

Model Curriculum

Packhouse Worker

SECTOR: AGRICULTURE & ALLIED
SUB-SECTOR: AGRICULTURE INDUSTRIES
**OCCUPATION: POST HARVEST SUPPLY CHAIN
MANAGEMENT**
REF ID: AGR/Q7503, V1.0
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: '**Packhouse Worker**' QP No. '**AGR/Q7503 NSQF Level 3**'

Date of Issuance: June 30th, 2015

Valid up to: March 31st, 2019

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


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

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Packhouse Worker

CURRICULUM / SYLLABUS

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

Program Name	Packhouse Worker		
Qualification Pack Name & Reference ID. ID	AGR/Q7503, 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"> • Sort, grade and manage the inventory of the produce: Receiving the goods, wash and clean, sorting parameters, grading standards, inventory manage etc • Degreen the horticulture produce: Ripening hormones, method of ripening, storing etc. • Pack and transport the goods: weighing, packing techniques, loading and unloading, method of transportation, storing, method of storing • Maintain the Packhouse: Packhouse maintenance, cleaning, hygiene environment <p>Become well versed with Environment Health & Safety: Well versed with health and safety measures in terms of personal safety and others as well.</p>		

This course encompasses 9 out of 9 National Occupational Standards (NOS) of “Packhouse Worker” Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	Introduction Theory Duration (hh:mm) 5:00 Practical Duration (hh:mm) 5:00 Corresponding NOS Code	<ul style="list-style-type: none"> Understand the General Discipline in the class room (Do's & Don'ts) Understand the Role of a Packhouse Worker Understand and study the standards of sorting, grading and packaging practice Learn and practice Basic skills of communication Learn and Practice Basic reading capabilities to enable reading of signs, notices and/or cautions at site. 	White Board, Marker, Laptop, projector
2	Receive the Horticulture Produce Theory Duration (hh:mm) 8:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N7510	<ul style="list-style-type: none"> Understand the working environment of Packhouse Receive the goods- unload the horticulture produce Understand the material handling procedure for different types of horticulture produce such as fruits , vegetables, flowers Identify and discard the defected produce from the goods received Understanding the proper stacking of the produce 	White Board, Marker, Laptop, projector
3	Wash and clean the horticulture produce Theory Duration (hh:mm) 8:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N7511	<ul style="list-style-type: none"> Study and understand the washing and method of cleaning the received goods Identify and remove the unmarketable or waste material Understand the de-moisturising of the Produce Practice the waxing of the produce 	White Board, Marker, Laptop, projector
4	Sort, Grade and Manage inventory of the horticulture produce Theory Duration (hh:mm) 12:00 Practical Duration (hh:mm)	<ul style="list-style-type: none"> Understand and maintain the quality measures of the produce Understand and differentiate perishable and non perishable products Study and understand the standards of Sorting, Grading process Manage the inventory of the horticulture produce Practice the sorting, grading as per standards 	White Board, Marker, Laptop, projector

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	20:00 Corresponding NOS Code AGR/N7512	<ul style="list-style-type: none"> Understanding various diseases of the horticulture produce 	
5	Ripen/Degreen the horticulture produce Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N7513	<ul style="list-style-type: none"> Understand the fruit maturity Understand and practice the method of ripening Use the ripening hormones Store the produce for ripening Understanding of ill-effects of carbide ripening 	White Board, Marker, Laptop, projector, Ripening hormones /chemicals
6	Weigh, pack and transport the horticulture produce Theory Duration (hh:mm) 12:00 Practical Duration (hh:mm) 20:00 Corresponding NOS Code AGR/N7514	<ul style="list-style-type: none"> Weigh and handle the goods with care Understand the different packing process, packing materials and optimum weight, moisture percentage of the produce Understand the suitable packing for different crops like fruits, flowers etc Pack the weighed produce Prepare a packed lot for dispatch Labeling of the packed produce Maintain record of packed lot for dispatch Understanding the FIFO practice 	White Board, Marker, Laptop, projector, weighing machine, packing materials
7	Store the horticulture produce Theory Duration (hh:mm) 8:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N7515	<ul style="list-style-type: none"> Organize the space in the Packhouse for the storage of goods Understand and make necessary arrangements for storing of the goods Gain knowledge about the storing methods and practices Practice Tag, mark and label the stock Store and handle the goods with care Basic knowledge of working of cold storage 	White Board, Marker, Laptop, projector
8	Undertake maintenance of the Packhouse Theory Duration (hh:mm)	<ul style="list-style-type: none"> Maintain the neat and clean area Understand the use of different chemicals and disinfectants in Packhouse Regular check up and fix up the 	White Board, Marker, Laptop, projector, disinfectants, chemicals

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	10:00 Practical Duration (hh:mm) 15:00 Corresponding NOS Code AGR/N7516	problems of the parts of the Packhouse <ul style="list-style-type: none"> Understanding the pest and rodent control measures Basic knowledge of HACCP 	
9	Coordinate with colleagues Theory Duration (hh:mm) 8:00 Practical Duration (hh:mm) 9:00 Corresponding NOS Code AGR/N9905	<ul style="list-style-type: none"> Understand the work requirement Communicate and receive instructions from supervisor Coordinate with colleagues 	White Board, Marker, Laptop, projector
10	Maintain safe work environment Theory Duration (hh:mm) 5:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR/N9906	<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 Understand, identify and study the use of equipment Understand and handle the emergency situation in workplace Maintaining dress code Maintaining tobacco and nicotine free environment 	White Board, Marker, Laptop, projector, Nose masks, gloves, first aid kit
	Total Duration: Theory Duration (hh:mm) 81:00 Practical Duration (hh:mm) 119:00	Unique Equipment Required: White Board, Marker, Laptop, projector, Record Keeping Book, Chemicals/disinfectants, ripening hormones, gloves, weighing machine, packing materials , 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: “Packhouse Worker” mapped to Qualification Pack: “AGR/Q7503, v1.0”

Sr. No.	Area	Details
1	Description	Trainer is responsible for educating the trainees - receiving, washing, cleaning, wiping, trimming, sorting, grading, waxing, ripening and de-greening, packaging, storing the horticulture produce in cold storage and keeping records etc
2	Personal Attributes	Trainer should be Subject Matter Expert. He/ she should have good communication skills, leadership skills, observation skills
3	Minimum Educational Qualifications	Diploma
4a	Domain Certification	Certified for Job Role: <u>“Packhouse Worker”</u> mapped to QP: <u>“AGR/Q7503, v1.0”</u> . 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"> • M Sc (Agriculture / Botany) • MBA (Agribusiness / Supplychain Management) • B. Sc. (Agriculture & Agri-Allied/Botany) • Graduate with 3 years of relevant work experience • Diploma with 3 years of relevant work experience • 10+2 with 5 years of relevant work experience

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Packhouse Worker
Qualification Pack	AGR/Q7503, 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 center 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 Outcome	Assessment criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR / N 7510 Receive the horticulture produce	PC1.receive the goods delivered to Packhouse for Packing and storage	50	2	1	1
	PC2.unload the goods (Horticulture produce) from the trucks without any damage		6	3	3
	PC3.follow appropriate and respective material handling procedure for different types of horticulture produce such as fruits , vegetables, flowers		6	3	3
	PC4.check and ensure if the delivered goods match the purchase orders		2	1	1
	PC5.verify goods are in good condition		2	1	1
	PC6.report any defects		2	1	1
	PC7.accurately weigh and count items using the equipment available		4	2	2
	PC8.use appropriate storage material such as carton box, trays, etc. as per the horticulture produce requirement		6	3	3
	PC9.ensure quality and safety of goods while unloading and material movement		4	2	2
	PC10.ensure quantity of goods as per the documentation		2	1	1
	PC11.carry the goods manually off the truck		2	1	1
	PC12.operate equipment carefully when required to move heavy pallets of specific Horticulture produce goods		2	1	1
	PC13.ensure adequate safety while handling complex equipment		4	2	2
	PC14.assist in maintaining a register or on computer by furnishing the details of the goods received		4	2	2
	PC15. coordinate with the suppliers on the stock information and match with the documented details		2	1	1
				50	25
2.AGR/N7511: Wash and clean the horticulture produce	PC 1.receive detailed information on the type of sorting to be done before or after the washing of different Horticulture produce goods handled in the Packhouse	50	10	5	5
	PC2.Washing of the received goods		5	2	3
	PC3.De-moisturising of the goods		10	5	5
	PC4.Remove unmarketable or waste material		10	5	5
	PC5.Waxing of the goods.		15	8	7
			50	25	25

3.AGR/N7512 Sort, Grade and Manage inventory of the horticulture produce	PC1.Remove the unwanted parts	100	5	2	3
	PC2.Sort the products according to quality measures.		10	5	5
	PC3.Sort the product according to the customer order.		10	5	5
	PC4.Sort according to the perishable nature of the products.		10	5	5
	PC5.Ensure that products are not get mixed.		10	5	5
	PC6.Recording of the unloaded horticultural products.		10	5	5
	PC7.assist in documenting the inventory of the graded stocks in the Packhouse periodically		10	5	5
	PC8.track inventory using appropriate system as per the instructions		5	3	2
	PC9.ensure that outgoing goods are reported to supervisors on time for inventory control management		10	5	5
	PC10.work with the guidance of the supervisor		5	2	3
	PC11.coordinate with supervisor		5	3	2
	PC12.maintain the stock information and report to the Supervisor.		10	5	5
			100	50	50
4.AGR/N7513Ri pen/Degreen the horticulture produce	PC1.gather information about various methods of ripening and degreen	100	10	5	5
	PC2.check the Maturity of fruit		10	5	5
	PC3.sort them and store in to the ripening chamber		15	7	8
	PC4.follow orders on the movement of fruits to specific designated areas: either in Natural Ripening chamber or controlled atmospheric ripening chamber.		10	5	5
	PC5.use ethical ways to controlled atmospheric ripening fruits		10	5	5
	PC6.use simple and harmless techniques for ripening of fruits		10	5	5
	PC7.check the chemicals which are used for ripening is correct or not		10	5	5
	PC8.ensure that no different stocks are mixed		5	3	2
	PC9.check the customer's order for degreening of the fruits		10	5	5
	PC 10. follow the best practices for Degreening fruits		10	5	5
			100	50	50
5.AGR/N7514W eigh, Pack and transport the	PC1.retrieve and assemble items for dispatch from various storage locations	100	5	2	3

horticulture produce	PC2.verify the stock is in good condition to be weigh and pack.		5	3	2
	PC3.weigh the horticulture produce as per customers demand and pack as per requirement of fruits and vegetable		8	4	4
	PC4.stack and pack the goods into bins or pallets or other appropriate boxes,bags or containers		15	8	7
	PC5.precool the packed horticulture produce as per requirement of shipping or transport time		10	5	5
	PC6.wrap and label the goods for delivery as per customer requirement		10	5	5
	PC7.carry out the transportation procedure such as by ship or trucks, based on the location to where the goods should reach		5	2	3
	PC8.operate automated equipment's such as fork-lifts, conveyor belts, rail cars, high stackers and others as necessary to lift goods to transport		8	4	4
	PC9.prepare the transport vehicle by either pre-cooling or pre-warming and withappropriate temperature conditions, as per the goods that is being transported		10	5	5
	PC10.avoid bumping the packed boxes to the walls or against other boxes		5	2	3
	PC11.avoid tear of plastic bag packages		5	2	3
	PC12.ensure damage free distribution		5	3	2
	PC13.ensure quality of goods to be maintained		5	3	2
	PC14.ensure the product is loaded timely		4	2	2
			100	50	50
6.AGR/N7515Store the horticulture Produce	PC1.organize space in the Packhouse for necessary precooled goods storage	100	5	2	3
	PC2.store the goods according to the assigned system of storage in the Packhouse		10	5	5
	PC3.check proper area with facilities for loading and unloading		10	5	5
	PC4.tag, mark and label the stock to locate its storage within the Packhouse based on nature of the goods		10	5	5
	PC5.identify damaged goods		5	3	2
	PC6.ensure quality and quantity of the goods		5	2	3
	PC7.take precautions while handling horticulture goods		10	5	5
	PC8.ensure storage of the goods in		10	5	5

	controlled conditions depending on the type of goods that have been received				
	PC9.take care of the temperature, humidity and controlled atmosphere storage as required by the goods		10	5	5
	PC10.use appropriate pest and rodent control mechanism to protect the goods during storage		15	8	7
	PC11.take care while storing and arranging the Horticulture produce at its appropriate racks and places		10	5	5
			100	50	50
7.AGR/N7516U ndertake maintenance of the Packhouse	PC1.maintain the shelves, pallet area and workstations neat		2	1	1
	PC2.maintain clean loading area		3	1	2
	PC3.Check equipment is maintained well and arrange for necessary repairs		5	3	2
	PC4.ensure the Packhouse is maintained and protected from fire, pests, water and pollution		5	2	3
	PC5.check the maintenance of air conditioners and electricity for refrigerated Packhouse .		5	3	2
	PC6.check all parts of the Packhouse and spray appropriate sprayers or take necessary steps to protect from any leakages, water logging if any, pests,etc.	100	7	3	4
	PC7.check the produce in the Packhouse at regular intervals as necessary		5	3	2
	PC8.remove if any damaged produce are found		2	1	1
	PC9.observe and ensure adequate safety precautions to be taken for the worker, goods and for the Packhouse		8	4	4
	PC10.wear protective, safety gear and other safety merchandise		8	4	4
			100	50	50
8.AGR/N9905C oordinate with colleagues	PC1.receive instructions and understand the work requirements as per policy and procedures		3	1	2
	PC2.report and communicate on the various activities undertaken	25	2	1	1
	PC3.escalate any issues and problems to the reporting supervisor		2	1	1
	PC4.receive feedback on work standards and customer satisfaction		4	2	2

	PC5.communicate any potential hazards at a particular location		2	1	1
	PC6.rectify any errors if indicated by the supervisor		2	1	1
	PC7.assist colleagues wherever necessary as per capability		2	1	1
	PC8.resolve any conflicts and ensure a smooth workflow		2	1	1
	PC9.put team over individual goals		4	2	2
	PC10.coordinate with the colleagues on various activities to be completed		2	1	1
			25	12	13
9.AGR/N9906M aintain safe work environment	PC1.comply with general safety procedures of the company	25	1	0	1
	PC2. follow standard safety procedures while handling equipment, hazardous material or tool		1	0	1
	PC3.Check parts of the workplace and take preventive actions like spraying and other steps to protect from leakages, water logging, pests, fire, pollution, etc.		3	2	1
	PC4.ensure no accidents and damages at the workplace, reporting of any breach of company safety procedure		2	0	2
	PC5.keep the workplace organized, swept, clean and hazard free		1	1	0
	PC6.attend fire drills and other safety related workshops organised at the workplace		2	1	1
	PC7.be aware of first aid, evacuation and emergency procedures		2	1	1
	PC8. be alert of any events and do not be negligent of any safety procedures to be followed		1	1	0
	PC9. avoid accidents while using hazardous chemicals, machines, sharp tools and equipments		2	0	2
	PC10.use safety materials such as protective gear, goggles, caps, shoes, etc. (as applicable with workplace)		3	2	1
	PC11.handle heavy and hazardous materials with care and using appropriate tools and handling equipment such as trolleys, ladders		2	1	1
	PC12.Maintains clean environment in Packhouse workplace.		2	1	1
	PC13.Regular preventive health check-up of Packhouse worker		2	1	1
	PC14.Maintain personal Hygiene in workplace		1	0	1
			25	11	14

			600	298	302
	<u>Percentage Weightage:</u>			<u>50%</u>	<u>50%</u>
	<u>Minimum Pass% to qualify (aggregate):</u>			<u>50%</u>	