3 out of 3 National Occupational Standards (NOS) of “Nursery Worker” Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	Introduction Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 00:00 Corresponding NOS Code Bridge Module	<ul style="list-style-type: none"> Understand General Discipline in the class room (Do’s & Don’ts) Understand the Scope & importance of Nursery and a Nursery Worker. Know the Objectives of a good nursery Know about different types and phases of Nurseries and their layout. Understand the Role of a Nursery Worker and the progression pathway 	Laptop, white board, marker, projector
2	Carry Out Nursery Chores Theory Duration (hh:mm) 40:00 Practical Duration (hh:mm) 85:00 Corresponding NOS Code: AGR/N0820	<ul style="list-style-type: none"> Identify different types of plants and seeds. Mother plant block maintenance and identification of crop varieties Learn to differentiate a healthy planting material (seed, bulb, seedling etc.) and a non healthy planting material. Identify different types of tools and equipment used in a nursery. Select and use different tools and equipments for different nursery operations. Knowing the routine procedure of cleanliness of the nursery, plants, nursery structures and tool and equipments. Selection of high quality seeds by observation or seed testing for viability. Preparation of land/soil before sowing seeds and seedlings Preparation of different types of seedbeds Understand use of different pots, polybags, pro tray in the nursery activities Select appropriate types and size of containers to develop different types of Plant seedlings Undertake soil sterilization- sterilization structures Use growth regulators in nursery management Preparing the right growing mixture for cultivation of seedlings and seed germination Carry out timely sowing of seeds. Irrigating the nursery beds timely and 	Different types of seeds, bulbs, plant seedlings, cuttings, trowel, rake, spade, jute balls, perforated poly bags, shade net, pots, water cans, hand cutter, long cutter knapsack sprayers, baskets, seedling trays, cocopeat, ladders, wheel barrow, axe, seedling trays, hoe, broom, shears, hose pipes, sprinklers, Tags, paint, sign boards, bamboo sticks

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>appropriately.</p> <ul style="list-style-type: none"> • Identify different pests, insects and diseases. • Learn the ways to protect the seeds and seedlings after sowing from different insects, pests and diseases. • Maintaining the microclimate of the nursery by maintaining proper moisture by different means for healthy and proper growth. • Carry out routine activities like weeding, hoeing, conditioning, thinning etc. • Identifying the ready seedlings at right stage for transplant as per varying season. • Learn different types and ways of packaging and transportation of seedlings • Learn different types of propagation techniques and propagate plants using these techniques. • Carry out application of growth regulators, nutrients and insecticides as per instructions during right season. • Carry out activities like pinching, training, pruning, shaping etc while propagating and growing plants • Understand designing aspect of different structures in the nurseries like green house, poly house, shade house and assist in developing these structures. • Learn in maintaining the sunlight and other condition in the green house and shade house. • Monitor growth of plants in nurseries • Learn transplanting and shifting of big plants and trees. • Gain knowledge about drip irrigation and assist in laying out the system. 	
3	<p>Carryout maintenance of nursery.</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 35:00</p> <p>Corresponding NOS Code: AGR/N0821</p>	<ul style="list-style-type: none"> • Carry out routine nursery maintenance related activities. • Monitor watering of plants and proper drainage system to prevent logging. • Know about organic and inorganic pesticides and insecticides and timely spray to control infestation of insect, pests and diseases. • Carry out waste water treatment in an adequate manner as per instruction. • Adhere to planting schedules • Maintain inventory of number of plants, gardening tools and equipments • Undertake grading, packaging and transportation of planting materials 	<p>Shovel, spade, trowel, rake, broom, hose pipe, sprinklers, pesticides, sprayers, long cutter, shears, cutters, axe, sickle, weeder, pit for dry leaves, jute and pvc bags</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Manage various nursery waste material/ disposal through composting. 	
4	<p>Maintain Health and safety at the workplace</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code AGR/N9903</p>	<ul style="list-style-type: none"> Maintain a clean & efficient workplace Render appropriate emergency procedures Practice first aid and general safety/ recommended safe practices. Undertake basic safety checks before operation of all machinery and vehicles and report all potential hazard to the supervisor. Identification and Use of all protective clothing and safety gears like safety belt, helmet, mask, goggles etc. while executing work like mowing the lawn, pruning trees, spraying insecticides and pesticides. Following the instructions as told while using the tools and equipments. Read and understand the hazardous use and contamination mentioned on the labels of pesticides/ fumigants etc. 	Laptop, white board, marker, projector, Sanitizer, Personal protective equipment Like: safety gloves, Safety boots, hairnet First Aid Kit: Bandages, Adhesive bandages, Betadine Solution / ointment, Pain relief spray / ointment, Antiseptic liquid; Antidote, Phone directory, Search lights, fire extinguisher
	<p>Total Duration:</p> <p>Theory Duration (hh:mm) 65:00</p> <p>Practical Duration (hh:mm) 135:00</p>	<p>Unique Equipment Required: Laptop, white board, marker, projector, Audio-visual aids, Different types of seeds, bulbs, plant seedlings, cuttings, trowel, rake, spade, jute balls, perforated poly bags, shade net, pots, water cans, hand cutter, long cutter knapsack sprayers, baskets, seedling trays, cocopeat, ladders, wheel barrow, axe, seedling trays, hoe, broom, shears, hose pipes, sprinklers, Tags, paint, sign boards, bamboo sticks, Shovel, broom, hose pipe, sprinklers, pesticides, long cutter, shears, cutters, axe, sickle, weeder, pit for dry leaves, jute and pvc bags</p>	

Grand Total Course Duration: **200 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by [Agriculture Skill Council of India](#))

Trainer Prerequisites for Job role: “Nursery Worker” mapped to Qualification Pack: “AGR/Q0807, v1.0”

Sr. No.	Area	Details
1	Description	Trainer is responsible for educating the trainees – different types of plants, shrubs & trees, various nursery chores, maintenance of nursery
2	Personal Attributes	The individual should be able to demonstrate skills of designing, maintaining garden, use of various tools, communication skills, observation skills, practical oriented skills and decision making for instant problem solving. Trainer should be Subject Matter Expert.
3	Minimum Educational Qualifications	Diploma in Agriculture/Horticulture (B.Sc Horticulture Preferable)
4a	Domain Certification	Certified for Job Role: “Nursery Worker” mapped to QP: “AGR/Q0807, v1.0”. Minimum accepted score is 80%.
4b	Platform Certification	Certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted score is 80%
5	Experience	<ul style="list-style-type: none"> • Post graduate(Horticulture) with a experience Of 1 Year in nursery • Graduate(Horticulture/Agriculture) 3 + years of Experience in nursery • Diploma with 5+ Years of experience in relevant field/ nursery

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Nursery Worker
Qualification Pack	AGR/Q0807, v1.0
Sector Skill Council	Agriculture

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre(as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criteria
5	To pass the Qualification Pack, every trainee should score a minimum of 50% in aggregate
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessable outcomes	Assessment criteria for outcomes	Marks Allocation			
		Total Marks	Out Of	Theory	Skills Practical
1. AGR/N0820: Carry out nursery chores	PC1. identify plants and their varieties, the right areas to place them in the nursery depending on their properties and inspect them to assess quality		4	1	3
	PC2. identify and carry out sorting of quality seeds and ensure temporary storage of seeds in proper condition		3	1	2
	PC3. select and use nursery tools for different nursery operations		3	1	2
	PC4. maintain the cleanliness of the nursery at all times		3	1	2
	PC5. select good quality seeds		3	1	2
	PC6. select poly bags of appropriate size and specifications		3	1	2
	PC7. plant seeds in the poly bags/root trainer cups to aid in the cultivation of young plants		4	1	3
	PC8. carry out timely sowing of the seeds		4	1	3
	PC9. prepare the land and make germination beds as per specification		3	1	2
	PC10. place the seeds in the germination medium and cover with coir mat/gunny bags		3	1	2
	PC11. water the germination beds to maintain optimum moisture using hand tools and gardening tools		4	1	3
	PC12. select the best quality germinated seeds, tie and wrap them and ensure transportation without damage –		3	1	2
	PC13. count the no: of seeds that have germinated so as to assess mortality rate		3	1	2
	PC14. carry out timely weeding and ensure undesirable seedlings are removed		4	1	3
	PC15. carry out fertilizer application as per instructions received		3	1	2
	PC16. carry out safe handling, storage and disposal of fertilizers		3	1	2

	PC17. identify and control insects and rodents through application of pesticides as per instructions received		4	1	3
	PC18. provide shade to regulate sun light to growing plants		4	1	3
	PC19. carry out harvesting of plants at the right stage and transplant or pot and label them		3	1	2
	PC20. dip cut flowers into disinfectant, count them into bunches, and place them in boxes to prepare them for storage and transportation		4	1	3
	PC21. operate and maintain machineries required to cultivate, harvest and spray plants and fields		3	1	2
	PC22. propagate new plants by grafting and other measures as per the instructions received		3	1	2
	PC23. carry out inspection of plants for any growth related issues during the growth period		3	1	2
	PC24. carry out watering of plants as and when required		3	1	2
	PC25. carry out application of growth regulators as per the instructions received		4	1	3
	PC26. carry out trimming and pruning of plants and trees whenever required as per instructions received		3	1	2
	PC27. assist in the designing aspects of greenhouse		3	1	2
	PC28. monitor the drip irrigation systems in the greenhouse		4	1	3
	PC29. monitor the growth of plants (flowers, vegetables or fruits) grown in the greenhouse		3	1	2
	PC30. assist in maintaining the sunlight and other conditions in the greenhouse		3	1	2
			100	30	70
2. AGR/N0821: Carry out maintenance of nursery	PC1. monitor proper drainage in the nursery and minimize over exploitation of water in irrigation	100	10	3	7
	PC2. carry out waste water treatment in an adequate manner, as per instructions		10	3	7
	PC3. control epidemic by destroying sources of mosquito breeding		10	3	7

	PC4. carry out prescribed use of fertilizers/chemicals as per instructions		10	3	7
	PC5. record information about plants and plant growth		10	3	7
	PC6. keep a record of gardening tools and equipment and clean and care for them to keep them in good condition.		10	3	7
	PC7. provide information on care of plants when required		10	3	7
	PC8. maintain inventory, and order materials as required		10	3	7
	PC9. adhere to planting and care schedules		10	3	7
	PC10. manage various nursery waste material/ disposal and how to make use of it for composting/vermi-composting		10	3	7
			100	30	70
3. AGR/N9903 Maintain health and safety at the workplace	PC1. undertake basic safety checks before operation of all machinery and vehicles and report all potential hazards to the supervisor	100	6	2	4
	PC2. identify work for which protective clothing or equipment is required and perform those duties in accordance with workplace policy		7	2	5
	PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants, etc.		7	2	5
	PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices		7	2	5
	PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use		7	2	5
	PC6. dispose off waste safely and correctly in a designated area		6	2	4
	PC7. recognize risks to bystanders and take action to reduce risk associated with jobs in the workplace		7	2	5
	PC8. perform work in a manner which minimizes environmental damage all procedures and ensure work instructions for controlling risks are followed closely		7	2	5
	PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger		7	2	5
	PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location		7	2	5

	and directions for emergency evacuation				
	PC11. follow emergency procedures to company standard / workplace requirements		6	2	4
	PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements		7	2	5
	PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques		7	2	5
	PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate		6	2	4
	PC15. report details of first aid administered in accordance with workplace procedures.		6	2	4
			100	30	70
Total			300	90	210
Percentage Weightage:				30%	70%
Minimum Pass% to qualify (aggregate):				50%	