



Model Curriculum

Artificial Insemination Technician

SECTOR: AGRICULTURE & ALLIED SUB-SECTOR: ANIMAL HUSBANDRY OCCUPATION: LIVESTOCK HEALTH MANAGEMENT REF ID: AGR/Q4803, V1.0 NSQF LEVEL: 3





Estin Local abor was-gen war	ASCI Agriculture Skill Council of Indea Certificate	N·S·D·C National Skill Development Corporation
QUALIFI	CURRICULUM COMPLIANCE 1 CATION PACK – NATIONAL OCC STANDARDS	
	is hereby issued by the	
	AGRICULTURE SKILL COUNCIL OF INDIA	
	for the	
	MODELCURRICULUM	
Job Role/Qualification F	Complying to National Occupational Standards o °ack: ` <mark>Artificial Insemination Technician'</mark> OP No. ` <mark>A</mark>	
Date of Issuance: March 24 th , 2018		S.S. Aveg
Valid up to: March 31 st , 2021 * Valid up to the next review date of the Que	ılification Pack	Authorised Signatory (Agriculture Skill Council of India)





TABLE OF CONTENTS

1. Curriculum	01
2. Trainer Prerequisites	04
3. Annexure: Assessment Criteria	05





Artificial Insemination Technician

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a "<u>Artificial Insemination Technician</u>", in the "<u>Agriculture & Allied</u>" Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Artificial Insemination	Technician		
Qualification Pack Name & Reference ID.	AGR/Q4803, v1.0			
Version No.	1.0	Version Update Date		
Pre-requisites to Training	8th Standard passed			
Training Outcomes	 Implement ca breeding, and management recording and Assist in vete technologies for Assist in dev 	 After completing this programme, participants will be able to: Implement cattle breeding service: Cattle breeds and basics of breeding, artificial insemination, assistance to farmers on management of unproductive animals, breeding related data recording and performance monitoring. Assist in veterinary extension services: Promotion of approved technologies for productivity and profitability of farming operations. Assist in development program implementation: Engagement with farmers' institutions, promotion of economic activities, and 		





This course encompasses <u>3</u> out of <u>3</u> National Occupational Standards (NOS) of "<u>Artificial Insemination</u> <u>Technician</u>" Qualification Pack issued by "<u>Agriculture Skill Council of India</u>".

1 Introduction • Understand general discipline in the class room (Do's & Don'ts) Laptop, white board, marker, projector 05:00 • Understand the connect between rural livelihood and livestock farming Laptop, white board, marker, projector 05:00 • Gather Knowledge of serving area / village Laptop, white board, marker, projector 05:00 • Understand the role and responsibilities of Artificial Insemination Technicians Laptop, white board, marker, projector 2 Implementation of cattle breeding services • Understand the female reproductive system of cattle and buffalo. Laptop, white board, marker, projector, Stored reproductive corgen, animal 75:00 • Understand besitos of genetics e.g. Laptop, white board, marker, projector, Stored reproductive corgen, animal 125:00 • Understand be ostrous / reproductive corgen models, Liquid 125:00 • Understand the basics of genetics e.g. Al Gun and accessories, Straws etc. • Understand basic aspect of state breeding policy • Apprecitate the importance of Artificial insemination, proper timing of Al and use appropriate semen straws • Use and maintain Al related equipments and accessories. • Apprecitate and adhere to standard protocol of handling liquid nitrogen and artificial insemination ating care of hygiene, welfare and safety precautions etc. • Understand basic aspects of management of productive / unproductive eanimals, including perpoductive	Sr. No.	Module	Key Learning Outcomes	Equipment Required
breeding servicessystem of cattle and buffalo.marker, projector, Stored reproductive organs, animal models, Liquid nitrogen, Al Gun and accessories, Straws etc.Practical Duration (hh:mm) 75:00Practical Duration (hh:mm) 125:00• Understand oestrous / reproductive cycle in cattle / buffalo vis a vis heat detection, time of insemination etc.marker, projector, Stored reproductive organs, animal models, Liquid nitrogen, Al Gun and accessories, Straws etc.Corresponding NOS Code AGR/N4820• Understand he basics of genetics e.g. Heredity, breeds, objective of breeding, types of breeding, breeding plan at farm level and basic aspect of state breeding policy• Appreciate the importance of Artificial insemination, proper timing of Al and use appropriate semen straws • Use and maintain Al related equipments and accessories.• Appreciate and adhere to standard protocol of handling liquid nitrogen and artificial insemination taking care of hygiene, welfare and safety precautions etc.• Understand basic aspects of management of productive / unproductive disorders, need of proper feeding and supplementation • Understand the extension services required to identify farmers need, organize meetingsboard, marker, projector, Promotion tools		Introduction Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 05:00 Corresponding NOS Code	 Understand general discipline in the class room (Do's & Don'ts) Understand the connect between rural livelihood and livestock farming Gather knowledge of serving area / village Appreciate village institutions and resources within village Understand the role and responsibilities of 	Laptop, white board,
Extension Servicesto identify farmers need, organize meetings etc. and to promote technology and bestprojector, Promotion tools	2	breeding services Theory Duration (hh:mm) 75:00 Practical Duration (hh:mm) 125:00 Corresponding NOS Code	 system of cattle and buffalo. Understand important concepts e.g. Reproductive cell (Sperm / Ova), Fertilization, Foetus, Gestation, parturition, Puberty, fertility, conception Understand oestrous / reproductive cycle in cattle / buffalo vis a vis heat detection, time of insemination etc. Understand the basics of genetics e.g. Heredity, breeds, objective of breeding, types of breeding, breeding plan at farm level and basic aspect of state breeding policy Appreciate the importance of Artificial insemination, proper timing of Al and use appropriate semen straws Use and maintain Al related equipments and accessories. Appreciate and adhere to standard protocol of handling liquid nitrogen and artificial insemination taking care of hygiene, welfare and safety precautions etc. Understand basic aspects of management of productive / unproductive animals, including reproductive disorders, need of proper feeding and supplementation Undertake breeding related animal identification, data recording and 	marker, projector, Stored reproductive organs, animal models, Liquid nitrogen, Al Gun and accessories, Straws
Theory Duration practices across all species as KASA	3		to identify farmers need, organize meetings	projector, Promotion





×	National Skill Development Corporation
Transform	ning the skill landscape

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	(hh:mm) 30:00 Practical Duration (hh:mm) 50:00 Corresponding NOS Code AGR/ N4808	 Technology adoption and extension methods, basics of PRA, Leadership, working with farmer groups, organizational / government extension delivery system. Understand the production cycle of farm animals (all species) Understand the practical aspect of farm input selection and procurement (e.g. organoleptic testing of feed) Understand the basic principles of animal housing Understand the basics of livestock feeding, feed ingredient (including compound feed), fodder variety and preservation. Understand the body condition scoring and selection of animals Understand the hygienic milking and livestock product handling Understand the use of communication devices e.g. mobile applications 	
4	Development program implementation and marketing in livestock sector Theory Duration (hh:mm) 40:00 Practical Duration (hh:mm) 70:00 Corresponding NOS Code AGR/N4810	 Explain the meaning of sustainable development and goal thereof Understand the basic aspect of development project management Undertake basic business planning Understand basics of marketing Familiarize with the government or private organization promoted development programs including those related to insurance. Familiarize with livestock related economic activities and formation of Self Help Groups. Familiarize with the functioning of farmer's institutions and engagement with them. 	Laptop, white board, marker, projector, Promotion tools
	Total Duration: Theory Duration (hh:mm) 150:00 Practical Duration (hh:mm) 250:00	Unique Equipment Required: Laptop, white board, marker, projector, Stored re animal models, Liquid nitrogen, AI Gun and acce promotion tools etc	

Grand Total Course Duration: 400 Hours, 0 Minutes

(This syllabus/ curriculum has been approved by <u>Agriculture Skill Council of India)</u>





Trainer Prerequisites for Job role: "Artificial Insemination Technician" mapped to Qualification Pack: "AGR/Q4803, v1.0"

Sr. No.	Area	Details
1	Description	Trainer provides education and guidance on cattle breeding, management and development related services mostly in the outdoor setting.
2	Personal Attributes	Trainer should have a mind for science, belongingness to the community, compassion for animals, good leadership, communication and observation skills. He / she should be physically strong and have manual dexterity.
3	Minimum Educational Qualifications	Regular Diploma (more than 15 months in veterinary /Animal Husbandry / Dairying)
4a	Domain Certification	Certified for Job Role: " <u>Artificial Insemination Technician</u> " mapped to QP: <u>"AGR/Q4803, 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	 M.V.Sc. M Sc (Animal Science) B. V. Sc. with 1 year of relevant work experience B. Tech (Dairy) with 3 years of relevant work experience B. Sc Agriculture with 4 years of relevant work experience Regular Diploma (more than 15 months in veterinary /Animal Husbandry / Dairying) with 5 years of relevant work experience





Annexure: Assessment Criteria

Job Role	Artificial Insemination Technician
Qualification Pack	AGR/Q4803, v1.0
Sector Skill Council	Agriculture

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 50% of aggregate marks to successfully clear the assessment.

6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.







				Marks Allocation	
Assessment outcomes	Assessment Criteria for outcomes	Total Mark (300)	Out Of	Theory	Skills Practical
1. AGR/N4820 : Implementation of cattle breeding	PC1. help farmers / clients with information on sources of good breeding animals.		5	5	0
services	PC2. assist farmers / clients in selecting animal with proper breed and other characteristics for breeding purpose.		10	3	7
	PC3. detect heat in cattle.		10	3	7
	PC4. use semen of appropriate quality and blood level.		5	3	2
	PC5. follow protocols pertaining to biosecurity, safety, hygiene and welfare		10	5	5
	PC6. follow the prescribed procedures in handling semen straw and in conducting insemination.		30	5	25
	PC7. conduct artificial insemination in time.		5	5	0
	PC8. guide farmers / clients on appropriate feeding practices required for breeding animals e.g. mineral supplementation etc.		10	4	6
	PC9. guide farmers on maintaining optimum number of animals based on breeding plan and suggested performance goal.		5	3	2
	PC10. use field data collection tools (including electronic reader / mobile based data collection) as per given specifications.		5	1	4
	PC11. provide organization with standard required information such as semen used; time of heat, time of insemination, calf born etc. needed to monitor breeding services.	100	5	3	2
			100	40	60
2. AGR/ N4808 Assisting in veterinary extension services	PC1. understand and explain the applicability and benefit associated with common approved technology(s) / best practice(s) in the context of local situations, opportunities and constraints.		35	15	20
	PC2. give feedback on technology application in field and need for improvement (if any).		10	4	20 6
	PC3. organize extension events based on farmer convenience and seasonal suitability.		15	4	11
	PC4. understand and explain quality parameters regarding various farm inputs.		10	5	5
	PC5. scout sources, plan and organize farmers for intelligent (timely, quality and cost based) procurement of inputs.		10	3	7
	PC6. keep record that can help make farmer meeting and farm school activities 'targeted' and	100	10	4	6







	'need based'				
	PC7. Use modern communication devices, audio- visual aids to explain farmers / clients.		10	5	5
			100	40	60
3. AGR/ N4810 Development program	PC1. promote awareness of programs and help in targeted beneficiary selection as envisioned in the promoted project / program.		10	4	6
implementation and marketing in livestock sector	PC2. work with selected project beneficiaries in implementing activities as envisaged in promoted programs.		10	2	8
	PC3. attend and cooperate during meetings / programs of farmer's institutions / panchayats.		10	2	8
	PC4. inform / involve farmer leaders / panchayat functionaries in selection of program beneficiaries.		10	2	8
	PC5. facilitateorganizations's / panchayat's endeavor to ensure convergence of development projects for synergy.		5	5	0
	PC6. motivate and handhold formation of self- help groups.		15	5	10
	PC7. guide farmers on business options and basic economics of various livestock linked activities.		15	5	10
	PC8. motivate farmers to produce for market and ensure aggregation, collective marketing of livestock products.		10	5	5
	PC9. provide market related e.g. prices etc. information to farmers.		7	2	5
	PC10. provide information on livestock farm inputs e.g. feed, fodder, supplements etc.	100	8	8	0
			100	40	60