

# Model Curriculum

## Coffee Plantation Worker

**SECTOR: AGRICULTURE & ALLIED**

**SUB-SECTOR: AGRICULTURE CROP PRODUCTION**

**OCCUPATION: PLANTATION CROP CULTIVATION**

**REF ID: AGR/Q0501, V1.0**

**NSQF LEVEL: 2**



## 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: 'Coffee Plantation Worker' QP No. 'AGR/00501 NSQF Level 2'

Date of Issuance: March 15<sup>th</sup>, 2015

Valid up to: March 31<sup>st</sup>, 2016

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



Authorised Signatory  
(Agriculture Skill Council of India)

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# Coffee Plantation Worker

## CURRICULUM / SYLLABUS

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

<b>Program Name</b>	<b>Coffee Plantation Worker</b>		
<b>Qualification Pack Name &amp; Reference ID. ID</b>	AGR/Q0501, v1.0		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	
<b>Pre-requisites to Training</b>	No entry barrier, 5 <sup>th</sup> standard pass preferable		
<b>Training Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• <b>Prepare seed and manage the Nursery bed:</b> Preparation of Soil, soil treatment, polybags, cuttings</li> <li>• <b>Grow and manage crop:</b> Inputs requirement, Land preparation, sowing, soil testing, application of fertilizer &amp; nutrients, training, pruning</li> <li>• <b>Harvest the crop and maintain the quality:</b> Time of Harvesting, method of harvesting, post harvest practice, packing and transportation.</li> <li>• <b>Become well versed with Environment Health &amp; Safety:</b> Well versed with health and safety measures in terms of personal safety and others as well.</li> </ul>		

This course encompasses 8 out of 8 National Occupational Standards (NOS) of “Coffee Plantation Worker” Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<b>Introduction</b>  <b>Theory Duration</b> (hh:mm) 5:00  <b>Practical Duration</b> (hh:mm) 0:00  <b>Corresponding NOS Code</b>	<ul style="list-style-type: none"> <li>Understand the General Discipline in the class room (Do’s &amp; Don’ts)</li> <li>Understand the Role of a Coffee Plantation Worker</li> <li>Visit the Coffee plantation and understand the working environment</li> </ul>	White Board, Marker, Laptop, projector
2	<b>Seed Preparation in Coffee Plantation</b>  <b>Theory Duration</b> (hh:mm) 05:00  <b>Practical Duration</b> (hh:mm) 10:00  <b>Corresponding NOS Code</b> AGR/No501	<ul style="list-style-type: none"> <li>Identify, Select the healthy matured plant for fruit selection</li> <li>Selection of Fruit and Manual Pulping</li> <li>Seed treatment process and drying</li> <li>Measure the moisture level</li> <li>Safe seed storage method</li> <li>Prepare seed bed, polybags</li> <li>Understand and perform the pre planting activities</li> </ul>	White Board, Marker, Laptop, projector,
3	<b>Land preparation and Transplanting in Coffee Plantation</b>  <b>Theory Duration</b> (hh:mm) 05:00  <b>Practical Duration</b> (hh:mm) 10:00  <b>Corresponding NOS Code</b> AGR/ No502	<ul style="list-style-type: none"> <li>Plan the Layout for Coffee Plantation</li> <li>Level the land as per the requirement</li> <li>Understand the crop spacing required for Coffee Plantation</li> <li>Understand the pits measurement</li> <li>Understand the Pre-planting activities</li> <li>Perform planting activity</li> <li>Understand the soil moisture level required for the plant</li> <li>Estimate the manure requirement for the crop</li> <li>Perform weeding</li> </ul>	Marker, Laptop, projector,
4	<b>Integrated Nutrient Management (scientific word) in Coffee Plantation</b> (hh:mm) 10:00	<ul style="list-style-type: none"> <li>Understand the Nutrient requirement for the Coffee Plantation</li> <li>Understand and perform the soil sampling test</li> <li>Understand the Micro and Macro</li> </ul>	White Board, Marker, Laptop, projector,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>Practical Duration</b> (hh:mm) 16:00</p> <p><b>Corresponding NOS Code</b> AGR/No503</p>	<p>Nutrients in soil</p> <ul style="list-style-type: none"> <li>Understand the required fertilizer dosage for the nutrient enrichment in soil</li> <li>Understand the various soil microorganisms beneficial for the nutrient enrichment in soil</li> <li>Use the bio fertilizer/organic manure in the cultivation of Coffee Plantation</li> <li>Estimate the quantity of fertilizer to be applied at various stages in relation to NPK and other secondary nutrients.</li> <li>Perform the weeding management</li> <li>Maintain the record of application of fertilizers and intervals</li> </ul>	
5	<p><b>Training and Pruning Coffee Plantation</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 18:00</p> <p><b>Corresponding NOS Code</b> AGR/No504</p>	<ul style="list-style-type: none"> <li>Understand the importance of Training and Pruning of Tea Plantation</li> <li>Understand the stages of Training and Pruning</li> <li>Select and follow the right Method of Training and Pruning</li> </ul>	White Board, Marker, Laptop, projector, Training and pruning equipment,
6	<p><b>Integrated Pest and Disease Management (scientific word) in Coffee Plantation</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 15:00</p> <p><b>Corresponding NOS Code</b> AGR/No505</p>	<ul style="list-style-type: none"> <li>Understand the major pests and disease in Coffee Plantation</li> <li>Understand the Characters of different insect pests</li> <li>Understand the symptoms and precaution measures for different diseases</li> <li>Understand the suitable chemical for the insect pest and diseases attack</li> <li>Identify, select and place the different insect traps in the field</li> <li>Understand the importance of Integrated Pest and Disease Management</li> <li>Perform the Integrated Pest and Disease Management</li> </ul>	White Board, Marker, Laptop, projector, Insect traps, Chemicals, Sprayer
7	<p><b>Irrigation in Coffee Plantation</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p>	<ul style="list-style-type: none"> <li>Understand the Water requirement for the Coffee Plantation</li> <li>Plan for the Irrigation system</li> <li>Understand the soil texture, porosity etc</li> <li>Understand the importance of and perform the water drainage in the field</li> <li>Understand the effects of water clogging</li> </ul>	White Board, Marker, Laptop, Irrigation equipments

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Practical Duration</b> (hh:mm) 13:00  <b>Corresponding NOS Code</b> AGR/No506	in the field <ul style="list-style-type: none"> <li>Prepare Irrigation Schedule</li> <li>Perform the Irrigation Management</li> </ul>	
8	<b>Harvesting and post harvest practices in Coffee Plantation</b>  <b>Theory Duration</b> (hh:mm) 10:00  <b>Practical Duration</b> (hh:mm) 18:00  <b>Corresponding NOS Code</b> AGR/No507	<ul style="list-style-type: none"> <li>Understand and practice the proper method of harvesting</li> <li>Practice the proper method for harvesting of cherry / fruit</li> <li>Understand the frequency of harvesting</li> <li>Make arrangements for the Transportation</li> </ul>	White Board, Marker, Laptop, projector,
9	<b>Maintain Health &amp; Safety at the work place</b>  <b>Theory Duration</b> (hh:mm) 05:00  <b>Practical Duration</b> (hh:mm) 10:00  <b>Corresponding NOS Code</b> AGR/N9903	<ul style="list-style-type: none"> <li>Perform General safety Rules</li> <li>Gain Knowledge of various health hazards relevant to workplace and basic first aid training.</li> <li>Understand the basic safety checks and other common reported hazards before all field operation</li> <li>Understand, identify and study the use of equipment and materials safely and correctly</li> <li>Understand and handle the emergency situation in workplace</li> </ul>	White Board, Marker, Laptop, projector,
	<b>Total Duration:</b>  <b>Theory Duration</b> (hh:mm) <b>70:00</b>  <b>Practical Duration</b> (hh:mm) <b>110:00</b>	<b>Unique Equipment Required:</b> White Board, Marker, Laptop, projector, budding knife, grafting knife, dormant scions, Tying material such as grafting tape, adhesive tape, electrician's ber tape or rubber strips, Sprayer, fertilizers	

Grand Total Course Duration: **180 Hours, 0 Minutes**

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

## Trainer Prerequisites for Job role: "Coffee Plantation Worker" mapped to Qualification Pack: "AGR/Q0501, v1.0"

Sr. No.	Area	Details
1	<b>Description</b>	Trainer is responsible for providing the education and skills development training related to ground level activities involved in a coffee plantation right from nursery preparation to harvesting and storage.
2	<b>Personal Attributes</b>	Trainer should be Subject Matter Specialist. He/ She should have good communication and observation skill, leadership skill, practical oriented skill
3	<b>Minimum Educational Qualifications</b>	Diploma, Bachelor Degree in Agriculture Science/Horticulture Science
4a	<b>Domain Certification</b>	Certified for Job Role: " <u>Coffee Plantation Worker</u> " mapped to QP: " <u>AGR/Q0501, v1.0</u> ". Minimum accepted score is 80%.
4b	<b>Platform Certification</b>	Certified for the Job Role: "Trainer", mapped to the Qualification Pack: "SSC/Q1402". Minimum accepted score is 70%
5	<b>Experience</b>	<ul style="list-style-type: none"> <li>• Post graduate with an experience of 1 Year,</li> <li>• Graduate with experience of 3 + Years,</li> <li>• Diploma with relevant experience of 5+ Years.</li> </ul>



### Annexure: Assessment Criteria

<b>Assessment Criteria</b>	
<b>Job Role</b>	Coffee Plantation Worker
<b>Qualification Pack</b>	AGR/Q0501, v1.0
<b>Sector Skill Council</b>	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 center based on this criteria
5	To pass the Qualification Pack, every trainee should score a minimum of 50% in aggregate
6	The marks are allocated PC wise; however, every NOS will carry a weight age in the total marks allocated to the specific QP

Assessable Outcome	Assessment Criteria	Total Mark(500)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR/No501 Seed Preparation in Coffee Plantation	PC1.Select healthy fruit bearing mother plant for seed	100	10	5	5
	PC2.Select matured fruit		5	2	3
	PC3.Grade matured fruit		5	2	3
	PC4.Pulp the coffee seed manually		5	2	3
	PC5.Treat seed by ash		5	2	3
	PC6. Treat with fungicide		5	2	3
	PC7.Dry the seed on shade		3	1	2
	PC8.Check moisture percentage by manually/moisture meter		5	2	3
	PC9 Store the seed safely		5	3	2
	PC10.Read and understand the safety precautions / labels in the reading material provided with the fungicide		2	2	0
	PC11. Keep ready with all the necessary first aids as suggested in the safety measures		5	3	2
	PC12. Use all the necessary safety material and follow all the preventive measures to avoid any injury during use / application of pesticide		5	3	2
	PC13. Use sieved river sand, jungle soil and composted cattle manure		5	2	3
	PC14. Perform soil solarisation covering with transparent plastic sheet		5	3	2
	PC15. Mix sand, manure and soil as per recommendation.		5	2	3
	PC16. Prepare raised bed		5	2	3
	PC17. Prepare poly bag bed		5	3	2
	PC18. Sow seed		5	3	2
	PC19. Prepare thatch		5	3	2
	PC20.Harden the seedlings		5	3	2
	<b>Total</b>		<b>100</b>	<b>50</b>	<b>50</b>
2.AGR/No502 Land preparation and	PC1. Treat soil by liming for optimal PH level	100	10	5	5
	PC2. Take composite soil sample		5	3	2

Transplanting in Coffee Plantation	PC3. Prepare soil for test		5	2	3	
	PC4. Assist to perform pH test		5	3	2	
	PC5. Treat soil by ash		5	3	2	
	PC6. Amend soil		5	2	3	
	PC7. Clean the field		2	0	2	
	PC8. Level the field		3	1	2	
	PC9. Construct drains		5	2	3	
	PC10. Layout the field to be conducive for mechanization		10	5	5	
	P11. Maintain spacing (RR and PP)		5	3	2	
	PC12. Dig pits		5	2	3	
	PC13. Treat pits		5	3	2	
	PC14. Transplant shady plants		10	5	5	
	PC15. Transplant coffee seedlings		10	5	5	
	PC16. Provide stacking		5	3	2	
	PC17. Perform mulching		5	3	2	
		<b>Total</b>		<b>100</b>	<b>50</b>	<b>50</b>
	3.AGR/No503 Integrated Nutrient Management (scientific word) in Coffee Plantation	PC1. Take soil as per the recommended sampling procedure from the field	<b>50</b>	3	1	2
PC2. Dry the soil and prepare samples as per procedure		2		0	2	
PC3. Pack, label and submit to nearby soil testing laboratory for analysis		5		3	2	
PC4. Select appropriately decomposed Farm Yard Manure for soil application		5		3	2	
PC5. Apply the FYM to the soil as per recommended dosage and procedure before planting and during crop cultivation (if required)		5		3	2	
P6. Adopt various cultural practices that enhances the soil nutrient status for the benefit of crop stand		10		6	4	
PC7. Apply organic and inorganic fertilizers for macro and micro nutrients as per the recommended dosage, timing and method of application		15		8	7	
O Apply basal dose				0	0	

	O Perform top dressing			0	0
	O Apply micro-nutrients by foliar spray			0	0
	O Apply manure/fertilizer by surface methods			0	0
	O Apply manure/fertilizer by ring methods			0	0
	O Fertigation through drip irrigation			0	0
	PC8. Remove weeds		2	0	2
	PC9. Use mulching as instructed by supervisors, to reduce the growth of weed.		3	1	2
	<b>Total</b>		<b>50</b>	<b>25</b>	<b>25</b>
4.AGR/N504 Training and Pruning in Coffee Plantation	PC1. Perform topping	<b>50</b>	10	2	8
	PC2. Maintain single stem system / Maintain double stem system / Maintain triple stem system		10	3	7
	PC3. Remove sucker		10	7	3
	PC4. Perform pruning		10	7	3
	PC5. Apply Bordeaux paste/mixture/paint		10	6	4
	<b>Total</b>		<b>50</b>	<b>25</b>	<b>25</b>
5.AGR/No505 Integrated Pest and Disease Management (scientific word) in Coffee Plantation	PC1. Identify the types of pests associated	<b>75</b>	5	2	3
	PC2. Identify the stage of crop and pest incidence		4	2	2
	PC3. Notify Signs and symptoms of damage		4	2	2
	PC4. Identify the behavior of the pest (like diurnal or nocturnal, egg laying behavior, attraction to colours etc)		5	2	3
	PC5. Identify Natural enemies of the pests		4	2	2
	PC6. Identify the types of diseases associated		10	4	6
	PC7. Identify the crop stage and disease incidence		4	2	2
	PC8. Identify the signs and symptoms of different diseases		5	2	3
	PC9. Do Seed and seedling treatment		4	2	2
	PC10. Take up chemical and non-chemical approaches to pest and disease control		30	15	15
	<b>Total</b>		<b>75</b>	<b>35</b>	<b>40</b>
6.AGR/No506 Irrigation in	PC1. Irrigate based on the soil type and slope as advised by the supervisors	<b>50</b>	30	15	15

Coffee Plantation	PC2.Maintain drainage system by regular cleaning and weeding		20	10	10
	<b>Total</b>		50	25	25
7.AGR/No507 Harvesting and Post Harvest Practices in Coffee Plantation	PC1.Test fruit maturity	<b>50</b>	10	5	5
	PC2. Perform periodical harvesting		10	5	5
	PC3.Perform pulping		10	5	5
	PC4.Perform washing of the seed		10	5	5
	PC5.Dry the seed		10	5	5
	<b>Total</b>		50	25	25
8.AGR/N9903 Health & Safety at the workplace	PC1.Undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor	<b>25</b>	3	1	2
	PC2. Work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.		3	1	2
	PC3. Read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc		3	1	2
	PC4. Assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.		1	1	0
	PC5. Use equipment and materials safely and correctly and return the same to designated storage when not in use		3	1	2
	PC6. Dispose of waste safely and correctly in a designated area		1	1	0
	PC7. Recognize risks to bystanders and take action to reduce risk associated with jobs in the workplace		1	1	0
	PC8. Perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.		1	1	0
	PC9. Report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.		1	1	0
	PC10.Follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.		1	1	0

	PC11. Follow emergency procedures to company standard / workplace requirements		1	1	0
	PC12. Use emergency equipment in accordance with manufacturers' specifications and workplace requirements		3	1	2
	PC13. Provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques		1	1	0
	PC14. Recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate		1	1	0
	PC15. Report details of first aid administered in accordance with workplace procedures.		1	1	0
			25	15	10
	<b>Total</b>	<b>500</b>	<b>500</b>	<b>250</b>	<b>250</b>
	<b>Percentage Weightage:</b>			<b>50%</b>	<b>50%</b>
	<b>Minimum Pass% to qualify (aggregate):</b>			<b>60%</b>	