

COURSE CURRICULA

On

Animal Husbandry

**Under Skill Development Initiative (SDI) Scheme
Based on
Modular Employable Skills (MES)**



**Government of India
Ministry of Labour & Employment
Directorate General of Employment & Training (DGE&T)**

**Course Curriculum under Skill Development Initiative Scheme (SDIS) based on
Modular Employable Skills (MES) in Animal Husbandry Sector**

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List of members attended the Trade Committee Meeting for designing the course curriculum on
Animal Husbandry Sector under Skill Development Initiative Scheme (SDIS) based on
Modular Employable Skills (MES)

Shri S.D.Lahiri, Director, CSTARI., Salt Lake, Kolkata

Sl No.	Name of the Member & Designation (In Block Letter) S/Shri	Representing Organization with full address	Signature
01	Swapan Mohapatra, Director	HDF Gramin ITC, Balasore	Chairman
02	R.K.Das Mohapatra, Horticulturist	Dept. of Horticulture, Mayurbhanj, Orissa	Member
03	Rabi Narayan Senapati, Soil Chemist	Soil Management Office, Mayurbhanj	Member
04	Nirmalendu Das, Expert	Institute of Biofertiliser, Balasore	Member
05	Bijoy Kumar Das, Ex- Horticulturist	Govt. of Orissa	Member
06	Dr. Ranjoy Kumar Giri, Ex- Agro Officer	Soil Conservation Deptt., Govt. of Orissa	Member
07	Ranjan Kumar Kar, SMS (Forestry)	Krishi Vigyan Kendra, Balasroe	Member
08	T.R.Mohanty, Senior Manager	Agro Industry, Orissa	Member
09	Dr. A.K.Sanigrihi, Scientist	DRDO, Balasore	Member
10	Dr. Sangram Keshari Swain, Programme Co-ordinator	Krishi Vigyan Kendra, Balasroe	Member
11	K.M.Pattanaik, Retd. Addl. Director	DTET, Govt. of Orissa	Member
12	Er. N.R.Pattanaik, Principal	I.T.I., Balasore	Member
13	Dilip Ranjan Sarangi, Soil Chemist	Soil Management Office, Mayurbhanj	Member
14	Sudarsan Das, Trustee & Secretary	HDF <u>Gramin ITC, Balasore</u>	Member
15	Mrs. Sanghamitra Pattanaik, Senior Manager	Horticulture Deptt., Krishi Vigyan Kendra, Govt. of Orissa	Member
16	Dr. Dinabandhu Mohapatra, Chief Dev. Officer	Animal Husbandry Deptt., Govt. of Orissa	Member
17	Pradip Chandra Das, Retd. Asstt. Agricultural Officer	RIT, Bolangir	Member
18	Mrs. Manasi Bhol, Senior Manager	Horticulture Deptt., Krishi Vigyan Kendra, Govt. of Orissa	Member
19	Dr. Deep Choudhury, Retd. Chief Dev. Officer	Animal Husbandry Deptt., Govt. of Orissa	Member
20	Dr Keshab Chandra Panda,	HDF, Gramin ITC, Balasore	Member

	Principal		
21	Dr. Dayanidhi Patra	People for animal	Member
22	Santosh Kumar Maharana, Training Officer	DDA. Baripoda	Member
23	Hrushikesh Mahanty, Instructor	HDF Gramin ITC, Balasore	Member
24	Bhupati Kumar Patra	HDF Gramin ITC, Balasore	Member
25	Debasish Mahapatra	HDF Gramin ITC, Balasore	Member
26	Radhagovinda Puhan	VS, Badasdhi	Member
27	Bimbadhar Dwibedy,	Dairy Entrepreneur	Member
28	Rabindra Nath Patra, Coordinator	HDF Gramin ITC, Balasore	Member
29	Haribandhu Biswal, Deputy Director	Horticulture Dept. Govt. of Orissa	Member
30	Tushan Ranjan Mohanty	HDF Gramin ITC, Balasore	Member
31	Dilip ranjan Sarangi	HDF Gramin ITC, Balasore	Member
32	Kishore Chandra Sahu	Krishi Bigayn Kendra, Mayurbhanj	Member
33	Sachindra Dalabehera, Instructor	HDF Gramin ITC, Balasore	Member
34	G Giri, Deputy Director	RDAT, Salt Lake, Kolkata	Member
35	R.N.Manna, T.O.	CSTARI, Salt Lake, Kolkata	Member

**List of members attended the Trade Committee Meeting for designing the course curriculum on
Animal Husbandry Sector under Skill Development Initiative Scheme (SDIS) based on
Modular Employable Skills (MES)**

Shri S.D.Lahiri, Director, CSTARI., Salt Lake, Kolkata

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01	Choudhury Swapan Kr. Mohapatra, Director	HDF- Gramin ITC, Angardadia, Mayurbhanj, Orissa	Chairman
02	Dr. J. N. Panda, Ex- Director, CARI	ICAR, Govt. of India	Member
03	Dr. Dayanidhi Patra	People for Animal	Member
04	Dr Keshaba Charana Panda, Principal	HDF, Gramin ITC, Mayurbhanj	Member
05	Dr. Prabartak Parida, Ex-Dy Director	Dept. of Animal Husbandry Govt. of Orissa	Member
06	Dr. Manoj Kr. Behera, Ex- Dy Director	OBPI, Govt. of Orissa	Member
07	Dr. Gangadhar Roul, Asstt. Director	Vety. Officer, Balasore	Member
08	Bhupati Kr. Patra	Lecturer, HDF, Gramin ITC	Member
09	Rabindra Nath Patra, Coordinator	HDF Gramin ITC	Member
10	Dr. G. Pattnaik, GM	BBAMUL, Balasore	Member
11	K. C. Rana, Dairy Extension Overseer	BBAMUL, Balasore	Member
12	Dillip Kumar Jena, Sift In charge	Omfed Dairy Plant, Remuna, Balasore	Member
13	R. N. Sahu, Plant In charge	Omfed Dairy Plant, Remuna, Balasore	Member
14	Bimbadhar Dwibedi, Dairy Supervisor	Gramin Agro Resources Pvt. Ltd., Mayurbhanj	Member
15	Daitari Chand, Manager, Dairy farm	Gramin Agro Resources Pvt. Ltd., Mayurbhanj	Member
16	Lambodar Singh, Dairy Supervisor	Gramin Agro Resources Pvt. Ltd., Mayurbhanj	Member
17	Ram Chandra Hansda, Dairy Supervisor	Gramin Agro Resources Pvt. Ltd., Mayurbhanj	Member
18	Satyanjan Durga, President	Patalipura Milk Chilling Plant, Patalipura, Mayurbhanj	Member
19	MC Sharma, Joint Director	CSTARI, Kolkata	Member
20	LK Mukherjee, Deputy Director	CSTARI, Kolkata	Member

Skill Development based on Modular Employable Skills (MES)

Introduction:

Livestock plays an important role in the socio-economic life of India. It is a rich source of high quality foods such as milk, meat and eggs. With a large human population and about 250 million economically strong potential consumers, the domestic demand for these food products are increasing rapidly, the demand often exceeding the supply. After China, India provides a major consumer base for human foods in the world. In India, livestock provides a regular supplementary income and employment not only to millions of producers in the rural areas but also to very large number of people engaged in secondary and tertiary business related to livestock business. It is an important occupation and a source of family income large number of women in the villages. Besides providing organic manure for the soil, livestock is also an important source of several value-added byproducts of animal origin which presently are not properly processed and utilized as a commercial activity but have an immense future business potential.

Background

The need for giving emphasis on Skill Development, especially for the educated unemployed youth (both for rural & urban) has been highlighted in various forums. Unfortunately, our country's current education system does not give any emphasis on development of skills. As a result, most of the educated unemployed youths are found wanting in this area, which is becoming their Achilles heel.

As India is on the path of economic development and the share of service sector's contribution to the GDP of the country is increasing (53% of GDP) it is becoming imperative that Government of India along with other nodal agencies play an important role in providing employable skills, with special emphasis on Skills.

Hence, need of the hour is some policy change at Apex level which will address the needs of the changing economy and look at providing mandatory skills training to all educated unemployed youths, with a view to have them gainfully employed. This shift in policy will ultimately benefit all the stake holders, namely the individuals, industry, Government and the economy by way of providing employment, increasing the output/productivity and ultimately resulting in a higher GDP for the nation.

- **Frame work for skill development based on 'Modular Employable Skills (MES)'**
Very few opportunities for skill development are available for the above referred groups (educated unemployed youth). Most of the existing skill development programmes are long term in nature. Poor and less educated persons cannot afford long term training programmes due to higher entry qualifications, opportunity cost, etc. Therefore, a new framework for skill development has been evolved by the DGET to address the employability issues.

The **key features of new framework for skill development** are:

- Demand driven short term training courses based on modular employable skills decided in consultation with Industries.
- Flexible delivery mechanism (part time, week ends, full time)
- Different levels of programmes (foundation level as well as skill up gradation) to meet demands of various target groups
- Central Government will facilitate and promote training while vocational training (VT) providers under the Govt. and Private Sector will provide training

- Optimum utilization of existing infrastructure to make training cost effective.
- Testing of skills of trainees by independent assessing bodies who would not be involved in conduct of the training programme, to ensure that it is done impartially.
- Testing & certification of prior learning (skills of persons acquired informally)

The Short Term courses would be based on “Modular Employable Skills (MES)”.

The **concept for the MES** is:

- ✓ Identification of minimum skills set. Which is sufficient to get an employment in the Labour market.
- ✓ It allows skills upgradation, multi skilling, multi entry and exit, vertical mobility and life long learning opportunities in a flexible manner.
- ✓ It also allows recognition of prior learning (certification of skills acquired informally) effectively.
- ✓ The modules in a sector when grouped together could lead to a qualification equivalent to National Trade Certificate or higher.
- ✓ Courses could be available from level 1 to level 3 in different vocations depending upon the need of the employer organisations.
- ✓ MES would benefit different target groups like:

Workers seeking certification of their skills acquired informally
 Workers seeking skill upgradation
 Early school drop-outs and unemployed
 Previously child Labour and their family

INTRODUCTION

Economic growth in India is increasingly supported by robust industrial growth. **Animal Husbandry Sector** is one of the relatively lesser known but significant sectors that support almost all industrial activity. However, notwithstanding its importance and size (INR 4 trillion), it has traditionally not been accorded the attention it deserves as a separate sector in itself. The level of inefficiency in **Animal Husbandry** activities in the country has been very high across all modes.

The required pace of efficiency and quality improvement will demand rapid development of capabilities of **Animal Husbandry** service providers. And with **Animal Husbandry Sector** being a service oriented sector, skill development will emerge as a key capability.

This lack of focus on developing manpower and skills for the **Animal Husbandry Sector** has resulted in a significant gap in the numbers and quality of manpower in the sector.

This gap, unless addressed urgently, is likely to be a key impediment in the growth of the **Animal Husbandry Sector** in India and in consequence, could impact growth in industry and manufacturing sectors as well.

This underscores the need identifying areas where such manpower and skill gaps are critical, and developing focused action plans to improve the situation.

A look at the required initiatives for manpower development in the sector makes it clear that sustainable development of the sector's manpower requires a collaborative public private effort. The level of commitment demonstrated by each stakeholder would largely determine the direction that the sector heads towards.

Age of participants

The minimum age limit for persons to take part in the scheme is 14 years but there is no upper age limit.

Curriculum Development Process

Following procedure is used for developing course curricula

- Identification of Employable Skills set in a sector based on division of work in the Labour market.
- Development of training modules corresponding to skills set identified so as to provide training for specific & fit for purpose
- Organization of modules in to a Course Matrix indicating vertical and horizontal mobility. The course matrix depicts pictorially relation among various modules, pre requisites for higher level modules and how one can progress from one level to another.
- Development of detailed curriculum and vetting by a trade committee and by the NCVT

(Close involvement of Employers Organizations, State Governments and experts, vocational

Training providers and other stakeholders are ensured at each stage).

Development of Core Competencies

Possession of proper attitudes is one of the most important attributes of a competent person. Without proper attitudes, the performance of a person gets adversely affected. Hence, systematic efforts will be made to develop attitudes during the training programme. The trainees deal with men, materials and machines. They handle sophisticated tools and instruments. Positive attitudes have to be developed in the trainees by properly guiding them and setting up examples of good attitudes by demonstrated behaviours and by the environment provided during training.

Some important core competencies to be developed are:

1. Communication skills
2. Better usage of English language/Vernacular
3. Presentation skills
4. Self management
5. Resume preparation
6. GD participation/facing techniques
7. Interview facing techniques

Following competencies should also be developed during level-II and higher courses:

1. Ability for planning, organizing and coordinating
2. Creative thinking, problem solving and decision-making
3. Leadership
4. Ability to bear stress
5. Negotiation

Duration of the Programme :

Time taken to gain the qualification will vary according to the pathway taken and will be kept very flexible for persons with different backgrounds and experience. Duration has been prescribed in hours in the curriculum of individual module, which are based on the content and requirements of a MES Module. However, some persons may take more time than the prescribed time. They should be provided reasonable time to complete the course.

Pathways to acquire Qualification:

Access to the qualification could be through:

- ✘ An approved training Programme.

Methodology

The training methods to be used should be appropriate to the development of competencies. The focus of the programme is on “performing” and not on “Knowing”. Lecturing will be restricted to the minimum necessary and emphasis to be given for learning through active participation and involvement.

The training methods will be individual centered to make each person a competent one. Opportunities for individual work will be provided. The learning process will be continuously monitored and feedback will be provided on individual basis.

Demonstrations using different models, audio visual aids and equipment will be used intensively.

Instructional Media Packages

In order to maintain quality of training uniformly all over the country, instructional media packages (IMPs) will be developed by the National Instructional Media Institute (NIMI), Chennai.

Assessment

DGE&T will appoint assessing bodies to assess the competencies of the trained persons. The assessing body will be an independent agency, which will not be involved in conducting the training programme. This, in turn, will ensure quality of training and credibility of the scheme. Keeping in view, the target of providing training/testing of one million persons through out the country and to avoid monopoly, more than one assessing bodies will be appointed for a sector or an area.

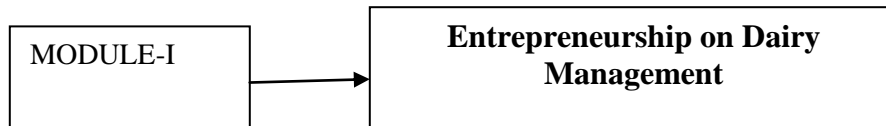
Certificate

Successful persons will be awarded competency-based certificates issued by **National Council for Vocational Training (NCVT)**.

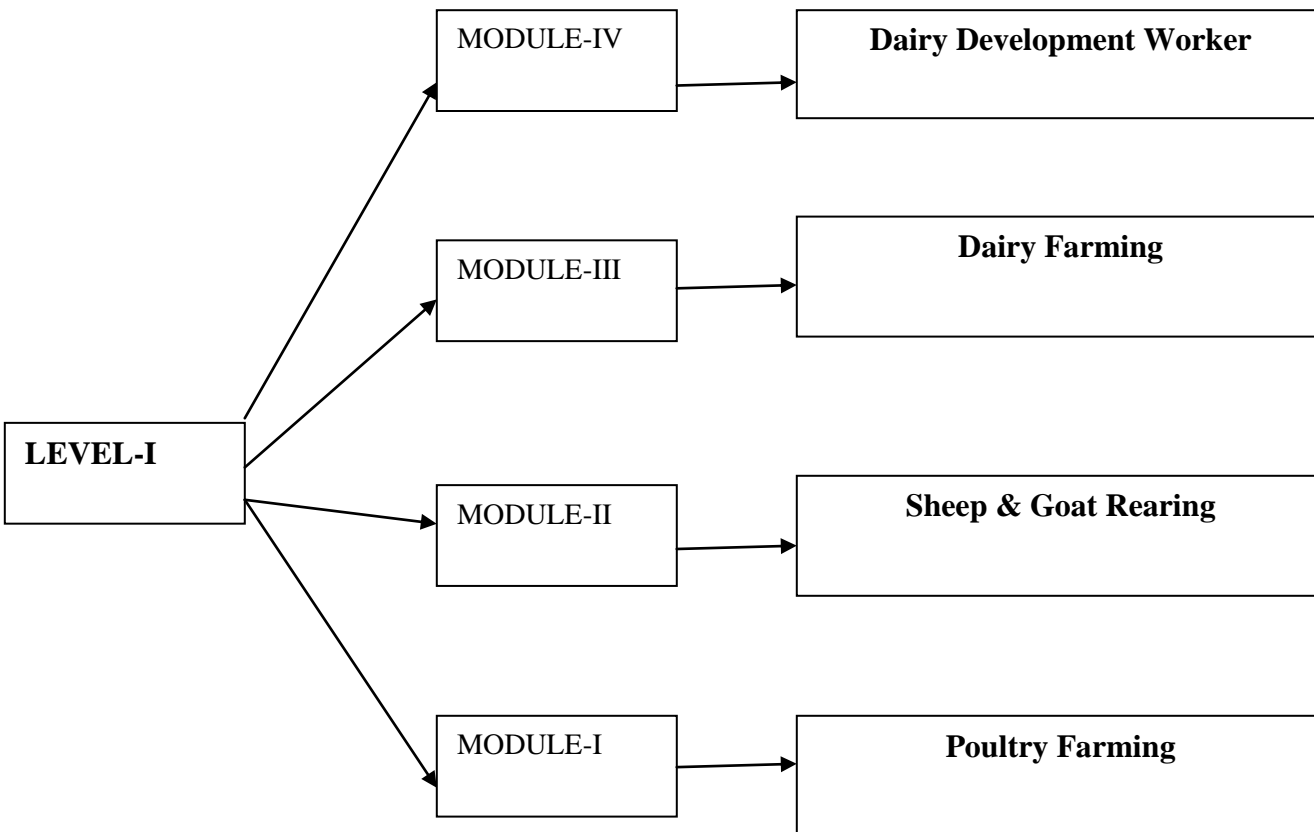
Course Matrix

Animal Husbandry

LEVEL- II



LEVEL- I



Level - I
Module No-I

Name	:	Poultry Farming
Sector	:	Animal Husbandry
Code	:	ANH101
Entry Qualification	:	8th class
Age	:	18 years
Terminal Competency	:	On completion of training the trainees will be able to manage poultry farming activities in hygienic way for quality breed production
Duration	:	480 hours

CONTENTS:

Practical	Theory
Exposure visit to private & Govt. poultry farms for basic knowledge in management of broiler & layers.	Knowledge of General Safety, health and hygiene Poultry a source of income, different type of poultry: Broiler, Layer, Dual type
Identification of different breeds	Selection of different poultry breeds and their efficiency.
Housing	Selection of site for poultry farms & methods of rearing, housing.
	Construction of house in deep litter system of housing: Brooder housing, grower house, Layer house. Chick rearing and brooder house management: Feed, Water, Light, Temperature
Accounts keeping, Maintenance of Registers & Records, preparation Balance Sheets etc.	Accounts keeping, Maintenance of Registers & Records, preparation of Balance Sheets etc.
Feeding and watering	Feeding and watering management.
	Utilization of different fodder and earthworm
	Grower management in deep litter system.
	Layer Management in deep litter system.
Identification of diseases and control measures, vaccination, medication, etc.	Ventilation & litter Management: Treatment of wet litter, Stirring, Decontamination.
	Common poultry diseases: Bacterial discuss, Viral diseases, Parasitic and protozoan diseases, Fungal diseases & mycotoxicosis in poultry.
Demonstration for sanitation management in poultry farm	Vaccination against RD, IBD, Fowl pox, marex diseases. Advanced vaccination procedure and prevention methods
	Bio security-litter management, Ecto parasite management & economy of poultry faming.

LIST OF TOOLS AND EQUIPMENT (For a batch of twenty trainees)

Sl. No.	Item	Number/Quantity
1.	Poultry with watering, feeding and lighting facility	As required

Level - I

Module No-II

Name : **Sheep & Goat Rearing**

Sector : **Animal husbandry**

Code : **ANH102**

Entry Qualification : **8th class**

Age : **14 years and above**

Terminal Competency : After completion of training the trainees will be able

- To maintain sheep and goat farm in hygienic way and produce quality breed.
- To provide first aid service to the live stocks.

Duration : **150 hours**

CONTENTS:

Practical	Theory
Two days of exposure visit to Govt./private sheep & goat farm	Knowledge of General Safety, health and hygiene Importance of sheep & goat in the livestock farming various dimensions of sheep & goat rearing future of advanced sheep & goat farming in India.
	Indian breeds of sheep & goat & their distribution.
Identification of different breeds of sheep & Goat	Breeding and genetic improvement
Demonstration of parts. Demonstration of parts of female genitalia by specimen/models	Housing and management. Heat detection, symptom and heat in sheep and goats. Care & management heifers, pregnant animals, management of sheep and goats after newborn and care of newborn.
Demonstration of Housing of sheep and goat	
Fodder cultivation	Feeding & feed formulation. (Principle of feeding, alternative source of cattle feed, formulation of feed with different ingredients.)
Audio visual demonstration of various diseases and its symptoms and prevention	Various diseases of sheep & goat & their prevention: Viral diseases- FMD, PPR, Rabies, sheep & goat pox, contagions ecchyma, Blue tongue. Bacterial- Tetanus, H.S, Foot root, Enterotoxaemia, pneumonia, CCPP. Fungal- Dermatormycosis, Ringworm. Parasitic- Fasciola, Amphistome, Haemonchus. Bunostomum, Tapeworm infection & Ectoparasites- Lice, Ticks, Mite, Protozoan diseases- Coccidia, Toxoplasma, Babesia
Accounts keeping, Maintenance of Registers & Records, preparation Balance Sheets etc.	Farm economics, Insurance, planning and management. Daily routine in a farm, maintenance of records, human resource management, planning for further development and profit. Accounts keeping, Maintenance of Registers & Records, preparation of Balance Sheets etc.

LIST OF TOOLS AND EQUIPMENT (For a batch of twenty trainees)

Sl. No.	Item	Number/Quantity
1.	Stiff Brushes	5
2.	Floor Brushes	6
3.	Ear tags	100
4.	Drenching bamboo	2
5	Enamel tray	2
6	Tongs	2
7	Buckets	3
8	Strip cup	1
9	Chaff cutter hand operated	1
10	Centrifuge	2
11.	Measuring tape	2
12	Khurpi	3
13	Knife	3
14	Iron pans	5
15	Crowbar	1
16	Muffle furnace	1
17	Gloves	20

Level - I

Module No- III

Name : **Dairy Farming**

Sector : **Animal Husbandry**

Code : **ANH103**

Entry Qualification : **8th class**

Age : **14 years and above**

Terminal Competency : After completion of training the trainees will be able

- To maintain dairy in hygienic way and produce quality milk
- To provide first aid service and artificial insemination to the live stocks.

Duration : **180 hours**

CONTENTS:

Practical	Theory
Visit to a Dairy Farms	Knowledge of General Safety, health and hygiene Introduction to scope of dairy farm. Housing, management and sanitation of dairy farm.
Demonstration of parts of cattle	Different body parts of cattle.
Identification of different breeds of cattle.	Different breeds of cattle & buffaloes.(Indian breeds of cattle & buffaloes, Orissa breeds, exotic breeds of cattle). Genetic improvement through breeding & types of breeding (What is breeding, cross breeding, inbreeding, out breeding, Grading, importance of exotic, inheritance at 50% level)
Demonstration of parts of female genitalia by specimen / models.	Male & female reproductive organs.
Demonstration process of AI, AI equipments. Demonstration of Housing of cattle	A.I. technique, optimum time of A.I., its advantage & disadvantage A.I. equipments. Heat detection, symptom and heat in cows & buffaloes. Care & management heifers, lactating animals, pregnant animals, management of cows after calving & care of newborn.
Process of milching and Testing of milk quality.	Collection procedure and type of milching. Quality parameters of milk.- Fat content and SNF
Marketing of milk.	Feeding & feed formulation. (Principle of feeding, alternative source of cattle feed, formulation of feed with

	different ingredients.)
Identification and cultivation of Fodder	Fodder cultivation & economic milk production. (Different types of fodder, grasses-seasonal & perennial, combination of grass and leguminous fodder, economic milk production through fodder feeding.)
Inoculation practice	First aid and treatment of common problems & ailments. (Tympani, Diarrhoea, fever, Anorexia, wounds, fracture etc.)
Practice of First aid and treatment of common problems & ailments. Pathological Test of different fical samples	Management of Ecto and Endo parasitic diseases of cattle. (Ticks, Mites, Lice, Mange, Liver flukes, strongyles, Tapeworms etc.)
Identification of diseases and its symptoms.	Different viral and bacterial diseases of cattle, their prevention & control. (H.S, B.Q, Anthrax, Mastitis, JD, FMD, Rinderpest, BMC, BVD, IBR, Vaccination procedure and control.) Various diseases of cattle's & their prevention: Viral diseases- FMD, PPR, Rabies, cattle pox, contagions eccthyma, Blue tongue. Bacterial- Tetanus, H.S, Foot root, Enterotoxaemia, pneumonia, CCPP. Fungal- Dermatormycosis, Ringworm. Parasitic- Fasciola, Amphistome, Haemonchus. Bunostomum, Tapeworm infection & Ectoparasites- Lice, Ticks, Mite, Protozoan diseases- Coccidia, Toxoplasma, Babesia Different metabolic diseases of cattle & their management & prevention. (Milk fever, Hypomagnesaemia, polioencephalia, ketosis etc)
Accounts keeping, Maintenance of Registers & Records, preparation Balance Sheets etc.	Accounts keeping, Maintenance of Registers & Records, preparation of Balance Sheets etc.
Visit to successful Dairy Farm, Co-operative Society & live stock markets.	Dairy farm economics, Insurance, planning and management. (Daily routine in a farm, maintenance of records, human resource management, planning for further development and profit.

LIST OF TOOLS AND EQUIPMENT (For a batch of twenty trainees)

Sl. No.	Item	Number/Quantity
1.	Stiff Brushes	5
2.	Floor Brushes	6
3.	Ear tags	100
4.	Bull nose ring	2
5.	Bull rope	10 ft.
6.	Milk strainer	5
7.	Drenching bamboo	2
8.	Enamel tray	2
10.	Tongs	2
11.	Mouth gag	1
12.	Cattle Travis (Iron)	2

13.	Sanitary Milking pails	2
14.	Buckets	3
16.	Strip cup	1
17.	Chains for cows	5
18.	Chains for calves	5
19.	Chaff cutter hand operated	1
22.	Centrifuge	2
23.	Refrigerator	1
25.	Spirit Lamp	2
27.	PH meter	2
28.	Compound microscope	2
30.	Gerber centrifuge	1
31.	Lactometer with jars	5
32.	Milk plunger	1
47.	Milk measures – 250 ml	1
	-do- - 500 ml	1
	- do - 1 litre	1
53.	Measuring tape	2
54.	Khurpi	3
55.	Knife	3
56.	Iron pans	5
57.	Crowbar	1
58.	Muffle furnace	1
59	Gloves	20

LIST OF GLASSWARE

1.	Clinical thermometer	2
3.	Automatic tilt measure for sulphuric acid	5
4.	Automatic tilt measure for amyl alcohol	5
5.	Pipette for milk 11.05 ml	10
7.	Dairy Thermometer	5
8.	Lactometer jars (aluminium)	5
9.	Burettes (0.01 sub-division)	10
10.	Pipette 10 ml	10
12.	Beakers 100 ml	5
	250 ml	5
	500 ml	5
	1000 ml	5
13.	Test tubes cap. 15 ml	50
14.	Milk bottles 250 ml	100
18.	Funnels 10 cm dia	10
19.	Measuring Cylinders 100 ml	2
	500 ml	2
	1000 ml	2
23.	Wash bottles cap. 500 ml	10
24.	Glass rods	1 kg.
26.	Sample bottles	50
27.	Pipette, graduated 10ml 0.1 ml div.	5
28.	Pipette, graduated 10 ml	

	1 ml division	5
31.	Syringe 5 ml	2
33.	Spring Balance	1
34.	Test tube stand 6 TT	15
35.	Test tube holder	10
36.	Alkali detergents	1 kg.
38.	Filter paper (11 cm dia)	2 boxes
39.	Brushes to clean glassware	6
40.	Plastic aprons	6
42.	Cotton apron	10
43.	Gloves with sleeves	10
44.	Mastitis kit	02
45.	AI Gun	02
46.	Breeders alcohol thermometer	02

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Level - I

Module No- IV

Name : **Dairy Development Worker**

Sector : **Animal Husbandry**

Code : **ANH104**

Entry Qualification : **8th class**

Age : **14 years and above**

Terminal Competency : After completion of training the trainees will be able

- To work for the Dairy/Cattle Development.

Duration : **180 hours**

Practical	Theory
Demonstration of Anatomy and physiology of Animals Demonstration of healthy and sick animals.	Details of external and Internal Anatomy and physiology of Animal (cow and buffaloes.) 1- Temperature Pulse rate. 2- Indicators of sound health. 3- Symptoms of sick Animals
Role play of Dairy development worker & Milk Producer	Educating farmers regarding importance of improved breeds through Artificial insemination. Importance of Animal, Health, orientation of farmers regarding various breeds of cows & buffaloes.
Visit to a fodder demonstration Farm	Importance of feeding and management to improve Milk Production. Importance of cattle feed & green fodder & Urea treatment of straw. Introduction to fodder cultivation.
Demonstration of ideal Dairy farm	1- Sanitation hygiene and maintenance of cattle shed. 2- clean milk production 3- Ideal milking Conditions 4- Importance of ventilation and safe drinking water for animals.
Importance of first Aid at Village level its benefit to milch animals and cattle owners. Demonstration of first Aid medicine & Management of external injuries	Basics of First Aid Treatment. Prevention of diseases at primary stage. Basic knowledge of first aid treatment of wounds, external, internal injuries and Medicines and home remedies.
Demonstration of Vaccination, Role play of dairy development worker in promotion of vaccination programme in milch animals.	Removal of basic social hindrance to immunization programme in animals. Vaccination schedule and doses. Importance of deworming, awareness or contagious and non contagious diseases of Animals.
Demonstration of Cross Breed cows/up graded buffaloes. Practice A.I. with the help of phantom box. Thawing of semen straw, preparation of AI gun maintenance of LN2 container. Visit to semen bank, Goshala, Vet. hospitals.	Detection of heat in Animals. Oestrous cycle. Details of Male & Female reproductive organs. Management of pregnant animal, new bred calf. Follow up of AI

LIST OF TOOLS AND EQUIPMENT (For a batch of twenty trainees)

SI No	Name of the items	Quantity
1	Computer with latest configuration	01
2	White/black board	2
3	Flip chart	2
4	First aid kit	1
5	AI Kit	1
6	Castrator 13” and 18”	1 each
7	Poster	6
8	Models	6
9	Charts	12
10	Audio visual aid	As required
11	OHP	1
12	Ln2 container	3
13	Microscope	1
14	Eartag machine	1
15	Phantom box	1

Level - II

Module No- I

Name : **Entrepreneurship on Dairy Management**

Sector : **Animal Husbandry**

Code : **ANH 205**

Entry Qualification : **Graduate in any discipline**

Age : **20 years and above**

Terminal Competency : After completion of training the trainees will be able to manage dairy business

Duration : **360 hours**

Practical	Theory
Exposure to dairy farm	Knowledge of General Safety, health and hygiene Entrepreneurship Development Programme (EDP) on Dairy. Motivational inputs, Distinction between Entrepreneur, Enterprise & Entrepreneurship, Qualities of a successful Entrepreneur, Achievement Motivation Training.
Exposure visit to different farm, Laboratories, Processing Units, milk production units, Export Market etc.	
Market Survey and cost analysis	Market Survey: How to conduct Market Survey for milk and dairy products.
Project Formulation: Preparation of Preliminary Project Report, Detailed Project Report, Presentation	Business Opportunity Guidance (BOG), Product Selection, Project Identification. All variety of Projects on Dairy farming and dairy products.
Interaction with successful entrepreneur.	Dairy farm economics, Insurance, planning and management. Daily routine in a farm, maintenance of records, human resource management, planning for further development and profit.
Demonstration of AI and heat detection	Different breeds of cattle & buffaloes Reproductive organ of males and female animals Pregnancy and its diagnosis. Restraining of animals Artificial insemination and heat detection
Demonstration of First aid on cattles.	Signs of healthy and sick animals. Veterinary first aid. Deworming of animals Control of ticks, lice etc. Vaccination.
Visit to dairy farms. Demonstration on Accounts keeping, Maintenance of Registers & Records, preparation Balance Sheets etc.	Housing for various categories of animals. Cooling system in animal housing. Management of calves, heifers, pregnant animals and dry stock etc. Record keeping.
Demonstration on formation of ration for cattles.	Feeding of animal for more milk production. Balanced cattle feed, pye pass protein feed, mineral mixture, urea molasses mineral mixture block feeding.
Visit to feed processing and visit to fodder farms.	Total mixed ration (TMR) Summer, kharif and rabi crops. Ratio between dry and green fodder. Preparation of hay and silage.

	Urea treatment of wheat/paddy straw.
Demonstration on ideal Dairy farm for milk production	Milking process, use of various milking techniques etc. Cleanliness of milker. Selection/cleanliness of utensils. Storage and cooling of milk- bulk milk coolers. Controls of flies, insects, rodents etc in the shed.
Demonstration on milk processing plant and its products.	Milk procurement, transportation, pricing. Reception of milk; weighing, sampling, platform tests. Chilling and storage. Pasteurisation. Cream separation. Butter making. Indigenous milk products- paneer, khoa, ghee, whey. Standardisation of milk. Sterilization. Refrigeration and boiler
Visit to successful Dairy Farm, Co-operative Society & live stock markets.	Milk cooperative society and its management.
<p><u>Cross occupational competency</u></p> <p>Development of Organizing and implementation of exercises/task</p> <ul style="list-style-type: none"> • Systematic approach • Accuracy • Efficient work • Carefulness • Planning & Organizing <p>Development of Communication & Cooperation</p> <ul style="list-style-type: none"> • Suitable behaviour towards customers • Influence in skill • Creativity in presentation & projection • Multi cultural skills <p>Development of mental technique</p> <ul style="list-style-type: none"> • Risk taking skill • Managing challenges • Ability to draw analogies • Thinking ahead • Ability to transfer • Creativity <p>Development of independency & responsibility</p> <ul style="list-style-type: none"> • Ability to make judgment • Reliability • Holding an opinion <p>Awareness of quality</p> <p><u>DEVELOPMENT OF OCCUPATIONAL COMPETENCY</u></p> <ul style="list-style-type: none"> • Leadership skills • Problem solving skills • Organising and Co-ordination skills • Critical thinking • Decision Making 	<p>Organizing and implementation of exercises</p> <p>Communication & Cooperation</p> <p>Learning methods and mental technique</p> <p>Independency & responsibility</p> <p>Different type of Leadership styles and creative leadership</p>

Entrepreneurship on Dairy Management

Tools and Equipments (For Twenty Students)

SL NO	NAME OF THE TOOLS AND EQUIPMENTS	QUANTITY
1	Bulk Milk Cooler	1
2	Milking Machine	1
3	Weighing Machine	1
4	Test Tube	50
5	Test tube Holder	10
6	Spirit Lamp	10
7	Stand For Barometer	5
8	Barometer	5
9	Conical Flask	5
10	Lacto Meter	10
11	Milk Thermo meter	10
12	Milk Cane	2
13	Butyrometer	12
14	Lock Stopper	100
15	Pin For Lock Stopper	20
16	Brush For Butyrometer	1 Groose
17	Milk Pipette	12
18	Brush For Milk Pipette	1 Groose
19	Butyrometer Stand	6
20	Pipette Stand	6
21	Centrifuge Machine (Gerber's)	1
22	Sample Bottle Milk	100
23	Sample Bottle Stand	6
24	Milk Sampler	6
25	Plunger	6
26	Funnel	6
27	Straining Cloth	5 Meter
28	Jar for Acid	1 (5lits)
29	Jar For Alcohol	1 (5lits)
30	Bottle For Acid	2 (500 ml)
31	Bottle For Alcohol	2 (500 ml)
32	Water Bottle	2
33	Milko Tester	1
34	Automatic milking Testing Apparatus	1
35	Pasteurizer	1
36	Homogenizer	1
37	Cream Separator	1
38	Butter Churner	1
39	Multi Purpose Vat	1
40	Dump Tank	1
41	Sterilizer	1
42	Deep freeze	1
43	Packaging Machine	1
44	Milk Pail	5
45	Cryo Container	1
46	A I Gun	1
47	First Aid Kit	1

CHEMICALS

SL NO	NAME OF THE CHEMICALS	QUANTITY
1	Sodium Hydroxide	1 pkt
2	Sulphuric Acid	1 Jar
3	Amyl Alcohol	10 ltrs
4	Methylene Blue	10 ltrs
5	Resorcinol	1 pkt
6	Rosalic Acid	1 Bottle
7	Hydrochloric Acid	1 ltr.