

Model Curriculum

Organic Grower

SECTOR: AGRICULTURE & ALLIED
SUB-SECTOR: AGRICULTURE CROP PRODUCTION
OCCUPATION: FARM MANAGEMENT
REF ID: AGR/Q1201, V1.0
NSQF LEVEL: 4



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: 'Organic Grower' QP No. 'AGR/Q1201 NSQF Level 4'

Date of Issuance: June 30th, 2015

Valid up to: March 31st, 2020

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



Authorised Signatory
(Agriculture Skill Council of India)

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Organic Grower

CURRICULUM / SYLLABUS

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

Program Name	Organic Grower		
Qualification Pack Name & Reference ID. ID	AGR/Q1201, v1.0		
Version No.	1.0	Version Update Date	
Pre-requisites to Training	5 th standard pass preferable		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Produce Organic Crops: Introduction to Organic farming, Crops selection, resources, procurement of inputs, cropping pattern, schedule etc • Grow and manage crop: Crop cultivation under organic farming, inter cultural operations – organic farming • Maintain the quality of the produce (as prescribed in standards): Harvesting, Post harvesting, Quality assurance & Certification • Become well versed with Environment Health & Safety: Well versed with health and safety measures in terms of personal safety and others as well. 		

This course encompasses 10 out of 10 National Occupational Standards (NOS) of “Organic Grower” 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"> • General Instructions to the Trainee • Understand the Role of a Organic Grower • Understand and study the Scopes and Opportunities of Organic Farming • Study the Need of Organic Farming in India 	Laptop, white board, marker, projector
2	Undertake planning for Organic Farming Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N1201	<ul style="list-style-type: none"> • Selection of Crop • Understand the need of safe farming practices • Understand and practice the type of safe farming practices • Transition to Organic Farming <ul style="list-style-type: none"> - Estimate the cost and time of Organic Farming - Budget estimation - Understand the phased approach to be taken to transition to organic farming • Prepare Crop portfolios – Multi crop, Feasible crop • Prepare Yearly Plan / Crop Schedule 	Laptop, white board, marker, projector, Record Keeping Book, receipts, voucher
3	Seed Selection & treatment under organic farming Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N1202	<ul style="list-style-type: none"> • Crop Selection <ul style="list-style-type: none"> - Identify main crop and companion crop - Plan for intercrop, mixed crop, relay crop, trap crop etc - Plan for crop rotation cycle - Crop schedule • Selection of seed variety – insect pest resistant, non genetically modified etc • Seed Treatment <ul style="list-style-type: none"> - understand the organic practices for seed treatment - identify inputs/material to be used for organic seed treatment - preparation of inputs for seed treatment - implementation of seed treatment 	Laptop, white board, Marker, Laptop, projector, bio inputs, bio fertilizers
4	Soil nutrient management under Organic farming Theory Duration (hh:mm) 10:00	<ul style="list-style-type: none"> • Understand the concept of soil nutrient management under organic farming • Understand the Soil Activation and Soil enhancement <ul style="list-style-type: none"> - understand importance of top soil in organic cultivation - identify various methods of 	White Board, Marker, Laptop, projector, bio fertilizers, soil testing tools/equipments, FYM, compost etc

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N1203	activating microbial activity in top soil - prepare various organic inputs that can increase soil microbial activity - apply soil activating inputs effectively - Soil Testing, Soil amendment, manuring, crop selection, land preparation, green manure crop, farm yard manure, use of bio mass, vermi compost, vermiwash, implementation of soil enhancement methods, protocol preparation for basal dose application & top dressing	
5	Weed control under Organic Farming Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N1204	<ul style="list-style-type: none"> • Identification of weeds <ul style="list-style-type: none"> - identify the types of weed in the crop - Consult the experts • Weed Management <ul style="list-style-type: none"> - undertake mechanical/manual weeding process at appropriate time to avoid crop damage - use mulching sheets for cultivation - use bio-herbicides for weed control wherever feasible - use mechanized weed control equipment 	White Board, Marker, Laptop, projector, Plough, bio-herbicides
6	Irrigation Management under Organic farming Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N1205	<ul style="list-style-type: none"> • Identify characteristics of good irrigation system • Understand and adopt the micro irrigation techniques • Identify the tools/equipments required for micro irrigation • Understand the optimum moisture level required for the farm 	White board, Marker, Laptop, projector, micro irrigation tools/equipments
7	Integrated Pest and Disease Management under organic farming Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 20:00	<ul style="list-style-type: none"> • Identify the crop infestation • Identify the symptoms of disease incidence in crop • Identify the stages of pest incidence • Understand the use of suitable varieties • Preventive and curative care <ul style="list-style-type: none"> - Resistant varieties, crop rotation, inter crop, border crop, trap crops, interculture operations, understand the natural enemies of pest, beneficial insects, bio-insecticides, etc 	White board, Marker, Laptop, projector

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code AGR/N1206		
8	Harvest and Post – harvest management under organic farming Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N1207	<ul style="list-style-type: none"> Harvesting of the crop: Crop maturity, moisture content during harvesting, etc Understand about the physical admixture during harvesting Harvesting methods and handling of harvested crops Understand the Post harvest management practices like grading, storage, organically acceptable fumigation, cold storage, packaging and marketing 	White board, Marker, Laptop, projector
9	Undertake Quality assurance & certification in Organic Farming Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 20:00 Corresponding NOS Code AGR/N1208	<ul style="list-style-type: none"> Third party certification process Risk management in compliance of standards Participatory guarantee system Documentation in third party and PGS certification Documents needed for sale of organic produce and traceability 	White board, Marker, Laptop, projector
10	Undertake business of Organic farming Theory Duration (hh:mm) 5:00 Practical Duration (hh:mm) 15:00 Corresponding NOS Code AGR/N1209	<ul style="list-style-type: none"> Economics of organic farming Connecting with the market and market intelligence Direct marketing 	White board, Marker, Laptop, projector
11	Maintain Health & Safety at the work place Theory Duration (hh:mm) 05:00	<ul style="list-style-type: none"> Perform General safety Rules Gain Knowledge of various health hazards relevant to workplace and basic first aid training. Understand the basic safety checks and other common reported hazards before all farm operation 	White Board, Marker, Laptop, projector, Nose masks, first aid kit

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Practical Duration (hh:mm) 05:00 Corresponding NOS Code AGR/N9903	<ul style="list-style-type: none"> Understand, identify and study the use of equipment, materials safely and correctly Understand and handle the emergency situation in workplace and during any farm operation 	
	Total Duration Theory Duration 80:00 Practical Duration 120:00	Unique Equipment Required: White Board, Marker, Laptop, projector, Record Keeping Book, receipts, voucher, Soil testing kit, plastic bags, labels, plough, seed drill, leveler, tractor, Sprayer, bio fertilizers, irrigation tools & equipments, container, Storage infrastructure -cool chamber, crate, bags, Nose masks, first aid kit	

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: “Organic Grower” mapped to Qualification Pack: “AGR/Q1201, v1.0”

Sr. No.	Area	Details
1	Description	Trainer is responsible for providing the education on cultivation of organic crops as per the organic package of practices recommended for a particular agro-climate zone, using approaches like diversity, cattle integration, on-farm input generation, biomass recycling, natural resource use optimization in exclusion of synthetic inputs directly or indirectly and sell the organic produce as per the competitive market prices without distress sale.
2	Personal Attributes	Trainer should be Subject Matter Specialist. He/ She should have good communication and observation skill, leadership skill, practical oriented skill
3	Minimum Educational Qualifications	Diploma
4a	Domain Certification	Certified for Job Role: “Organic Grower” mapped to QP: “AGR/Q1201, v1.0”. Minimum accepted score is 80%
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted % as per respective SSC guidelines is 80%.
5	Experience	<ul style="list-style-type: none"> • M Sc (Agriculture / Horticulture /Botany/Forestry) • B Sc. (Agriculture / Horticulture /Botany / Forestry) • Any graduate with 3 years of relevant experience • Diploma with 3 years of relevant experience • 10+2 with 5 years of relevant experience

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Organic Grower
Qualification Pack	AGR/Q1201, 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 70% 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 Outcome	Assessment Criteria	Total Marks	Out of	Marks Allocation	
				Theory	Skills Practical
2.AGR/N1202 Seed Selection and Treatment under Organic Farming	PC1.identify suitable main crop and its companion crops depending upon the suitability of climate and season	120	15	9	6
	PC2.plan for multi-crop planting as intercrops, mixed crop, relay crop or trap crop		10	5	5
	PC3.keep rotation cycle in mind		5	2	3
	PC4.plan for sowing or planting methodology		10	5	5
	PC5.select pest and disease resistant varieties suiting to the given agro-climatic and soil situations		5	3	2
	PC6.ensure that seed or planting material is not genetically modified		5	2	3
	PC7.identify vendors for authentic organic seed procurement, if not available on-farm		5	2	3
	PC8. understand the organic practices for seed treatment		10	5	5
	PC9.identify various bio-inputs that could be used for seed treatment		5	3	2
	PC10.chalk out seed/ planting material treatment plan with: • bio inputs such as biofertilizers, bio-pesticides • on-farm made seed protecting aids such as Bijamruth • off-farm botanical or organically acceptable chemical alternatives		15	6	9
	PC11.identify vendors of authentic organic seed treatment inputs		5	3	2
	PC12.prepare bio-inputs for seed treatment in farm: Bijamruth, botanical alternatives etc		10	5	5
	PC13.implement seed treatment process appropriately		10	5	5
	PC14.understand acceptable chemical alternatives, their procurement and use		10	5	5
Total		120	60	60	

Assessable Outcome	Assessment Criteria	Total Marks	Out of	Marks Allocation	
				Theory	Skills Practical
3.AGR/N1203 Soil Nutrient Management under Organic Farming	PC1.understand importance of top soil in organic cultivation	180	5	2	3
	PC2.identify various methods of activating microbial activity in top soil		10	5	5
	PC3.prepare various organic inputs that can increase soil microbial activity		10	5	5
	PC4.apply soil activating inputs effectively		10	5	5
	PC5.undertake soil testing at authorized centres		10	5	5
	PC6.understand soil test data for soil amendment and manuring		5	2	3
	PC7.select appropriate crops suiting to soil condition		10	5	5
	PC8.calculate nutrient needs based on test report and local crop recommendations		10	5	5
	PC9.prepare the land to get appropriate tilth		5	3	2
	PC10.identify various methods adopted in organic farming for building organic matter in soil		10	5	5
	PC11.grow green manure crop and incorporate biomass		10	5	5
	PC12.use farmyard manure & mineral fortified compost		10	5	5
	PC13.use other biomass as mulch or soil cover		10	5	5
	PC14.prepare vermicompost & vermiwash		15	7	8
	PC15.prepare dung-urine slurries		5	3	2

Assessable Outcome	Assessment Criteria	Total Marks	Out of	Marks Allocation	
				Theory	Skills Practical
4.AGR/N1204 Weed control under Organic Farming	PC16.prepare biodynamic inputs/compost (BD 500, BD 501, Cow Pat pit etc)	120	15	8	7
	PC17.implement various soil enhancement methods effectively: • Sanjivak, Jivamrth, Amritpani for microbial enrichment • Vermiwash, panchagavy, cattle dung urine-slurry and protein hydrolysates for growth promotion • Green manuring and biomass recycling		15	7	8
	PC18.prepare protocols for basal dose application & top dressing		15	8	7
	Total		180	90	90
	PC1.identify the types of weed in the crop		20	10	10
	PC2.maintain records of the weed and share it with experts		10	5	5
	PC3.explain clearly about the symptoms and get inputs from experts		15	7	8
	PC4.control weeds during ploughing		15	7	8
	PC5.undertake mechanical/manual weeding process at appropriate time to avoid crop damage		20	10	10
	PC6.use mulching sheets for cultivation		15	8	7
	PC7.use bio-herbicides for weed control wherever feasible		10	5	5
	PC8.use mechanized weed control equipment		15	8	7
	Total		120	60	60

Assessable Outcome	Assessment Criteria	120 Total Marks	Out of	Marks Allocation	
				Theory	Skills Practical
5.AGR/N1205 Irrigation Management under Organic Farming	PC1.identify characteristics of good irrigation systems	120	15	7	8
	PC2.identify advantages & disadvantages of irrigation channels and watering through hose, buckets etc		15	8	7
	PC3.interact with micro irrigation expert and get feedback on the usage of specific applicable irrigation methods to be adopted		10	5	5
	PC4.ensure appropriate water supply at various life stages of the crop as per each stage requirement		20	10	10
	PC5.ensure spread of water in the entire field		15	7	8
	PC6.ensure proper water drainage		10	5	5
	PC7.adopt micro irrigation techniques (drip irrigation using appropriate equipments, sprinklers) based on the requirement of specific crops		20	10	10
	PC8.identify disease due to increase in moisture/water content and take measures to control them		15	7	8
	Total			120	59
6.AGR/N1206 Integrated Pest and Disease Management under Organic Farming	PC1.identify different types of pests	180	5	2	3
	PC2.identify stages of crop and pest incidence		10	5	5
	PC3.diagnose symptoms and extent of damage		10	5	5
	PC4.understand major crop diseases and identify the specific disease in the crop		10	5	5
	PC5.identify crop stage and disease incidence disease calendar		5	2	3
	PC6.identify early symptoms of various types of diseases		10	5	5
Assessable	Assessment Criteria	Total	Out of	Marks Allocation	

Outcome	Marks		
		Theory	Skills Practical
PC7. understand the different mode of transmissions of disease such as implements, vectors, water, rain, wind etc	3	1	2
PC8.use resistant varieties	5	3	2
PC9.undertake pruning of plant if affected by diseases (if need arises)	5	3	2
PC10.select resistant varieties	8	4	4
PC11.perform crop rotation with suitable and recommended crops	5	3	2
PC12.select suitable crop combinations as intercrops, border crops and trap crops	5	3	2
PC13.undertake deep ploughing in summer, keep field clean and destroy infested plant debris and field sanitation	5	3	2
PC14.remove alternate hosts such as weeds	6	3	3
PC15.perform mulching	10	5	5
PC16.perform mechanical/manual weeding as and when required	10	5	5
PC17.use various types of traps (mechanical and manual)	10	5	5
PC18.understand natural enemies of the pest such as lady bird, ground beetles etc	10	5	5
PC19.release beneficial insects	3	2	1
PC20.use hoverfly and adopt them for pest control	10	5	5
PC21.identify various types of bio-pesticides and their vendors	5	2	3

Assessable Outcome	Assessment Criteria	Total Marks	Out of	Marks Allocation	
				Theory	Skills Practical
8.AGR/N1208 Undertake Quality Assurance & Certification in Organic Farming	PC1.understand different types of certification available for organic produce :Third party certification & Participatory guarantee systems	120	3	2	1
	PC2.identify procedures and timelines for applying for certification		2	1	1
	PC3.understand quality checks (one-time and recurring) for obtaining and maintaining certification		3	1	2
	PC4.study the organic standards in detail for every aspect of farming, including storage, transport and sale		2	1	1
	PC5.comply with the standards related to farm facilities and production methods		3	2	1
	PC6.maintain detailed farm history and current set-up, and usually including results of soil and water tests.		3	1	2
	PC7.submit application to the certification agency in the prescribed format with necessary farm and process details		2	1	1
	PC8.submit a written annual production plan detailing everything from seed to sale: seed sources, field and crop locations, fertilization and pest control activities, harvest methods, storage locations, etc		8	4	4
	PC9.sign agreement with certification body		2	1	1
	PC10.adhere to the standards recommended by the certification body		4	2	2
	PC11.pay fee to the certification body for annual surveillance and for facilitating a mark which is acceptable in the market as symbol of quality		4	2	2
	PC12.schedule annual on-farm inspections with a physical tour, examination of records, and an oral interview		2	1	1
	PC13.maintain day-to-day farming and marketing records, covering all activities		1	1	0
	PC14.make available the documents & records for inspection as and when required		5	3	2

Assessable Outcome	Assessment Criteria	Total Marks	Marks Allocation		
			Out of	Theory	Skills Practical
	PC15.comply to non-compliances, if any raised by the certification body		3	1	2
	PC16.ensure to follow-up for certification after the inspection		2	1	1
	PC17.release the stock for sale with Certification Mark (India Organic Logo) only after certification is granted		3	2	1
	PC18.understand procedure for risk assessment		3	2	1
	PC19.undertake parallel and split production, part conversion		2	1	1
	PC20.use machine tools averting contamination		2	1	1
	PC21.use water for irrigation averting contamination		2	1	1
	PC22.prevent contamination by water and air drift		2	1	1
	PC23.document risk management initiatives		2	1	1
	PC24.understand PGS certification system in brief		5	3	2
	PC25.adhere to the basic requirements for PGS group formation		3	1	2
	PC26.maintain documentation for group making, PGS pledge		3	2	1
	PC27.adopt PGS standards		2	1	1
	PC28.participate regularly in meetings and share vision & operational issues		2	1	1
	PC29.keep transparency and horizontality in operation		2	1	1
	PC30.understand basic documentations on field history		2	1	1
	PC31.maintain field/ farm, diary		5	2	3
	PC32.maintain internal inspection sheets and peer appraisals		2	1	1

Assessable Outcome	Assessment Criteria	Total Marks	Out of	Marks Allocation	
				Theory	Skills Practical
	PC8.undertake farm-level value addition		2	1	1
	PC9.undertake collective marketing by farmer groups		2	1	1
	PC10.understand branding advantages of organic produce		2	1	1
	PC11.identify major channels for sales of organic produce including physical and online		2	1	1
	PC12.maintain networking with retail chains and bulk buyers		2	1	1
	PC13.create direct connect with consumers		2	1	1
	PC14.use on-line market intelligence tools		2	1	1
	PC15.target consumer based on SEC segmentation		4	2	2
	PC16.organize of local haats		2	1	1
	PC17.release publicity literature and campaigns		1	0	1
	PC18.provide information on quality and benefits of organic foods		3	2	1
	PC19.demonstrate quality procedures and documents		4	2	2
	PC20.keep presence in area for long term		4	2	2
	PC21.convince consumers to register for regular supplies		4	2	2
	PC22.create a system for weekly supplies in Box		4	2	2
	Total		60	30	30
10. AGR/N990	PC1. undertake basic safety checks before operation of all machinery and vehicles and	60	5	3	2

	Percentage Weightage:			50%	50%
	Minimum Pass% to qualify (aggregate):			70%	