

# Model Curriculum

## Dairy Farmer/ Entrepreneur

SECTOR: AGRICULTURE & ALLIED  
SUB-SECTOR: DAIRYING  
OCCUPATION: DAIRY FARM MANAGEMENT  
REF ID: AGR/Q4101, 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: '**Dairy Farmer/ Entrepreneur**' QP No. '**AGR/Q4101 NSQF Level 4**'

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

Valid up to: March 31<sup>st</sup>, 2019

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



Authorised Signatory  
(Agriculture Skill Council of India)

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# Dairy Farmer/ Entrepreneur

## CURRICULUM / SYLLABUS

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

<b>Program Name</b>	Dairy Farmer/ Entrepreneur		
<b>Qualification Pack Name &amp; Reference ID. ID</b>	AGR/Q4101, v1.0		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	
<b>Pre-requisites to Training</b>	No entry level barrier; 5th Standard Passed 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>Efficiently start and manage a Dairy farm:</b> Dairy Industry, input requirements, Site selection, cattle selection, budget estimation, procurement of inputs, etc.</li> <li>• <b>Construct and maintain shed for cattle:</b> Resources availability, shed construction – types, maintenance of shed</li> <li>• <b>Prepare and give recommended feed and water for livestock:</b> Feed Nutrients composition, feed requirements</li> <li>• <b>Maintain health of livestock along with productivity:</b> Vaccination of cattle, nutrients requirements,</li> <li>• <b>Understand and prepare forage:</b> Forage types, types of storage</li> <li>• <b>Effectively market dairy products like milk, curd, cheese:</b> Milk products, manufacturing, standards, market value, marketing of the product</li> <li>• <b>Ensure safe and clean dairy farm:</b> Hygiene maintenance</li> </ul>		

This course encompasses 8 out of 8 National Occupational Standards (NOS) of “Dairy farmer/ Entrepreneur” Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p><b>Introduction</b></p> <p><b>Theory Duration</b> (hh:mm) 5:00</p> <p><b>Practical Duration</b> (hh:mm) 0:00</p> <p><b>Corresponding NOS Code</b></p>	<ul style="list-style-type: none"> <li>Understand General Discipline in the class room (Do's &amp; Don'ts)</li> <li>Understand Role of a Dairy Farmer</li> <li>Understand the different indigenous and exotic breeds</li> <li>High milk yielding varieties</li> <li>Selection of Cattle</li> <li>Differentiate Healthy and sick animals</li> <li>Learn and Practice Basic skills of communication</li> <li>Learn and Practice Basic reading capabilities to enable reading of signs, notices and/or cautions at site.</li> </ul>	Laptop, white board, marker, projector
2	<p><b>Prepare and maintain livestock accommodation</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 10:00</p> <p><b>Corresponding NOS Code</b> AGR/N4101</p>	<ul style="list-style-type: none"> <li>Understand the accommodation needs of livestock</li> <li>Understand the different types of accommodation- Head to Head, Tail to tail</li> <li>Understand the best balance between animal health and well-being and available resources</li> <li>Use and recognize tools/equipment used for preparation of accommodation</li> <li>Understand the different methods of waste handling/ management</li> <li>Plan and follow the routine cleaning of animal shed</li> </ul>	Laptop, white board, marker, projector,
3	<p><b>Establish Livestock within accommodation</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/ N4102</p>	<ul style="list-style-type: none"> <li>Understand the required suitable personal protective equipment while establishing livestock in accommodation</li> <li>Check the suitable environment condition of the accommodation before establishing livestock within it</li> <li>Follow the proper handling to minimize stress</li> <li>Understand and follow the safety procedures</li> <li>Ensure cleanliness and follow proper method of waste disposal</li> </ul>	Laptop, white board, marker, projector, cattle shed
4	<p><b>Provide Feed and Water for Livestock</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p>	<ul style="list-style-type: none"> <li>Understand the Feed Composition and quality</li> <li>Understand the nutrients requirement for animals</li> <li>Identify and procure the inputs required for the feed preparation</li> <li>Arrange for various feed and feed</li> </ul>	Laptop, white board, marker, projector, feed components

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Practical Duration</b> (hh:mm) 20:00  <b>Corresponding NOS Code</b> AGR/N4103	supplements essential for animal nutrition and growth <ul style="list-style-type: none"> <li>Follow the Feeding Chart and store feed appropriately</li> <li>Prepare Feed with the mixture of right components or procure quality compound feed from suppliers</li> <li>Provide the feed and water to cattle</li> <li>Understand the wastage minimization</li> </ul>	
5	<b>Maintain Healthy Performance of Livestock</b>  <b>Theory Duration</b> (hh:mm) 5:00  <b>Practical Duration</b> (hh:mm) 10:00  <b>Corresponding NOS Code</b> AGR/N4104	<ul style="list-style-type: none"> <li>Understand the Healthy Animal parameters</li> <li>Treat animals as per animal welfare regulations.</li> <li>Monitor the physical condition of the animals at suitable intervals, and recognize, record and report any abnormal signs</li> <li>Check livestock for presence of external parasites</li> <li>Understand the health maintenance procedure of livestock</li> <li>Understand the pregnancy period of the cattle</li> <li>Take Care during Pregnancy</li> <li>Understand handling of calf</li> <li>Record the health check up of the animal and treatment provided.</li> </ul>	Laptop, white board, marker, projector
6	<b>Performing Hand and Machine Milking</b>  <b>Theory Duration</b> (hh:mm) 10:00  <b>Practical Duration</b> (hh:mm) 25:00  <b>Corresponding NOS Code</b> AGR/N4104	<ul style="list-style-type: none"> <li>Understand the Pre-Milking, Milking and Post Milking activities</li> <li>Understand the Mastitis disease and precautions to be taken</li> <li>Identify and use the milking machine and equipment</li> <li>Understand the adjustments of the machine and equipment</li> <li>Understand and perform proper milking procedures</li> <li>Understand the right milking technique</li> <li>Follow procedure for clean milk production</li> </ul>	Laptop, white board, marker, projector, milking machine, hot water,
7	<b>Forage Conservation</b>  <b>Theory Duration</b> (hh:mm) 10:00  <b>Practical Duration</b> (hh:mm) 15:00  <b>Corresponding NOS Code</b>	<ul style="list-style-type: none"> <li>Gain knowledge about different Fodder crops</li> <li>Understand the right time of harvesting of crops</li> <li>Identify and use the tools and equipments for preparation of forage</li> <li>Understand the method of forage conservation – hay making, silage preparation, chemical treatment etc</li> <li>Understand the method of minimization of spoilage</li> </ul>	Laptop, white board, marker, projector, milking machine, hot water,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	AGR/N4106		
8	<b>Entrepreneurship</b>  <b>Theory Duration</b> (hh:mm) 15:00  <b>Practical Duration</b> (hh:mm) 15:00  <b>Corresponding NOS Code</b> AGR/N4107	<ul style="list-style-type: none"> <li>Understand the Dairy Farming economics and Finance</li> <li>Collect information on Financing Institutions for Dairy farming</li> <li>Estimate the Budget for Dairy farming</li> <li>Understand and update the market information</li> <li>Manage the records of the Business</li> <li>Understand the method of marketing</li> <li>Develop contact with market players</li> </ul>	Laptop, white board, marker, projector
9	<b>Maintain Health and 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>Maintain a clean &amp; efficient workplace</li> <li>Render appropriate emergency procedures</li> <li>Practice General safety and first aid</li> </ul>	Laptop, white board, marker, projector, gloves, first aid
	<b>Total Duration:</b>  <b>Theory Duration</b> (hh:mm) <b>80:00</b>  <b>Practical Duration</b> (hh:mm) <b>120:00</b>	<b>Unique Equipment Required:</b> Laptop, white board, marker, projector, Cattle shed, infrastructure for forage preservation, chaff cutter, milking machine, gloves, 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: “Dairy Farmer / Entrepreneur” mapped to Qualification Pack: “AGR/Q4101, v1.0”

Sr. No.	Area	Details
1	<b>Description</b>	Trainer is responsible for educating the trainees - viability and sustainability of the dairy farm, care of dairy animals, their health and productivity, milking and marketing of the produced milk.
2	<b>Personal Attributes</b>	Trainer should be subject matter expert. He/ she should have good communication skills, leadership skills, observation skills, practical oriented skills
3	<b>Minimum Educational Qualifications</b>	Diploma in Animal Husbandry/Veterinary/ Dairying
4a	<b>Domain Certification</b>	Certified for Job Role: <u>“Dairy Farmer/ Entrepreneur”</u> mapped to QP: <u>“AGR/Q4101, v1.0”</u> . Minimum accepted score is 80%
4b	<b>Platform Certification</b>	Certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted score is 80%
5	<b>Experience</b>	<ul style="list-style-type: none"> <li>• M.V.Sc.</li> <li>• M Sc (Animal Science)</li> <li>• B. V. Sc.</li> <li>• B. Tech (Dairy)</li> <li>• B. Sc Agriculture with 2 years of relevant work experience</li> <li>• Diploma in Veterinary /Animal Husbandry / Dairying) with 3 years of relevant work experience</li> <li>• VLDA (Veterinary livestock development assistant) with 2 years of relevant work experience</li> <li>• Any Graduate with 3 years of relevant work experience</li> </ul>



## Annexure: Assessment Criteria

<b>Assessment Criteria</b>	
<b>Job Role</b>	Dairy Farmer/ Entrepreneur
<b>Qualification Pack</b>	AGR/Q4104, 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	Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS
4	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (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 criterion.
5	To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6	In case of <i>unsuccessful completion</i> , the trainee may seek reassessment on the Qualification Pack.

Assessment outcomes	Assessment Criteria for outcomes	Total Marks (500)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR N4101 Prepare and Maintain Livestock Accommodation	PC1.Prepare animal accommodation which achieves the best balance between animal health and well-being and available resources, consistent with relevant legislation	75	8	4	4
	PC2.Prepare and maintain equipment, tools and materials required for livestock accommodation		6	3	3
	PC3. Follow cleaning routine in accordance with supervisor's instructions		8	4	4
	PC4. Dispose of waste according to established workplace procedures		7	5	2
	PC5. Report any hazards identified, to the supervisor immediately		6	4	2
	PC6. Maintain accommodation in a safe and clean condition for livestock		8	6	2
	PC7.Replenish materials and supplies as required by livestock		6	3	3
	PC8. Clean tools and equipment and maintain according to established workplace procedures		8	3	5
	PC9. Store equipment safely and securely in the assigned location		6	2	4
	PC10.Use working methods and systems which promote health and safety and which are consistent with relevant legislation and codes of practice.		6	2	4
	PC11.Take the appropriate action when monitoring reveals problems or issues with the accommodation		6	2	4
			75	38	37
2.AGR/ N4102 Establish Livestock within Accommodation	PC1.Wear suitable personal protective equipment when establishing livestock in their accommodation	25	2	1	1
	PC2. Check that the equipment, materials and accommodation are suitable for reception of the livestock, prior to their arrival		2	1	1
	PC3.Establish suitable environmental conditions for the animals		2	1	1
	PC4.Handle and move the livestock correctly and safely, according to supervisor's instructions		2	1	1
	PC5. Introduce livestock into the accommodation in a way that minimizes stress and maintains their health and welfare		2	1	1
	PC6. Deal with any difficulties arising according to established workplace procedures		2	1	1
	PC7.Carry out your work according to relevant legislation and codes of practice.		2	2	0

	PC8. Monitor the livestock carefully, to ensure their on-going health and welfare is maintained		2	1	1
	PC9. Monitor environmental conditions carefully to ensure that they promote the health and well-being of livestock		2	1	1
	PC10. Adjust and replenish materials as required by the livestock		2	1	1
	PC11. Arrange for regular cleaning of animal housing areas, floors and mats of animals (if any) according to the animal accommodation and specification.		2	0	2
	PC12. Carry out cleaning routines of animals as per prescribed procedures.		1	0	1
	PC13. Arrange for regular disposal of animal waste and other wastes as per prescribed procedures.		1	1	0
	PC14. Report problems that cannot be dealt with to the supervisor immediately		1	1	0
			25	13	12
3. AGR/ N4103 Provide Feed and Water for Livestock	PC1. check that the correct quantities and types of animal feed have been delivered and that they are in an acceptable condition	100	10	5	5
	PC2. report any shortfalls or faults in delivered animal feed to the appropriate person		5	2	3
	PC3. Handle animal feed safely, and in a way that protects it from damage and contamination and minimizes wastage		6	3	3
	PC4. store animal feed safely according to the manufacturer's recommendations, in the order in which it is to be used		6	4	2
	PC5. check stored animal feed regularly for any signs of pest infestation and report this to the appropriate person straight away		8	4	4
	PC6. Check stock levels regularly and tell the appropriate person if stocks are low.		5	2	3
	PC7. Wash hands effectively before and after handling animal feed		4	0	4
	PC8. Obtain the equipment and materials needed to prepare and serve animal feed		8	3	5
	PC9. Clean work surfaces, utensils and equipment effectively before and after use		6	2	4
	PC10. Arrange for various feed and feed supplements essential for animal nutrition and growth.		8	4	4
	PC11. Mix the appropriate proportions of feed and feed supplements depending on the age and stage of growth of animal.		8	3	5
	PC12. Prepare the correct amount of animal feed as directed in the Feeding Plan in a way that minimizes wastage		6	3	3
	PC13. Operation and maintenance of equipment used in feed preparation e.g. chaff cutter.		2	1	1

	PC14. Use working methods and practices throughout the process that promote health and safety		2	2	0
	PC15. Dispose off any stale and unusable animal feed in a safe place and put equipment and utensils away safely.		2	2	0
	PC16. Wear suitable personal protective equipment when providing feed and water to livestock		2	2	0
	PC17. Supply feed to livestock according to established workplace procedures		2	0	2
	PC18. Supply clean, fresh water to the animals according to their needs		2	2	0
	PC19. Report concerns, related to the feeding and drinking habits of animals, to the supervisor immediately		2	2	0
	PC20. Monitor the condition of feed and water and take the appropriate action when problems occur		2	2	0
	PC21. Clean and maintain feed and water equipment according to established workplace procedures		2	0	2
	PC22. Dispose of waste from the feeding and watering systems safely and correctly, according to established workplace procedures		2	2	0
			100	50	50
4. AGR/ N4104 Maintain Healthy Performance of Livestock	PC1. Treat animals in a manner which complies with relevant legislation, minimizes any likelihood of stress and injury, and maintains their health and well-being	100	6	3	3
	PC2. Provide animals with sufficient and effective opportunities to move, and maintain physical functioning		8	4	4
	PC3. Monitor the physical condition of the animals at suitable intervals, and recognize, record and report any abnormal signs		8	2	6
	PC4. Check livestock for presence of external parasites		8	3	5
	PC5. Carry out specific measures to promote and maintain animals' health and welfare correctly and safely		6	3	3
	PC6. Ensure records are accurate, legible and complete and comply with organizational and legal requirements for future reference		4	3	1
	PC7. Immediately summon assistance for any animals health emergency, and initiate action appropriate to the situation		6	2	4
	PC8. Manage waste safely and correctly in accordance with legislative requirements.		8	2	6
	PC9. Use and store drugs, medication and equipment in accordance with veterinary instructions and organizational policy		8	6	2
	PC10. Use current and uncontaminated prescribed medication only for the intended animal		8	5	3
	PC11. Use the correct technique to give the specified treatment at the correct time		8	4	4

	PC12. Report any difficulties, in administering treatments, immediately to the supervisor		6	3	3
	PC13. Complete records of the treatment accurately, according to established workplace procedures		8	6	2
	PC14. Observe livestock after treatments and report concerns immediately to the supervisor		8	4	4
			100	50	50
5. AGR/N4105 Performing Hand and Machine Milking	PC1. Maintain conducive milking environment	25	2	2	0
	PC2. Restrain the cow in preparing her for milking		2	1	1
	PC3. Prepare Udder before milking		2	0	2
	PC4. Check for mastitis		2	0	2
	PC5. Check and Adjust milking equipment, as required, to ensure correct operating order		2	2	0
	PC6. Carry out livestock health treatments during drying off, as directed, with minimal stress and weight loss		2	2	0
	PC7. Perform Milking using the right technique		2	0	2
	PC8. Establish a calm regular milking routine		1	0	1
	PC 9. Implement milking procedures with minimum stress to livestock and maximum yield within reasonable timeframes		1	1	0
	PC10. Rectify Minor malfunctions of equipment or milking systems are rectified to manufacturer's specifications, and more complex repairs are reported for specialist attention		1	1	0
	PC11. Implement prescribed handling practices so as to prevent cross-infection during milking operations		2	1	1
	PC12. Perform Teat dipping to prevent mastitis		2	1	1
	PC13. Weigh and store the milk into milk can		2	1	1
	PC14. Clean the milking pail and keep them in the designated place		2	0	2
			25	12	13
6. AGR/N4106 Forage Conservation	PC1. Explore various forage conservation options based on the year round requirement of feed and fodder.	75	4	2	2
	PC2. Identify risk factors for spoilage in forage conservation such as fire, vermin and air in silage.		4	3	1
	PC3. Ensure favorable conditions suitable for forage conservation.		5	2	3
	PC4. Prepare forage conservation machinery and equipment in accordance with manufacturer's specifications, Occupational Health and Safety (OHS) requirements.		4	2	2
	PC5. Ensure clear access to paddocks for harvesting and transport machinery.		2	1	1
	PC6. Prepare storage facility for selected forage conservation method.		4	1	3

	PC7. Identify safety hazards and implement OHS procedures for forage conservation.		4	1	3
	Monitor weather conditions to determine optimum time for harvest and to ensure quality.		2	1	1
	PC8. Identify dry matter target and assess dry matter content of forage material for the forage operation.		4	2	2
	PC9.Mow, condition, tender and/or rake swaths depending on weather conditions and forage drying targets.		5	2	3
	PC10.Conduct harvesting activities in a safe, controlled and efficient manner.		5	2	3
	PC11. Check equipment during harvesting operations regularly for wear and damage.		4	2	2
	PC12. Bale, wrap, compact, seal or store forage in accordance with storage plan.		6	4	2
	PC13. Load, transport, and store/compact (if required) forage in accordance with OHS and quality requirements.		4	4	0
	PC14. Store forage so as to minimize risk of spoilage and combustion		6	4	2
	PC15. Dispose of all waste and debris to minimize environmental impacts.		4	2	2
	PC16.Clean and service machinery and ancillary equipment in accordance with manufacturer's specifications, OHS requirements and industry practice.		3	1	2
	PC17.Test or sample stored forage for quality.		3	0	3
	PC18.Mitigate environmental impacts of forage conservation activities such as effluent run off, if any.		2	2	0
			75	38	37
7. AGR/N4107 Entrepreneurship	PC1.Farm Planning and Budgeting with reference to various components of Dairy Farm	75	8	4	4
	PC2.Keep books of accounts and various transactions of the farm		8	4	4
	PC3.Arrange for financial assistance from various quarters in the light of various schemes available for dairy development		6	3	3
	PC5.Ascertain the prices of various inputs and milk and milk products from the market		6	2	4
	PC6. Assess the influence of various quality parameters of the milk on the milk pricing		6	2	4
	PC7.Establish cordial relations with various clients for the benefit of dairy farm development		8	4	4
	PC8.Assess the needs and requirement of the clients and assess one's own unique selling proposition		8	3	5
	PC9.Extract critical market information that is otherwise not in the public domain		6	2	4
	PC10. Choose appropriate buyer in a given situation of market parameters		7	3	4

	PC11. Identify best ways of attracting market price for one's produce		6	3	3
	PC12. Ensure quality before and during the sale activity to ensure good returns.		6	4	2
			75	34	41
8. AGR/N9903 Maintain 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	25	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>Grand 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>70%</b>	