सत्यमेव जयते

Annual Report

2019-20

Department of Animal Husbandry and Dairying
Ministry of Fisheries, Animal Husbandry and Dairying
Government of India

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Annexures

CHAPTER 1

OVERVIEW OF ACHIEVEMENTS

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1.1 Animal Husbandry and Dairying activities, along with agriculture, continue to be an integral part of human life since the process of civilization started. These activities have contributed not only to the food basket and draught animal power but also by maintaining ecological balance. Owing to conducive climate and topography, Animal husbandry and Dairying Sectors have played prominent socio-economic role in India. Traditional, cultural and religious beliefs have also contributed in the continuance of these activities. They also play a significant role in generating gainful employment in the rural sector, particularly among the landless, small and marginal farmers and women, besides providing cheap and nutritious food to millions of people.

1.2 Livestock production and agriculture are intrinsically linked, each being dependent on the other, and both crucial for overall food security. Livestock sector is an important sub-sector of the agriculture of Indian economy. It forms an important livelihood activity for most of the farmers, supporting agriculture in the form of critical inputs, contributing to the health and nutrition of the household, supplementing incomes, offering employment opportunities, and finally being a dependable "bank on hooves" in times of need. It acts as a supplementary and complementary enterprise.

1.3 According to NSSO 66th Round Survey (July 2009 – June 2010) on Employment and Unemployment, 15.60 million workers as per usual status (Principal status plus subsidiaries status) were engaged in farming of animals, mixed farming and fishing. Whereas as per estimate of NSS 68th Round (July 2011-June 2012) survey on Employment and Unemployment, 16.44 million workers as per usual status (Principal status plus subsidiaries status) were engaged in the activities of farming of animals, mixed farming and fishing. As per Annual Report 2017-18 of Periodic Labour Force Survey, the Percentage of usually working persons (ps+ss) engaged in Animal Production, Mixed farming, Fishing and Aquaculture is as under:

Percentage of usually working persons (ps+ss) engaged in Animal Production, Mixed farming, Fishing and Aquaculture:

Percentage of usually working persons (ps+ss) engaged in Animal Production, Mixed farming, Fishing and Aquaculture during 2011-12[$] and 2017-18[#]			
Industry (Group as per NIC-2008)		2011-12	2017-18
Code	Description		
014	Animal Production	2.75	2.10
015	Mixed farming	0.83	1.41
031	Fishing	0.28	0.23
032	Aquaculture	0.05	0.08

Source:
1.[$]*NSS Report No. 554: Employment and Unemployment Situation in India, 2011-12*
2. [#]*Annual Report, PLFS, 2017-18*

1.4 India has vast resource of livestock and poultry, which play a vital role in improving the socio-economic conditions of rural masses. There are about 303.76 million bovines, 74.26 million sheep, 148.88 million goats and about 9.06 million pigs as per 20th Livestock Census in the country. The species wise population of animals in Livestock and Poultry population during the last two Censuses is given in table 1.1.

Table 1.1: Livestock and Poultry Population

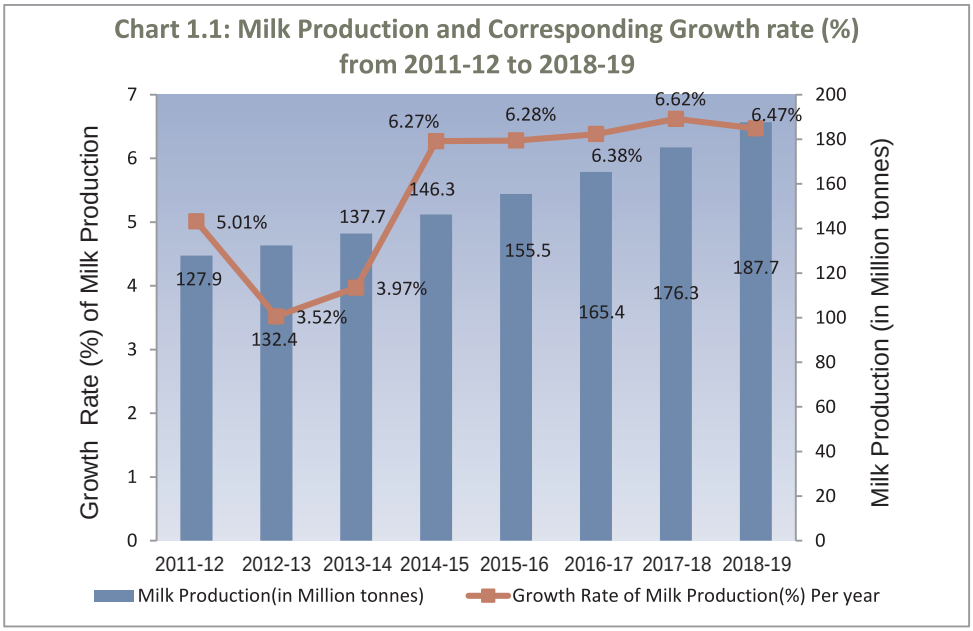
S. No.	Species	19th Livestock Census 2012 (no. in millions)	20th Livestock Census 2019(no. in millions)	Growth Rate (%) 2012-19
1	Cattle	190.90	193.46	1.34
2	Buffalo	108.70	109.85	1.06
3	Yaks	0.08	0.06	-25.00
4	Mithuns	0.30	0.39	30.00
	Total Bovines	299.98	303.76	1.26
5	Sheep	65.07	74.26	14.12
6	Goat	135.17	148.88	10.14
7	Pigs	10.29	9.06	-11.95
8	Other animals	1.54	0.80	-48.05
	Total Livestock	512.06	536.76	4.82
9	Poultry	729.21	851.81	16.81

The State-wise breakup of different species of livestock and Poultry is given at Annexure-I.

1.5 Livestock Production:

1.5.1 As per estimates of the Publication "National Accounts Statistics 2019"of Central Statistics Office (CSO), the value of output from livestock sector was about Rs. 10,43,656 crore at current prices during 2017-18 which is about 33.25% of the value of output from agricultural and allied sector. At constant prices the value of output from livestock was about 31.81% of total agriculture and allied sector.

1.5.2 Milk Production: India continues to be the largest producer of milk in world. Several measures have been initiated by the Government to increase the productivity of livestock, which has resulted in increasing the milk production significantly from the level of 102.6 million tonnes at the end of the Tenth Plan (2006-07) to 127.9 million tonnes at the end of the Eleventh Plan (2011-12). Milk production during 2017-18 and 2018-19 is 176.3 million tonnes and 187.7 million tonnes respectively showing an annual growth of 6.47%. The per capita availability of milk is around 394 grams per day in 2018-19.The production of milk and corresponding growth rate (%) per year from 2010-11 to 2018-19 is shown at chart:1.1:

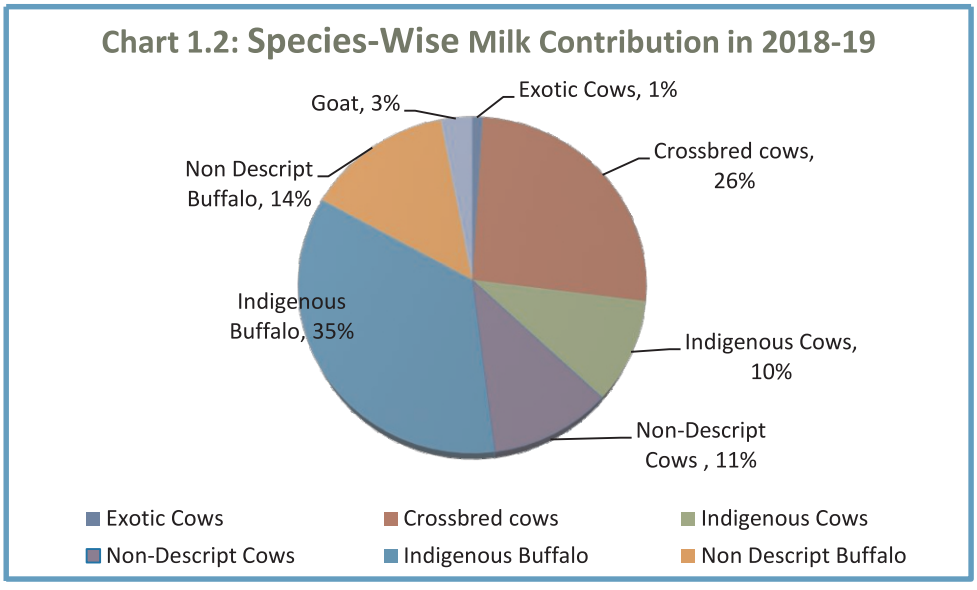


1.5.2.1 Average Yield Rate for Milk: The average yield of milk per day per animal in milk at National level from different species during 2018-19 is given below:

Table 1.2: Average Yield Rate for Milk

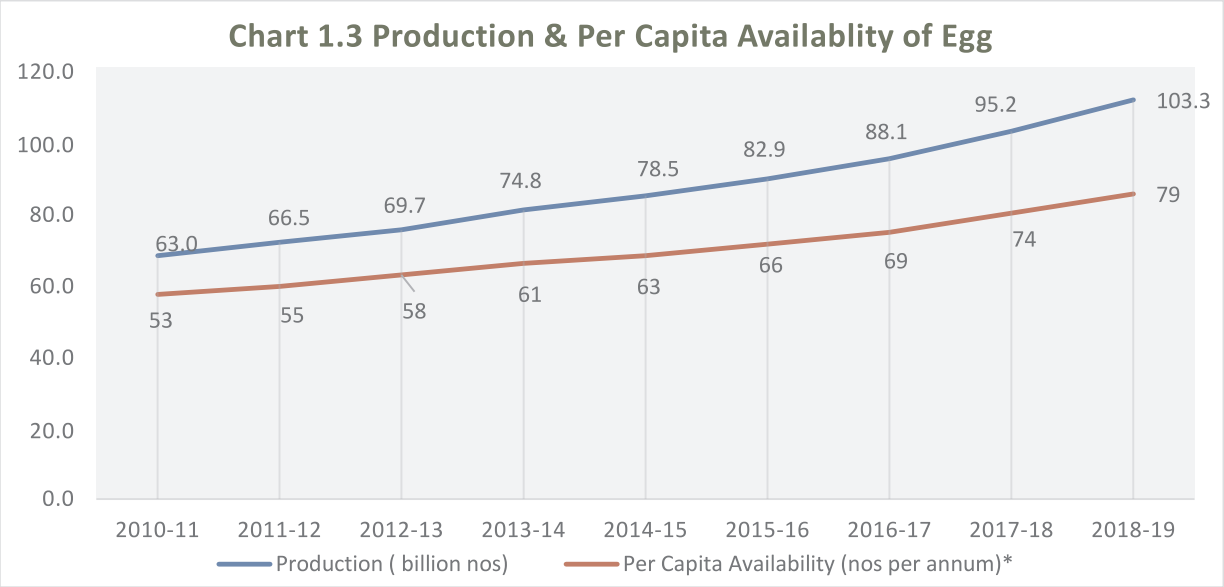
Exotic Cows (kg/day)	Crossbred Cows (kg/day)	Indigenous Cows (kg/day)	Non-Descript Cows (kg/day)	Indigenous Buffalo (kg/day)	Non-Descript Buffalo (kg/day)	Goat (kg/day)
11.67	7.85	3.85	2.50	6.34	4.35	0.45

1.5.2.2 Percentage Share of Milk Production during 2018-19



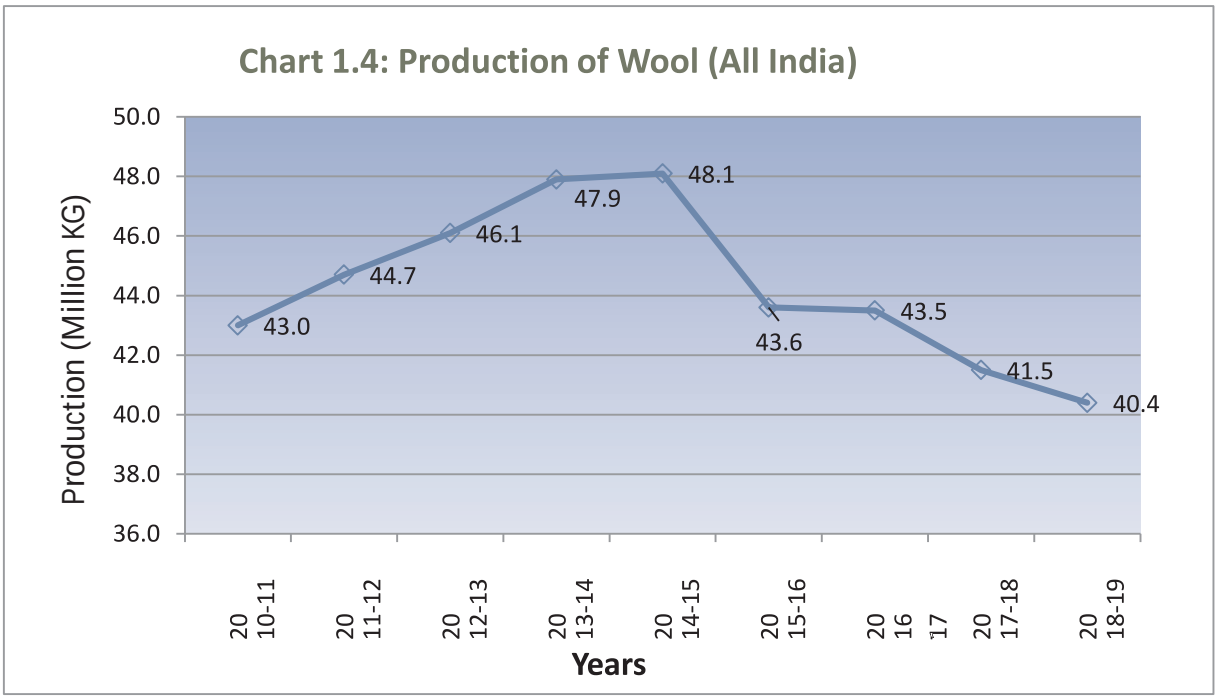
The above Chart shows the contribution of milk production by Cow, Buffalo and Goat. The analysis shows nearly 35% of the milk production is contributed by Indigenous Buffaloes followed by 26% by crossbred cows. The Indigenous cows contribute 10% of the total milk production in the country whereas non-descript cows contribute 11% milk production and non-descript buffaloes contribute 14% milk production. Goat milk shares a contribution of 3% in the total milk production across the Country.

1.5.3 Egg Production: Poultry production in India has taken a quantum leap in the last four decades, emerging from an unscientific farming practice to commercial production system with state-of-the-art technological interventions. Egg production at the end of the Tenth Plan (2006-07) was 50.70 billion as compared to 66.45 billion at the end of the Eleventh Plan (2011-12). Currently the total Poultry population in our country is 851.81 million (as per 20th Livestock Census) and egg production is around 103.3 billion numbers during 2018-19. The per capita availability (2018-19) is around 79 eggs per annum. Egg production and the corresponding growth rate (%) per year of the country from 2010-11 to 2018-19 is shown at chart 1.3:

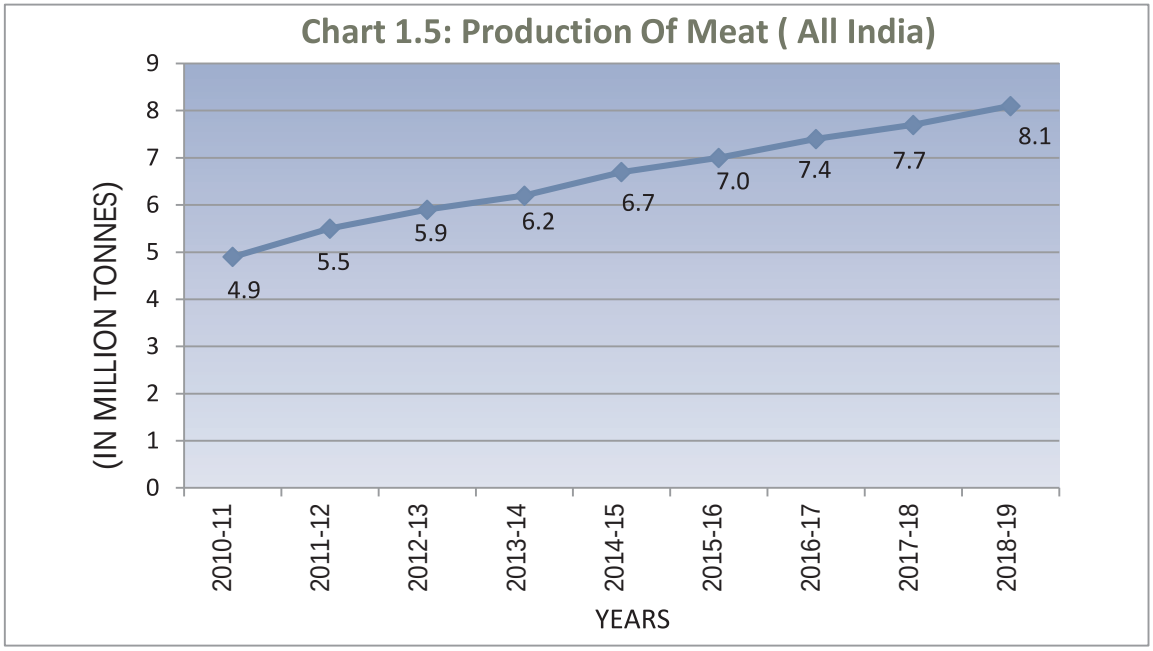


**Based on Projected Population of March, 2018 based on Human Census 2001*

1.5.4 Wool Production: Wool production declined marginally at the end of Eleventh Five Year Plan (2011-12) to 44.7 million kg from 45.1 million kg in the end of Tenth Five Year Plan (2006-07). Wool production in the beginning of Twelfth Plan (2012-13) was 46.1 million Kg and increased to 48.1 million Kg in 2014-15 but declined to 40.4 million Kgs in 2018-19. The wool production has shown negative growth as (-) 2.51% during 2018-19. The production of wool and the corresponding growth rate (%) per year of the country from 2010-11 to 2018-19 is shown at chart: 1.4 :



1.5.5 Meat Production: The Meat production has registered a healthy growth from 2.3 million tonnes at the end of Tenth Five Year Plan (2006-07) to 5.5 million tonnes at the end of the Eleventh Five Year Plan (2011-12). Meat production in the beginning of Twelfth Plan (2012-13) was 5.95 million tonnes which has been further increased to 8.1 million tonnes in 2018-19. The production of meat and the corresponding growth rate (%) per year of the country from 2010-11 to 2018-19 is shown at chart:1.5:



The Production of major livestock products since 1950-51 to 2018-19 is given at Annexure-II.

1.6 Government's Initiative and Assistance to States

As Agriculture, including Animal Husbandry and Dairying is a State subject, thus the emphasis of the Department has been on supplementing efforts of the State Governments in the development of these sectors. The Department has been providing assistance to the State Governments for the control of animal diseases, scientific management and upgradation of genetic resources, increasing availability of nutritious feed and fodder, sustainable development of processing and marketing facilities and enhancement of production and profitability of livestock.

1.7 New scheme launched during the FY 2019-20:

a) National Animal Disease Control Programme for FMD and Brucellosis:

National Animal Disease Control Programme (NADCP) has been launched by Honorable Prime Minister in September, 2019 for control and eradication of Foot & Mouth Disease and Brucellosis disease in the country. NADCP has been approved by the Cabinet on 31.05.2019 with 100% central funding with a financial outlay of Rs. 13,343.00 crore for five years (2019-20 to 2023-24) for vaccinating 100% cattle, buffalo, sheep, goat and pig population for FMD and 100% bovine female calves of 4-8 months of age for brucellosis.

b) Nationwide Artificial Insemination Programme:

Nationwide Artificial Insemination Programme covering for 20,000 bovine per district for 600 districts and 300 villages per districts in the country has been launched by Honorable Prime Minister in September, 2019 under Rashtriya Gokul Mission which is one of the largest such programmes with 100% central assistance for undertaking breed improvement. During the programme from 15th September 2019 to 15th March 2020 about 1.2 crore animals will be covered, so far 19.4 lakh Artificial inseminations have been performed as on 25.01.2020 and 10.9 lakh farmers benefitted.

1.8 Annual Plan 2018-19 & 2019-20

1.8.1 The Department was allocated Rs. 2832.55 crore at BE stage for the Annual Plan 2018-19, which has been increased at RE stage i.e. Rs 2961.70 crore. The final expenditure for 2018-19 was Rs 2896.63 crore. For the year 2019-20, the Department has been allocated Rs. 3342.65 crore (including Plan & Non-Plan) at BE stage which has been decreased at RE stage i.e. Rs 3180.27 crore. By the end of December, 2019, the Department has incurred an expenditure of Rs 2527.38 crore out of the allocated fund for the financial year 2019-20.

1.8.2 The scheme-wise BE, RE and Expenditure for 2018-19 and 2019-20 is given at Annexure–III.

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Chapter 2

ORGANIZATION

ORGANIZATION

2.1 Structure

2.1.1The Department of Animal Husbandry and Dairying is one of the Departments under the Ministry of Fisheries, Animal Husbandry and Dairying vide Cabinet Secretariat's Notification No. S.O. 1972 (E) dated 14.06.2019. The Department of Animal Husbandry and Dairying originally came into existence on February 1, 1991 by the merger of two Divisions of the Department of Agriculture and Cooperation viz. Animal Husbandry and Dairy Development into a separate Department. The Fisheries Division of the Department of Agriculture and Cooperation and a part of the Ministry of Food Processing Industries was later transferred to this Department on October 10,1997. In pursuance of Interim Budget Announcement 2019-20, the Fisheries Division has been separated as a new Department named Department of Fisheries, by carving out of the Department of Animal Husbandry, Dairying and Fisheries, vide Cabinet Secretariat's Notification No. S.O.762(E) dated 05.02.2019.

2.1.2 The Department is under the overall charge of Shri Giriraj Singh, Hon'ble Minister of Fisheries, Animal Husbandry and Dairying. He is assisted by two Ministers of State namely Dr. Sanjeev Kumar Balyan and Shri Pratap Chandra Sarangi. The administrative head of the Department is the Secretary (Animal Husbandry and Dairying).

2.1.3 Secretary of the Department is assisted by Animal Husbandry Commissioner, four Joint Secretaries and one Adviser (Statistics) in discharging the responsibilities assigned to this Department. The organizational chart of the Department and work allocation among various Divisions is given at Annexure-IV.

2.2 Functions

2.2.1 The Department is responsible for matters relating to livestock production, preservation, protection & improvement of stocks, dairy development, matters relating to the Delhi Milk Scheme and the National Dairy Development Board.

2.2.2 The Department advises the State Governments/Union Territories in the formulation of policies and programmes in the field of animal husbandry and dairy development. The main focus of the activities is on (a) Development of requisite infrastructure in States/UTs for improving animal productivity; (b) Promoting infrastructure for handling, processing and marketing of milk and milk products; (c) Preservation and protection of livestock through provision of health care; and (d) Strengthening of central livestock farms (Cattle, Sheep and Poultry) for development of superior germplasm for distribution to States.

2.2.3 The list of the subjects allocated to the Department is given at Annexure-V.

2.3 Subordinate Offices

2.3.1 The Department looks after the administration of the following field / subordinate Offices spread all over the country (Table 2.1).

Table 2.1: Subordinate Offices

S. No.	Subordinate Offices	Number
(i)	Breed Improvement Institutes	12
(ii)	Central Poultry Development Organizations	5
(iii)	Central Sheep Breeding Farm	1
(iv)	Central Fodder Development Organizations	8
(v)	National Institute of Animal Health, Baghpat	1
(vi)	Animal Quarantine Certification Service Station	6
(vii)	Delhi Milk Scheme	1
	Total	34

2.3.2 A list of the aforesaid subordinate offices is given at Annexure-VI.

2.4 National Dairy Development Board (NDDB)

2.4.1 National Dairy Development Board, located at Anand, Gujarat, set up in 1965 and declared as a statutory body corporate in 1987 under the NDDB Act, is a premier institution to accelerate the pace of dairy development on cooperative lines in the country.

2.5 Veterinary Council of India

2.5.1 Veterinary Council of India (VCI) is a statutory body established under the provision of Indian Veterinary Council Act, 1984. Veterinary Council of India is responsible for regulating veterinary practices as well as for maintaining uniform standards of veterinary education through Minimum Standard of Veterinary Education Regulations in all veterinary institutes across the country.

2.5.2 Veterinary Council of India is consisting of 27 Members - five Members nominated by the Government of India from amongst the Directors of Animal Husbandry of those States to which the Act extends, four Members from amongst the

course for 525 seats for the academic year 2019-20 in all the recognized veterinary colleges in India except Jammu & Kashmir.

2.6 Grievances Cell

2.6.1 A Grievances Cell has been set up in the Department to look into grievances of the public. The cell is headed by Joint Secretary level officer.

2.7 Liaison Officer for SC/ST/OBS/PWD/EWS

2.7.1 A Chief Liaison Officer has been appointed for Other Backward Classes (OBCs), Scheduled Castes (SCs)/ Scheduled Tribes (STs), Economic Weaker Sections (EWSs) and Persons with Disabilities (PwDs) at the Headquarters of the Department as well as for Subordinate/field offices. Liaison Officers have been appointed for OBC, SC/ST, PwD and EWS category employees under the Chief Liaison Officer. Besides, Liaison Officers have also been appointed for subordinate offices in a cluster to ensure proper implementation of government policy on reservations in service.

2.8 Vigilance Unit

2.8.1 Vigilance Unit processes/analyses vigilance cases pertaining to this Department and its subordinate offices. The Chief Vigilance Officer monitors the vigilance cases on a regular basis. The Department along with its field units observed Vigilance Awareness Week from 28th October, 2019 to 2nd November, 2019. The theme of observing Vigilance Awareness Week was “Integrity- A way of life”. Secretary (AHD) administered the Integrity pledge to all the officers and staff on 28th October, 2019 at 11:00 A.M.

2.9 Progressive use of Hindi

2.9.1 The Department has made concerted efforts during the year for promotion of Hindi in Official work. The Hindi Section was actively involved in translating various important documents like the Annual Report, Performance Budget, Parliament Questions, documents related to Parliamentary Standing Committee and Cabinet notes, etc. as well as in implementing the Official Language Policy of the Government.

2.9.2 An Official Language Implementation Committee is functioning in the Department under the Chairmanship of Joint Secretary (Admn.). In accordance with the prescribed rules, two meetings of the Committee were held during the year. The progress in use of Hindi in the Department was reviewed in these meetings. Suggestions were given to promote the use of Hindi in official work. As a result of these suggestions, the percentage of correspondence in Hindi has increased considerably.

2.9.3 Circular letters were also issued from time to time from the Secretary, Department of Animal Husbandry and Dairying and Joint Secretary concerned to all Officers/Sections emphasizing need for proper implementation of the Official Language Policy of the Government.

2.9.4 All letters received in Hindi were replied in Hindi. Similarly letters originated from the Department to States located in region "A" and "B" were also sent in Hindi. Provisions of Section 3(3) of the Official Language Act, 1963 were also fully complied with.

2.9.5 Hindi Pakhwada was organized in the Department from 16th September, 2019 to 30th September, 2019.

2.10 Implementation of Right to Information (RTI) Act, 2005

2.10.1 For the purpose of providing information of public interest, Department has designated Central Public Information Officers (CPIOs) and Appellate Authorities under the relevant provision of the RTI Act. Similarly, separate CPIOs and Appellate Authorities under RTI Act have been

designated for various subordinate offices and autonomous organizations under the Department. RTI applications received through online RTI Portal and otherwise are forwarded online to the concerned CPIO for speedy disposal.

2.11 Reservation for Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Castes (OBCs) and others:

2.11.1 Department of Animal Husbandry and Dairying (DAHD) continued its endeavor for strict implementation of the orders issued by the Government of India from time to time, regarding reservation in services for SCs, STs, OBCs, minorities, ex-servicemen, and physically disabled persons. A dedicated cell for proper implementation of government policy on reservation has been established in the Department to ensure reservation in service.

2.12 Prevention of Harassment of Women Employees

2.12.1 A committee for prevention of sexual harassment of women at workplace exists in the Department to look into the complaints of sexual harassment of women. No complaint has been received during the year 2019-20.

2.13 Minimum Government, Maximum Governance

2.13.1 Initiatives taken by the Department for speedy disposal of grievances have been reflected in the CPGRAM Portal.

2.13.2 Monthly Report on significant development and monitoring of various issues viz. Presentation made before Prime Minister, Centre State Cooperation, Decisions of Cabinet and Cabinet Committees through e-Samiksha portal is being done regularly.

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Chapter 3

CATTLE DEVELOPMENT

CATTLE DEVELOPMENT

3.1 Rashtriya Gokul Mission:

3.1.1 Introduction

The Rashtriya Gokul Mission has been implemented for development and conservation of indigenous bovine breeds since December 2014. Scheme is crucial for upliftment of rural poor as more than 80% low producing indigenous animals are with small and marginal farmers and landless labours. The scheme is important in enhancing milk production and productivity of bovines to meet growing demand of milk and making dairying more remunerative to the rural farmers of the country. The scheme is leading to multiplication of elite animals of indigenous breeds and increased availability of indigenous stock.

3.1.2 Objectives

The scheme is being implemented with the following mandate:

i) To undertake breed improvement programme for indigenous cattle breeds so as to improve their genetic makeup and increase the stock.

ii) To enhance milk production and productivity of indigenous bovine breeds.

iii) To upgrade nondescript cattle using elite indigenous breeds like Gir, Sahiwal, Rathi, Red Sindhi, Tharparkar, Kankrej and Hariana.

iv) Arrange quality Artificial Insemination (A.I) services at farmers' doorstep

v) Bring all breedable females under organised breeding through Artificial Insemination using germplasm of high genetic merit disease free bulls.

vi) Increasing population of high genetic merit female population

3.1.3 COMPONENTS

Major components under the scheme are as under:

(i) Conservation of Indigenous Breeds

(a) Establishment of "Gokul Gram" or integrated cattle development centre

(b) Establishment of National Kamdhenu Breeding Centre

(c) Identification and issue of Health Cards to in Milk bovines

(ii) Breed Improvement by Modern Reproductive Techniques

(a) Establishment of Embryo Transfer Technology (ETT) & In-Vitro Fertilization (IVF) laboratories

(b) Sex sorted semen production

(c) E-Pashuhaat Portal

(d) Establishment of National Bovine Genomic Centre for Indigenous Breeds.

(iii) Awareness Program:

(a) Award to Farmers ("Gopal Ratna") and Breeders' Societies/Organisation ("Kamdhenu")

(b) Organisation of Fertility Camps

(iv) Enhancement of Production and Productivity

(a) Field performance Recording

(b) Progeny Testing

(c) Pedigree Selection

(v) Extension of AI Coverage

a) Establishment of MAITRI centres

b) Strengthening of existing AI centres

c) Strengthening LN storage and transport and distribution system

d) Training of Existing AI Technicians

3.1.4Status of Implementation

3.1.4.1 The Rashtriya Gokul Mission has been

BE and expenditure made under RGM since 2014-15

Financial	Rs. Crore						
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Allocation	159.40	81.77	118.75	190	750.5	268.76	1569.18
Expenditure	159.02	81.76	118.75	187.64	750.44	253.58	1551.19

expenditure up to December 2019

under the Rashtriya Gokul Mission with the aim of conservation and development of indigenous bovine breeds in a scientific and holistic manner. The objectives for establishment of Gokul Gram are as under:

a) To promote indigenous cattle rearing and conservation in a scientific manner.

b) To propagate high genetic merit bulls of indigenous breeds.

c) To optimize modern Farm Management practices and promote Common Resource Management.

d) To utilize animal waste in economical way i.e. Cow Dung, Cow Urine

3.1.5.1.1 Status of Establishment:

Establishment of 21Gokul Grams have been approved in 14 States under the scheme with an outlay of Rs 207.62crores and an amount Rs. 102.81 crore has been released to States for establishment of Gokul Grams. As on 31.12.2019, civil works and animals induction completed at 8 Gokul Grams and civil works completed at 2 Gokul Grams.

3.1.5.2 National Kamdhenu Breeding Centre

3.1.5.2.1 National Kamdhenu Breeding Centres

Status of Establishment of Gokul Grams

State	No. and Locations of the Gokul Grams		Fund allocated (Rs. in Crore)
	No.	Location	
Andhra Pradesh	1	Chadalwada, Prakasam	10
Arunachal Pradesh	1	Lohit	3.44
Bihar	1	Dumraon Buxar	7.9
Chhattisgarh	2	Bemetra and Sarkanda(Bilaspur)	11.97
Gujarat	3	Dharampur, Surat and Banaskantha	63.36

Haryana	1	Hissar	15
Himachal Pradesh	1	Una District	9.95
Karnataka	1	Lingadahalli, Chikkamagalur	5
Maharashtra	3	Palghar, Pohra and Tathawade	27
Madhya Pradesh	1	Ratona, Sagar	10
Punjab	1	BirDosanji, Patiala	12.85
Uttar Pradesh	3	Varanasi, Mathura & Shahjahanpur	24.14
Uttarakhand	1	Govardhanpura	1.64
Telangana	1	Veterinary University Hyderabad	5.37
TOTAL	21		207.62

are being set up as the Centre of Excellence. A Nucleus Herd of all the Indigenous Bovine Breeds (50 breeds of Cattle and 17 breeds of Buffaloes) are being conserved and developed with the aim of enhancing their productivity and upgrading their genetic makeup. An amount of Rs 25 crore each has been released to Madhya Pradesh and Andhra Pradesh for establishment of two National Kamdhenu Breeding Centres, one each at northern and southern region of the country respectively. The National Kamdhenu Breeding Centre (NKBC) act as the repository of indigenous germplasm of all indigenous breeds and supply certified germplasm to the farmers undertaking rearing of indigenous breeds and increasing their stock.

3.1.5.2.2 Establishment of NKBC in Andhra Pradesh at Chintala Devi located in Nellore District has been completed. The NKBC has been established in 700 acres of land. 414 animals of 17 breeds of cattle and buffaloes are being maintained at the NKBC centre.

3.1.5.2.3 Northern Region NKBC in Madhya Pradesh is being established at Kiratpur, in Hoshangabad, District. This center is being established in 400 acres of land. Work is under progress. Till 31.12.2019, civil works for 6 new sheds, 5 sheds renovated, boundary wall, internal roads, drainage system, dispensary, biogas plants, administrative block completed. As on 31.12.2019, 262 animals of 10 indigenous breeds have been inducted.

Indigenous Cow Herd, NKBC, Chintaladevi, Andhra Pradesh

Buffalo Herd, NKBC, Chintaladevi, Andhra Pradesh

ETT/IVF lab NKBC, Chintaladevi, Andhra Pradesh

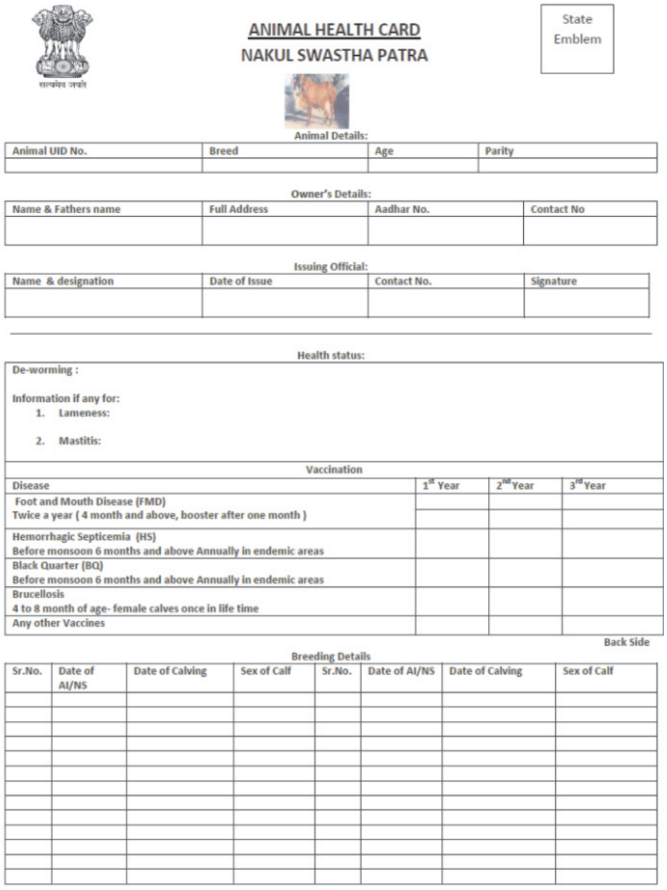
NKBC, Kiratpur, Madhya Pradesh

NKBC, Kiratpur, Madhya Pradesh - Cow shed under construction

3.1.5.3 Pashu Sanjivni:

3.1.5.3.1 Reasons for initiation of the scheme

As per Integrated Sample Survey 2018-19, 98 million cattle & buffaloes are in-milk but their records on breeding, productivity, treatment and vaccination were not properly maintained by the State Animal Husbandry Departments. System for maintaining records on the animals was not evolved in the country. Due to absence of records on animal identification and traceability, it was not possible to separate healthy animals from diseased animals and animal products obtained from healthy animals and diseased animals. Lack of proper animal identification and traceability was major cause of the spread of animal as well as zoonotic diseases in the country. Country was also facing difficulty in expanding trade of milk & milk products as there was no established animal identification and traceability system to meet sanitary and phyto sanitary (SPS) requirements.



ANIMAL HEALTH CARD
NAKUL SWASTHA PATRA

State Emblem

Animal Details:

Animal UID No.	Breed	Age	Parity

Owner's Details:

Name & Fathers name	Full Address	Aadhar No.	Contact No

Issuing Official:

Name & designation	Date of Issue	Contact No.	Signature

Health status:

De-worming :

Information if any for:
1. Lameness:
2. Mastitis:

Vaccination

Disease	1st Year	2nd Year	3rd Year
Foot and Mouth Disease (FMD) Twice a year (4 month and above, booster after one month)			
Hemorrhagic Septicemia (HS) Before monsoon 6 months and above Annually in endemic areas			
Black Quarter (BQ) Before monsoon 6 months and above Annually in endemic areas			
Brucellosis 4 to 8 month of age- female calves once in life time			
Any other Vaccines			

Back Side

Breeding Details

Sr.No.	Date of AI/NS	Date of Calving	Sex of Calf	Sr.No.	Date of AI/NS	Date of Calving	Sex of Calf

3.1.5.3.2 Major activities undertaken under the scheme

Animal identification and traceability using polyurethane tags with 12 digit Animal Unique Identification Number (AUID) as per the method prescribed by International Committee on Animal Recording and uploading information of identified animals on Information Network for Animal Productivity and Health (INAPH) on online mode.

3.1.5.3.3 Technology for animal identification

Animals are being identified under the Pashu Sanjivni using poly urethane tags with 12 digit Animal unique identification number as per method developed by International Committee on Animal Recording. Animal Unique Identification (AUID) numbers are being generated by NDDB. NDDB has developed Information Network for Animal Productivity and Health (INAPH) and same has been used as National database for uploading breeding and health related information on the cattle and buffaloes identified using polyurethane tags with 12 digit animal unique identification number (UID).

3.1.5.3.4 Cost of the project:

An allocation of Rs 148 crore has been approved under the scheme for implementation of Pashu Sanjivni component and GoI share of Rs 85.74 crore has been released to the States. Cost of each tag approved under the scheme is Rs 8 and Rs 4 for each health card (Nakul Swasthya Patra).

3.1.5.3.5 Major Outcomes:

The component Pashu Sanjivni will help in: i) traceability and tracking of animals for health and productivity; ii) Control on spread of animal diseases through tagging and targeted vaccination; iii) Scientific management of animals for better health and reproduction; iv) Enhanced production and productivity; v) Improvement in quality of livestock & livestock products and vi) Increase in trade of livestock and livestock products by meeting out SPS issues.

3.1.5.3.6 Present Status:

Funds for the Pashu Sanjivni Scheme have been released to the States and so far 27.4 million animals in milk have been tagged and their data have been uploaded on INAPH data base.

3.1.5.4 Breed Improvement by Modern Reproductive Techniques

3.1.5.4.1 Establishment of Sex Sorted Semen Production Facility:

With mechanisation of Agriculture, utility of male bovines have reduced. Farmers are not willing to maintain Bullocks for agriculture or any other draft work. Hence, male calves born at farmer house have become a liability. Due to religious reasons, culling of male bovines is difficult in most part of the country. Farmers often let the male

calves loose which are resulting into increase in stray animal population. Only female calves can be produced (with more than 90% accuracy) by use of latest technology like Sex Sorted Semen in AI program. This technology can be a game changer for India. For the first time in the country sex sorted semen production facility is being created with an allocation of Rs 475 crores. Extensive use of this technology will not only address the stray animal issue but would also increase the number of female animals thereby increasing income of farmers by sale of female or through sale of milk.

3.1.5.4.1.1 Present Status

Projects from 12 semen stations (Gujarat, Haryana, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, Uttar Pradesh, Punjab, Himachal Pradesh and Uttarakhand) have been sanctioned and Central Share has been released. Facility at three semen stations has been completed and sex sorted semen production has been started. So far 3 lakh sex sorted semen doses have been produced.

3.1.5.4.1.2 Pilot Project on use of Sex Sorted Semen

In order to create awareness among the farmers a pilot project on AI with sex sorted semen has been initiated in 5 districts of the country. 2500 animals have been covered through AI with sex sorted semen of indigenous breeds in each district. AI services provided free of cost at the farmers doorstep. Identified farmers are also supported for mineral mixture @ 10kg/animal, deworming etc and selected animals are covered through estrus synchronization. The farmers with animals conceived through sex sorted semen will get high yielding indigenous breed female calves. In five districts12500 animals have been covered through use of sex sorted semen and so far 536 calving with 440 female calves, 55 male calves and 41 abortions have been reported.

District	AI in INAPH	Pregnancy Diagnosis details				No. of Calving	Male to Female Ratio	Fund Released (in Rs. Lakh)	Fund Utilisation(in Rs. Lakh)
		Preg	NP	Total	CR %				
Amreli	2500	716	1380	2096	34.2	193	15:155	16.59	
Jodhpur	2500	596	1635	2231	26.7	170	14:146	16.59	0.07
Purbi Champaran	2500	876	1510	2386	36.7	22	2:18	16.59	8.46
Shahjahanpur	2500	334	1100	1434	23.3	73	18:55	16.59	13.59
Varanasi	2500	242	1762	2004	12.1	78	6:66	16.59	
Grand Total	12500	2764	7387	10151	27.2	536	55:440	82.94	22.12

Abbreviations used in table: Preg= Pregnancy; NP= Non Pregnant; CR=Conception rate

3.1.5.4.2 Embryo Transfer Technology (ETT) & In-Vitro Fertilization (IVF):

3.1.5.4.2.1 Embryo Transfer (ET) normally means collection of an embryo from a donor female and its transfer to female, which carries it to full term. Through a method called “Superovulation”, the donors can be made to produce more number of eggs in a cycle (normally a cow or a buffalo sheds only one egg) by treating it with hormones. Thus, the harvest of embryos can be increased manifold

through superovulation. This technique is popularly known as Multiple Ovulation and Embryo Transfer (MOET).

3.1.5.4.2.2 The In Vivo production of embryos involves selection of superior animal (called as a donor) for a defined trait (Example-Milk volume, milk fat, milk protein, age at first calving etc), from the population followed by multiple injections of FSH hormone which is called Super-ovulation. This process leads to multiple ovulations from the donor cow. The Super-ovulated animal is bred by proven Sire or Semen of proven sire which leads to fertilization of multiple oocytes inside the donor uterus. Seven days later of breeding (AI/Natural) the uterus horns are flushed to extract the embryos and ova (unfertilized, fertilized or degenerate). The embryos and ova are searched, washed and graded under the microscope. The embryos are loaded into the straws for transfers into the Donor estrus based synchronized cows/heifers (Called as recipients) which may be genetically inferior or the embryos can be frozen for future use. On average 5 to 8 calves can be produced from one donor per year by transfers of In Vivo produced embryos.

3.1.5.4.2.3 The IVF system involves aspiration of oocytes from elite donors, fertilization of oocytes with the semen of top high genetic merit bulls and mature embryos either transferred to recipients or frozen for storage. On an average 30 calves can be produced from one donor per year. The technology has been promoted by all advanced dairy nations for propagation of elite animals, production high genetic merit bulls and bulls for use as donor animals.

3.1.5.4.2.4 The ETT/IVF labs aims at the creation of an infrastructure for continuous production of 'seed stock' of genetically superior stock of different breed of cattle and buffaloes, required under national goal as per National Action Plan (NAP), and a network to provide the benefits of the ET technology to milk producers at the village level.

3.1.5.4.2.5 In order to meet requirement of bulls and elite bull mothers to produce future generation of bulls NAP envisages establishing 50 embryo transfer technology labs in the country by 2023-24. In the first Phase 30 ETT labs with IVF facility are being established by 2020-21. From these labs 3000 HYIB bulls will be produced to meet requirement of bulls at the semen stations and requirement of elite bull mothers at bull mother farms and ETT centres.

3.1.5.4.2.6 Status:

Out of 30 labs approved under the scheme, 14 labs have been made functional and work is going on at 16 ETT labs and upto November 2019, 2641 embryos from elite animals of indigenous breeds have been produced and out of this 1888 embryos have been transferred and 288 calves born during the year. Present status of these labs is as under:

Status of Embryo Transfer Technology Labs

SN	ETT lab	State	Donors Maintai-ned	Embryos Produced	Embryos Transfer-red	Calves born	Embryos stored	Fund Released (in Rs. lakh)
1	ULDB, Kalsi	Uttarakhand	20	345	213	100	124	463.2
2	SAG, Bidaj	Gujarat	30	281	125	26	122	215
3	MPLPDC, Bhopal	MP	30	372	397	73	26	394.5

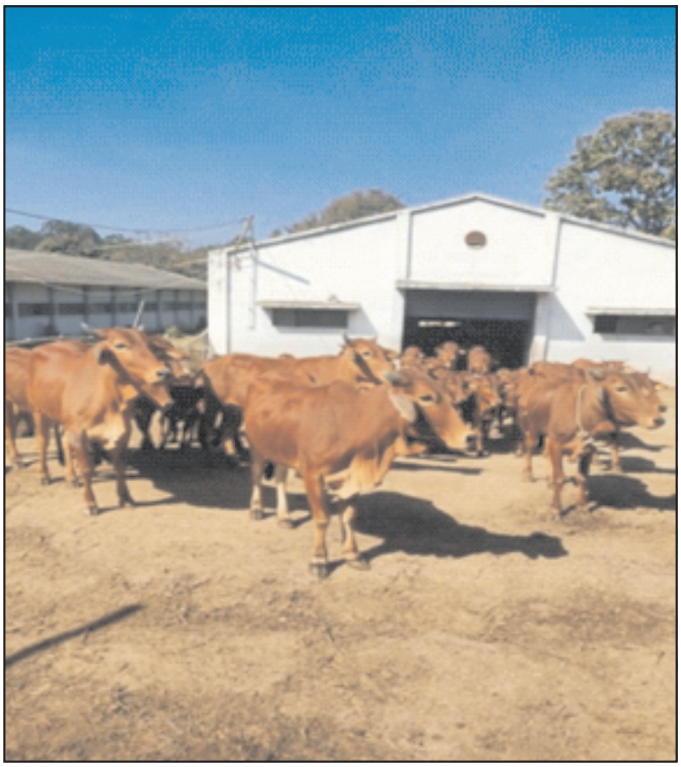
4	GADVASU, Ludhiana	Punjab	19	106	65	25	50	433
5	UPLDB, Barabanki	Uttar Pradesh	10	170	171	35	31	329.06
6	BAIF, Pune	Maharashtra	44	102	60	0	42	507.48
7	HPLPDB, Palampur	Himachal Pradesh	15	20	14	4	0	195
8	KLDB, Mattupatty	Kerala	32	69	55	5	14	248
9	PLDB, Patiala	Punjab	9	247	170	15	77	340.5
10	LAM Farm, Guntur	Andhra Pradesh	36	117	55	2	4	239
11	DLF, Hosur	Tamil Nadu	20	93	25	-	36	454.87
12	MAFSU, Nagpur	Maharashtra		13	13	-		119
13	PBGSBS, Harringhatta	West Bengal	22	119	107	3	12	450.2
14	ETT, Shirpur ,Pune	Maharashtra	14	587	418	-	244	483
15	ETT Lab, Patna	Bihar	8	-	-	-	-	806
16	NKBC, Chintaladevi	Andhra Pradesh	Civil works completed					250
17	TANUVAS, Namakkal	Tamil Nadu	ETT lab work completed					100
18	CSLDA, Anjora	Chhattisgarh	Work under progress					304
19	CoE, Motihari	Bihar	21	Under establishment, Consumables are in process of purchase.				1352
20	PVNR, Korutla	Telangana	4	Civil work Completed				583
21	LUVAS, Hissar	Haryana	Civil work started, Purchase of equipment in process					583
22	NKBC, Itarsi	Madhya Pradesh	Work under progress					250
23	Bareilly, UPLDB	Uttar Pradesh	Completed from State funds					0
24-30	CCBF-7 No.	Alamadhi, Andeshnagar, Dhamrod, Chiplima, Hasserghatta, Suratgarh, Sunabeda	Site selection completed by NDDB, Soil Survey analysis is being done.					4600
Total			335	2641	1888	288	782	13699.81

3.1.5.4.2.7 Under the scheme, hands on training in Embryo Transfer Technology (ETT) was imparted to 22 professionals and hands on training in IVF bovine embryo production to 37 professionals. ETT and IVF trainings for professionals were conducted at Kalsi, Dehradun, Uttarakhand;

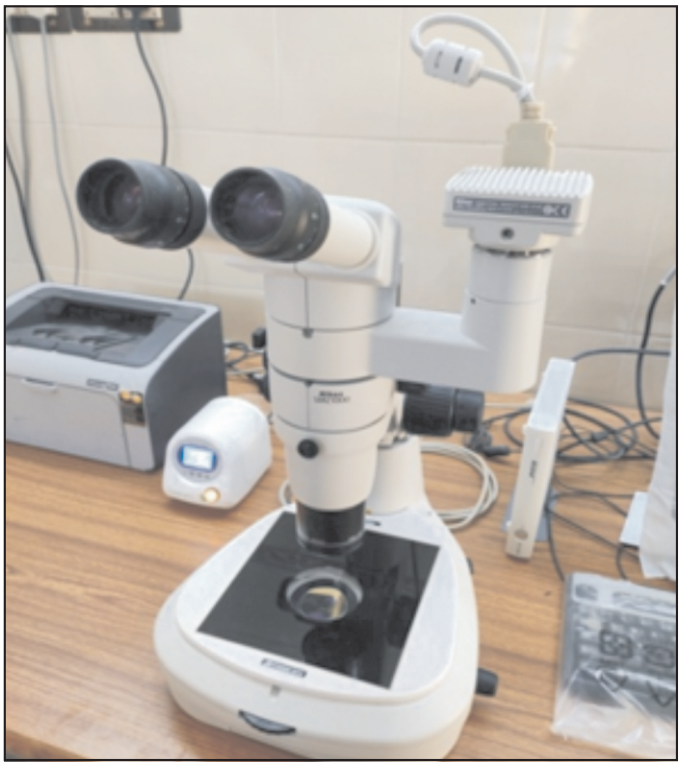
ETT/ IVF LAB LAM FARM, GUNTUR, ANDHRA PRADESH

ETT /IVF lab at District Livestock farm, Hosur, Tamil Nadu

Red Sindhi donor cows



ETT /IVF lab



Mobile ETT Van for providing ET facility at field – DLF, Hosur

Calves born through ETT at DLF, Hosur, Tamil Nadu

Calves born through ETT at ETT Lab , Bhadbada Bhopal, Madhya Pradesh

management of recognized Indigenous cattle breeds National Gopal Ratna and National Kamdhenu Award have been instituted under Rashtriya Gokul Mission.

3.1.6.2 Nationwide A.I program

3.1.6.2.1 Looking towards the success of the Krishi Kalyan Abhiyan (KKA), Nationwide AI programme has been launched by Hon'ble PM on 11th September 2019 for implementation in 605 districts with less than 50% Artificial

Insemination coverage, covering 300 villages per district and 20,000 animals per district. In case of North Eastern States and Union Territories of Jammu and Kashmir and Ladakh, the programme has been extended to all villages and to all districts. During the programme from 15th September 2019 to 31st May 2020 about 1.2 crore animals are being covered.

3.1.6.2.2 Under the programme AI services are being delivered at farmers' doorstep free of cost in identified villages of each 605 districts. For Indigenous Cattle breeds, HYIB bull semen with dam's lactation yield above 3000 kgs/lactation is used under the programme. Upgradation of non descript cattle with exotic semen and crossbred with high yielding crossbred semen is also permitted under the programme as per the State breeding policy. For this purpose, semen with MSP of 10,000 Kgs for HF and 7000 Kgs for Jersey is prescribed. In case of non- descript buffaloes, semen of Murrah/ Nili-Ravi with MSP of 3000 Kgs and above is used. Provision of Rs 25 per HGM frozen semen straw is made available to implementing agencies and an incentive @ Rs 50 /AI and additional incentive of @ Rs 100 per calf born made available to AI technicians under the scheme. The programme will lead to overall genetic upgradation of bovine population.

3.1.6.2.3 All the animals covered under the programme are being identified using Animal UID (AUID) and their data is being uploaded on INAPH data base. After AI done, the animal is being followed up and all the events are being recorded on the data base till the birth of the calf.

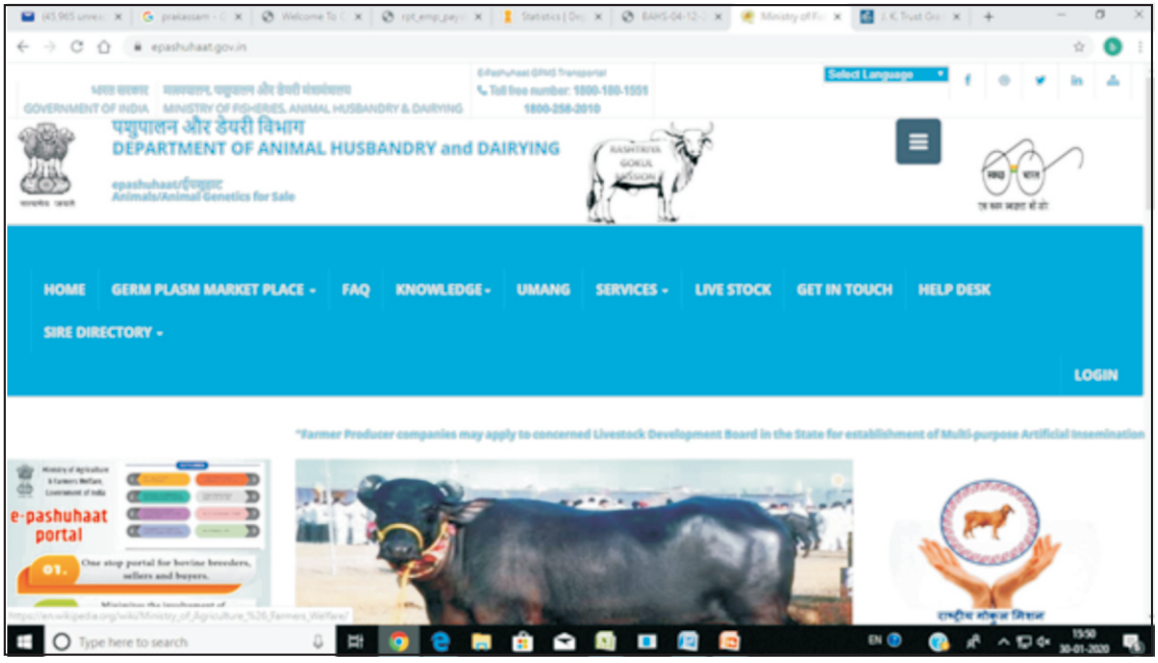
3.1.6.2.4 Expected Outcome:

(i) Overall A.I coverage in the selected districts will be extended from the present level of 18 % to 45% of the breedable bovine females.

(ii) Around 3.60 Crore number of AIs would result into birth of 1.2 Cr superior male and female calves.

(iii) Due to this campaign mode approach, 0.6 Crore superior female calves will be produced which will yield 21.90 MMT of milk /annum after 3 years.

(iv) Cows and buffaloes worth Rs.24000 Crores



E PASHU HAAT PORTAL

(Rs.40,000 per adult cow) will be added to the farmers household.

(v) Through sale of milk, dairy farmers will earn an additional income of Rs. 65700 crores.

(vi) There will be improvement in the indigenous breed population by the addition of more milch animals to the dairy herd of the country.

3.1.6.3 Status of the Programme

Under the programme 36.59 lakh animals have been covered and 18.28 lakh farmers got benefitted from the programme as on 6.3.2020. All the animals covered under the programme are tagged using AUID and their data uploaded on INAPH data base.

3.1.6.4 Organization of Fertility Camps

In order to improve fertility of milch animals so that animals give birth to the calves within average calving intervals, funds have been released to the States for organization fertility camps. During 2019-20, 8325 camps have been organised at the rate of 2 camps per block.

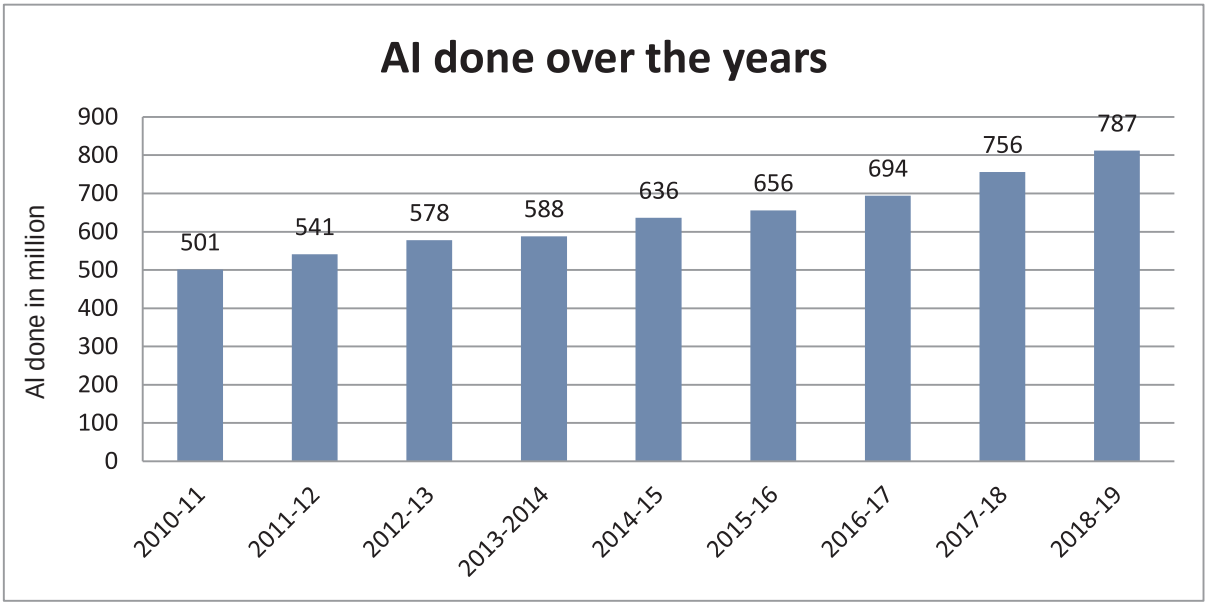
3.1.7 Enhancement of production and Productivity:

3.1.7.1 Field Performance Recording (FPR)

Field Performance Recording (FPR) plays a crucial role in identification and propagation of elite animals of indigenous breeds. Funds have been released to the States including funds released under NDP-I and 61054 animals of indigenous breeds have been covered under FPR.

3.1.7.2 Progeny Testing:

Milk production is a sex limited trait therefore genetic potential of the bull is estimated by the performance of the daughters. The scientific breeding method for estimating predicted transmitting ability of bulls on daughters' performance is termed as progeny testing. Organised Progeny Testing Programme (PTP) has been initiated under NDP-I and 14 projects have



The Performance of various agencies on AI coverage in the country during 2018-19 is given in the following table:

S. No	Agency	No of AI technicians	No of AI conducted (in lakh)	No of AI per AI technician
1.	Department of Animal Husbandry	73594	360.55	489.91
2.	Dairy Cooperatives	23990	18 9 .85	791.37
3.	Other Agencies	31923	242.08	758.32
	Total	129507	787.48	2039.60

been implemented in the country. These projects will be subsumed under Rashtriya Gokul Mission after March 2019. Details of the projects implemented under NDP-I are as under:

1 HGM HF bull and 4 Jersey HGM bulls were

State Wise AI coverage during 2018-19

S. No.	States	Breedable Bovine Females (in lakh)	Dept. of AH		Other Agencies *		Coop. Unions		Total AIC	Total	AI cove-rage in %
			AI Centres (In No)	AI performed (in lakh)	AI Centres (in No)	AI performed (in lakh)	AI Centres (in No)	AI performed (in lakh)			
1	Andhra Pradesh	50.01	4221	19.47	2703	21.63	753	4.64	7677	45.74	44
2	Arunachal Pradesh	0.80	100	0.01	0	0.00	0	0.00	100	0.01	1
3	Assam	24.10	1675	3.70	0	0.00	110	0.65	1785	4.35	9
4	Bihar	115.75	2054	3.62	250	4.83	3785	22.99	6089	31.45	13
5	Chattisgarh	37.32	1709	4.57	856	2.58	30	0.00	2595	7.15	9
6	Goa	0.43	82	0.19	0	0.00	21	0.13	103	0.32	36
7	Gujarat	99.20	2442	16.50	5471	4.95	6541	61.80	14454	83.25	40
8	Haryana	29.33	3046	31.70	1000	10.34	115	0.34	4161	42.39	69
9	Himachal Pradesh	13.15	4341	10.22	1	0.01	0	0.00	4342	10.23	37
10	Jammu & Kashmir	16.08	1506	13.62	0	0.00	0	0.00	1506	13.62	40
11	Jharkhand	37.70	2720	3.60	1010	2.70	7	0.03	3737	6.33	8

12	Karnataka	56.92	5468	30.28	151	1.49	3115	36.04	8734	67.81	57
13	Kerala	6.90	2536	11.64	224	0.98	210	1.16	2970	13.78	95
14	Madhya Pradesh	124.90	3820	21.24	2240	3.59	1180	7.29	7240	32.12	12
15	Maharashtra	88.28	5147	24.07	1344	18.43	821	5.89	7312	48.38	26
16	Manipur	0.71	234	0.14	2	0.01	0	0.01	236	0.16	10
17	Meghalaya	3.14	265	0.24	0	0.00	0	0.00	265	0.24	4
18	Mizoram	0.20	68	0.05	12	0.01	0	0.00	80	0.06	15
19	Nagaland	0.22	324	0.17	41	0.08	4	0.03	369	0.28	61
20	Odisha	31.30	3407	8.63	1077	3.89	1093	1.88	5577	14.40	22
21	Punjab	36.07	3527	28.08	1260	8.46	1223	7.58	6010	44.12	58
22	Rajasthan	136.40	5709	26.56	1392	11.73	900	5.78	8001	44.07	15
23	Sikkim	0.66	247	0.18	0	0.00	0	0.00	247	0.18	13
24	Tamil Nadu	50.57	4829	45.66	1973	6.04	2792	20.01	9594	71.72	68
25	Telangana	36.70	3642	15.84	65	1.03	75	0.87	3782	17.74	23
26	Tripura	2.96	936	1.49	168	0.82	0	0.00	1104	2.31	37
27	Uttar Pradesh	242.06	5549	33.21	6651	99.76	728	4.64	12928	137.60	27
28	Uttara-khand	13.09	880	3.10	22	3.70	22	0.14	924	6.93	25
29	West Bengal	72.28	3110	2.76	4010	35.04	465	2.94	7585	40.74	27
	Total	1327.25	73594	360.55	31923	242.08	23990	184.85	129507	787.48	28

produced through transfer of Imported Embryos

3.1.7.3 Pedigree Selection Programme:

Pedigree selection programme has been initiated under NDP-I for those indigenous breeds which have limited population and AI infrastructure is also not available in the area. Under the programme, male calves are selected on the basis of pedigree details and performance of dam, sire and other ancestors in the pedigree. The pedigree selection programme initiated under NDP-I has been subsumed under RGM after March 2019. The details of the pedigree selection programmes implemented under NDP-I are as under:

Due to limited demand of above indigenous breeds by Semen Stations for semen production, limited bulls have been produced.

3.2 Breed Improvement Institutes

3.2.1 Introduction:

These Central Cattle Development Organizations include seven Central Cattle Breeding Farms, one Central Frozen Semen Production and Training Institute and four Central Herd Registration Units established in different regions of the country to produce genetically superior bull calves, quality frozen semen from High Genetic Merit Bulls (HGM) and for identification and location of superior germplasm of indigenous breeds of cattle

Requirement of MAITRI's (AIT's) in the Country				
S.No	State	Total AITs reqd	Total AITs available at present	Additional AIT's required
1	Kerala	911	2970	0
2	Tamil Nadu	7027	9594	0
3	Punjab	5983	6010	0
4	Haryana	5446	4161	1285
5	Karnataka	10404	8734	1670
6	Gujarat	14111	14454	0
7	Goa	59	103	0
8	Andhra Pradesh	8910	7677	1233
9	Himachal Pradesh	3342	4342	0
10	West Bengal	10488	7585	2903
11	Jammu & Kashmir	4006	1506	2500
12	Uttar Pradesh	35296	12928	22368
13	Maharashtra	14169	7312	6857
14	Uttarakhand	2701	924	1777
15	Telangana	5839	3782	2057
16	Tripura	826	1104	0
17	Odisha	5354	5577	0
18	Mizoram	42	80	0
19	Nagaland	230	369	0
20	Rajasthan	21683	8001	13682
21	Jharkhand	4831	3737	1094
22	Bihar	15605	6089	9516
23	Madhya Pradesh	17950	7240	10710
24	Chhattisgarh	5937	2595	3342
25	Sikkim	147	247	0
26	Manipur	279	236	43
27	Assam	5320	1785	3535
28	Meghalaya	821	265	556
29	Arunachal Pradesh	341	100	241
	Total	208056	129507	78549

and buffaloes, so as to meet the requirement of HGM bulls and frozen semen doses in the country. These organizations have also been playing important role in training of manpower in frozen semen technology.

3.2.2 Central Cattle Breeding Farms (CCBFs)

3.2.2.1 Breeding is one of the important tools to facilitate production potentials and bring about progressive genetic improvement in production on a long term basis in animals. Central Cattle Breeding Farms were introduced by Govt. of India in various agro climatic zones of the country between 1968 to 1976 under various five year plans. Their main aim is to make available germplasm with high genetic potential of important indigenous and exotic cattle breeds (Holstein Friesian and Jersey) within the country so as to serve as a backbone of the dairy industry. These farms have played crucial role in supply of breeding inputs in the form of disease free HGM bulls of indigenous and exotic breeds and frozen semen doses.

3.2.2.2 There are seven Central Cattle Breeding Farms (CCBFs) located at Alamadhi (Tamil Nadu), Andeshnagar (UP), Chiplima & Sunabeda (Odisha), Dhamrod (Gujarat), Hessarghatta (Karnataka) and Suratgarh (Rajasthan). These CCBFs are engaged in scientific breeding of cattle and buffaloes with the aim of production of high pedigreed bulls for genetic upgradation programmes. Besides, these farms are also providing awareness training to the farmers and breeders.

3.2.2.3 These farms are producing high pedigreed bull calves of indigenous, exotic breeds of cattle and important buffalo breeds for distribution to State Governments, Breeding Agencies, NGOs, Co-operatives etc. The bull calves are produced from indigenous breeds viz. Tharparkar, Red Sindhi, Exotic Breeds viz. Jersey, Holstein Friesian, Buffalo breeds viz. Murrah and Surti and crossbred bulls of Jersey X Red Sindhi and Holstein Friesian X Tharparkar.

3.2.2.4 Objectives:

Mandate of these farms is as under:

(i) Progressive genetic improvement of herd for Milk Production and other important traits like calving interval, days open and days dry through scientific selection and organized breeding plan.

(ii) Development and conservation of superior germplasm of various cattle and buffalo breeds.

Table.1. Grading of semen stations over the years

Grades	2005	2009	2011	2013	2016	2018	2019
A	2	12	20	30	37	30	6
B	12	15	17	15	14	12	1
C	12	7	3	-	_	_	-
Not Graded (NG)	33	13	7	5	2	1	1
Not Evaluated (NE)	-	2	2	2	5	-	5
Total	59	49	49	52	58	43	13

(iii) Production and distribution of high genetic merit (HGM) bulls to different Breeding Agencies for semen production.

(iv) Demonstration of scientific breeding and farm management practices to the

Table.2. State-wise distribution of semen stations with the grades awarded

Sl. No.	State	Grade A	Grade B	Not Graded	Not Evaluated	Total Stations
		80 & above	66 to 79	Below 65		
1	Andhra Pradesh	1	2		1	4
2	Assam	1				1
3	Bihar			1		1
4	Chhattisgarh	1				1
5	Gujarat	4	1			5
6	Haryana	4	1		1	6
7	Himachal Pradesh	1				1
8	Jammu & Kashmir				2	2
9	Karnataka	3	2			5
10	Kerala	3				3
11	Madhya Pradesh	1				1
12	Maharashtra	5	1			6
13	Meghalaya			1		1
14	Odisha	1				1
15	Punjab	1	2			3
16	Rajasthan	1	1			2
17	Tamil Nadu	3	2			5
18	Telangana		1			1
19	Uttarakhand	1				1
20	Uttar Pradesh	2			1	3
21	West Bengal	3				3
Total		36	13	2	5	56

technical personnel extension workers and farmers.

3.2.2.5 Functions:

3.2.2.5.1 Progressive Genetic improvement of stock:

Through scientific breed improvement programme using progeny tested and imported semen progressive genetic improvement is being undertaken at these farms. Animals are selected towards short calving interval, days open and days dry.

3.2.2.5.2 Development & conservation of indigenous breeds

Indigenous breeds like Red Sindhi and Tharparkar breed of cattle and Surti breed of buffalo are being developed and conserved at these farms. HGM bulls of these breeds are being made available to semen stations with the State Government and other agencies. CCBF Chiplima is important source of Red Sindhi germplasm for use in breeding programmes being implemented by the States and other agencies in the country.

3.2.2.5.3 Production & distribution of elite bull calves:

Disease free high genetic merit male calves produced at these farms through scientific breeding by using semen of progeny tested bulls and imported semen in case of exotic breeds of cattle. High genetic merit bulls disease free bulls are made available to the States and other agencies for semen production.

3.2.2.6 CCBF, Alamadhi:

The Central Cattle Breeding Farm, Alamadhi, Chennai, located at (Avadi), Alamadhi, Chennai was established in 1973 with aim of promoting Murrah breed of buffalo in the southern region and to meet requirement of HGM bulls of Murrah breed in the region. The farm is spread over an area of 214.98 hectare. The farm houses Murrah buffaloes and present herd strength is 231 animals. During 2019-20, the farm produced 26 HGM Bull calves and sold 34 HGM bull calves to the states. Besides, the farm trained 237 farmers during the period. The farm is proposed to be converted into Centre of Excellence with state-of-art ETT /IVF lab and training centre for training of professionals and scientist working the field for southern region.

3.2.2.7 CCBF, Dhamrod:

The Central Cattle Breeding Farm, Dhamrod is located in the State of Gujarat in the District of Surat. The farm was established during 1968 with Surti buffalo breed, with aim and objective to produce superior high pedigreed Surti bull calves for propagation and breeding purpose throughout the country and also to conserve this indigenous breed. The farm strength is 236 animals. During 2019-20, the farm produced 34 Bull calves and sold 24 bull calves to the States. Besides, the farm trained 199 farmers during this period. The farm is being maintained as a conservation farm for Surti breed of buffalo as limited population of this breed is available in the country. It has been decided to replace low productive Surti stock with the Gir breed of cattle which is in more demand and performs optimally in this location. At this farm state-of- art ETT /IVF lab and training centre for training of professionals and farmers will be established.

3.2.2.8 CCBF, Andeshnagar:

The Central Cattle Breeding Farm, Andeshnagar is located in the State of Uttar Pradesh about 13 Kms away from Lakhimpur- Kheri . The farm was established during 1976 and houses Murrah breed of buffalo and crosses of Holstein Friesian X Tharparkar. The farm strength is 518 animals. During 2019-20, the farm produced 48 Bull calves and sold 58 bull calves to the States. Besides, the

farm trained 350 farmers during this period. The farms will be converted into Centre of Excellence with state-of- art ETT /IVF lab and training centre for training of professionals and scientist working the field for northern region.

3.2.2.9 CCBF, Chiplima:

The Central Cattle Breeding Farm, Chiplima is located at Basantpur, district Sambalpurin the State of Odisha. The farm was established during 1968 and houses Red Sindhi breed of cattle and cross breeds of Jersey X Red Sindhi. The farm strength is 250 animals. During 2019-20, the farm produced 29 Bull calves and sold 8 bull calves to the states. Besides, the farm trained 589 farmers during this period. The farms will be converted into Centre of Excellence with state-of- art ETT /IVF lab and training centre for training of professionals and scientist working the field for

eastern region

3.2.2.10 CCBF, Sunabeda:

The Central Cattle Breeding Farm, Chiplima is located at Sunabeda, District Koraput in Odisha State. The farm was established during 1972 and houses exotic Jersey breed of cattle. The farm strength is 350 animals. During 2019-20, the farm produced 33 Bull calves and sold 109 bull calves to the states. Besides, the farm trained 79 farmers during this period. At this farm state-of- art ETT /IVF lab and training centre for training of professionals and farmers will be established.

3.2.2.11 CCBF, Hessarghatta:

The Central Cattle Breeding Farm, Hessarghatta is located at Hesaraghatta, District Bengaluru in Karnataka State. The farm was established during 1976 and houses exotic Holstein Friesian breed of cattle. The farm strength is 126 animals. During 2019-20, the farm produced 11 Bull calves and sold 11bull calves to the states. Besides, the farm trained 361number of farmers during this period. At this farm state-of- art ETT /IVF lab and training centre for training of professionals and farmers will be established.

3.2.2.12 CCBF, Suratgarh:

The Central Cattle Breeding Farm, Suratgarh is located at Suratgarh, District Sriganganagar in Rajasthan State. The farm was established during 1967 and houses indigenous stock of Tharparkar breed of cattle. The farm strength is 361 animals. During 2019-20, the farm produced 30 Bull calves and sold 15 bull calves to the states. Besides, the farm trained 376 number of farmers during this period. At this farm state-of- art ETT /IVF lab and training centre for training of professionals and farmers will be established.

- Semen production increased from 88 million doses in 2014-15 to 119 million doses in 2018-19.
- During 2018-19, 79 million AIs performed
- Conception rate increased from 20% to 35%

3.2.3 Overall Physical Progress

S. No	Organization	Breed	No of bulls produced 2019-20
1	ABRO	Murrah	37
2	KMF	HF	10
3	Banas	Mehsana	12
4	Mehsana	Mehsana	26
5	SAG CBHF	CBHF	7
6	SAG	Gir	16
7	SAG Murrah	Murrah	5
8	APLDA	CBJY	29
9	TCMPF	CBJY	0
10	PLDB	Murrah	46
11	KLDB	CBHF	20
12	HLDB	Murrah	28
13	ULDB	CBHF	19
14	BAIF	CBHF	21
15	GANGMUL	Sahiwal	9
16	PLDB	Sahiwal	6
17	HPLDB	Jersey	0
	PT Total		291

These farms produced 211 nos. of bull calves, sold 259 bull calves to farmers and to State Breeding Farms and trained 2191 nos. of the farmers in dairy farm management during the year 2019-20. Parameter wise physical progress made during 2019-20 is presented in the following table:

3.2.2 Vision

3.2.3.1 Advanced dairying nations have introduced genomic selection and demonstrated

S. No.	Project	Breed	No of bulls produced during 2019-20
1	Haryana Livestock Development Board (HLDB)	Hariana	0
2	Banas, Gujarat	Kankrej	11
3	SAG, Bidaj	Jaffarabadi	7
4	Maharashtra Livestock Development Board (MLDB)	Pandharpuri	10
5	Punjab Livestock development Board (PLDB)	Nili Ravi	3

6	Rajasthan Livestock Development Board (RLDB)	Tharparkar	4
7	URMUL Trust, Rajasthan	Rathi	4
	PS Total		39

of the scheme is to undertake identification and propagation of superior germplasm of indigenous breeds in the breeding tract through field performance recording and arrange breeding of selected cows with high genetic merit bulls. The scheme is playing crucial role in development and conservation of indigenous breeds.

3.2.4.2 Structure of the scheme:

Under the scheme there are 4 CHRS units located at Rohtak, Ahmedabad, Ajmer and Ongole. There are 96 milk recording centers to undertake field performance recording (FPR). The scheme is covering 14 indigenous breeds of cattle and buffalo in 9 States. The data is uploaded on the INAPH data base and animals are identified using 12 digit Animal Unique Identification (AUID) number. Guidelines of International Committee on Animal Recording are followed under the scheme.

3.2.4.3 CHR Unit Rohtak

This Unit was established in 1963. The unit has 33 recording centers for undertaking milk recording in the field. The indigenous breeds covered are Hariana, Sahiwal, Red Sindhi and Gir breeds of cattle and Murrah and Nili Ravi breeds of buffalo. The States covered by the unit are Haryana, Uttar Pradesh, Punjab, Uttarakhand and Delhi.

3.2.4.4 Achievements:

In 2019-20, 14180 elite Cows & Buffaloes conforming to breed characteristics were brought under the FPR. Achievements made during 2019-20 are as under:

3.2.4.5 CHR unit, Ahmedabad

3.2.4.5.1 This Unit was established in 1969. The unit has 42 recording centers for undertaking milk recording in the field. The indigenous breeds covered are Gir, Kankrej breeds of cattle and Surti, Jaffrabadi, Mehsani, Pandharpuri breeds of buffalo. The States covered by the unit are Gujarat and Maharashtra.

3.2.4.5.2 Achievements:

In 2019-20, 8130 elite Cows & Buffaloes conforming to breed characteristics were brought under the FPR. Achievements made during 2019-20 are as under:

3.2.4.6 CHR unit, Ajmer

3.2.4.6.1 This Unit was established in 1979. The unit has 11 recording centers for undertaking milk recording in the field. The indigenous breeds covered are Gir, Rathi, Tharparkar breeds of cattle and Murrah breed of buffalo. The State covered by the unit is Rajasthan.

3.2.4.6.2 Achievements:

In 2019-20, 2403 elite Cows & Buffaloes conforming to breed characteristics were brought under the FPR. Achievements made during 2019-20 are as under:

3.2.4.7 CHR unit, Ongole:

3.2.4.7.1 This Unit was established in 1979. The unit has 10 recording centers for undertaking milk recording in the field. The indigenous breeds covered are Ongole breed of cattle and Murrah breed of buffalo. The State covered by the unit is Andhra Pradesh.

3.2.4.7.2 Achievements:

In 2019-20, 4,219 elite Cows & Buffaloes

conforming to breed characteristics were brought under the FPR. Achievements made during 2019-20 (upto Dec, 2019) are as under:

3.2.4.8 Role Played by CHRS in Genetic Upgradation Programmes:

3.2.4.8.1 During 2018-19the primary registration of 13,953 cows and buffaloes was done, out of which 10,157 were finally registered; 276 breeders awareness / publicity camps were held and 522 persons were trained for conducting survey and milk recording for State Implementing Agencies. List of the elite male calves identified under the scheme have been placed on the website of this Department and also on E PashuHaat portal. High genetic merit male calves have been purchased by the State for use in breeding programmes being implemented by the States.

3.2.4.8.2 Revision in MSP:

Based on the revision of MSP, the lactation yield range is modified for award of prize money incentive as follows:

3.2.4.9 Vision:

3.2.4.9.1 At present field performance recording programme under CHRS is not integrated with the breeding programmes being implemented by the States in the breeding tract of indigenous breeds. Therefore there is urgent need to cover elite animals identified under FPR with AI using semen of high yielding indigenous breeds or semen from progeny tested bulls. CHRS units will undertake AI programme in collaboration with State Animal Husbandry Departments or AI infrastructure available with NDDB under progeny testing and pedigree selection programme. AI infrastructure will also be created with CHRS unit.

3.2.4.9.2 CHRSs will assist NBAGR in collection of blood samples and digitization of data on performance recording for genomic studies and development of genomic chip.

3.2.5 Central Frozen Semen Production & Training Institutes (CFSP&TI):

3.2.5.1 CFSP&TI is one of the premier Institutes of the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India established in the year 1969.

3.2.5.2 The Institute is engaged mainly in production of Bovine Frozen Semen of Indigenous (Red Sindhi and Tharparkar), Exotic (Holstein Friesian and Jersey), crossbred and Murrah breeds of bulls for the use in Artificial Insemination (AI) programmes in the country. The center is one of the recognized testing laboratories for testing of AI equipment. The main objectives are production of high quality frozen semen from superior exotic, crossbred and Indigenous breeds of cattle and some important breeds of buffaloes, serve as a Central Depot of frozen semen from outstanding imported bulls for the distribution within the country for breeding the nucleus exotic herds, training of technical personnel from State Government, Universities, Milk Federations and other Institutes in various aspects of frozen semen technology. The Institute is certified for IS/ ISO 9001-2008, for Quality Management System by the Bureau of Indian standards.

3.2.5.3 CFSP&TI coordinated for revision of MSP, SOP and Score Card for evaluation of AI Training Centers and initiated actions for evaluation of AI Training Institutes in the year 2019-20.

3.2.5.4 During 2019-20 around 6.77 lakh doses of frozen semen are produced till December 2019.4 training courses organised and 47 professionals trained in frozen semen technology upto December 2019. 132 internship students trained from 5 different veterinary colleges at the institute.

3.2.5.5 Prospective Plan

3.2.5.5.1 At present state-of-the- art training institutes are not available in the country for training of professionals engaged in frozen semen production, embryo transfer technology and in-vitro fertilization techniques. Training institute at CFSP&TI will be converted into international training centre for professionals working in the field in India and abroad.

3.2.5.5.2 In order to meet demand of sexed semen in the country, sexed semen production facility will be created at CFSP&TI. Quality sexed semen produced at the centre will be made available to the States for use in their breeding programme.

3.2.5.5.3 Procurement of HGM Bulls

CFSPTI has procured 3 Gir HGM bulls under NDP-I. It is also planned to procure 2 Sahiwal HGM bulls which will be very shortly inducted into the herd.

3.2.5.5.4 Capacity Building

Under NDP–I sub project of strengthening the semen stations, the capacity building of the staff at various levels was given its due importance. As per the charted training program mentioned in the

Red Sindhi Bull

Cross Bred Cow

Red Sindhi Cow

Calves

Fodder (Maize + Cow pea)

project, officers and staff of CFSP&TI undertook training in various fields at reputed training centres emplaned under NDP-I. These trainings have helped the Officers and staff of CFSP&TI to improve their technical knowledge and track the recent developments in the field of semen processing.

3.2.5.5.4 Social Awareness Camps (E & S Activities)

CFSP&TI had appointed an Animal Health Officer (AHO) as envisaged under the NDP-I project for effective health control mechanism and to create the social awareness on bio-security and zoonotic diseases to the rural folks living within 10 kilometers radius of CFSP&TI. There was an overwhelming response from public and effective interaction was made with subject matter specialists. This has helped CFSP&TI to effectively monitor the movement of animals and their vaccination program. This enabled CFSP&TI to maintain a disease-free zone.

Jersey Breed at CCBF, Sunabeda

(Tharparkar Calves)

(Tharparkar Cow)

(Tharparkar Cow)

Sl No	Para meters	Alamadhi	Andesh Nagar	Chiplima	Dhamrod	Hessarghatta	Sunabeda	Suratgarh	Total
1	Bull calf Production	26	48	29	34	11	33	30	211
2	Bull Calf sold	34	58	8	24	11	109	15	259
3	No. of Farmers trained	237	350	589	199	361	79	376	2191

Primary Registration	Animals Finally Registered	Breeders Awareness / Publicity Camps	No. of Person trained
4542	1115	27	147

Primary Registration	Animals Finally Registered	Breeders Awareness / Publicity Camps	No. of Person trained
3117	2695	65	137

Primary Registration	Animals Finally Registered	Breeders Awareness / Publicity Camps	No. of Person trained
824	919	34	88

Primary Registration	Animals Finally Registered	Breeders Awareness / Publicity Camps	No. of Person trained
1454	580	34	45

SN	Breed	First Category	Second Category
1	Gir	3500 & above	3000-3499
2	Kankrej	3000 & above	2500-2999

SN	Breed	First Category	Second Category
3	Hariana	2500 & above	2000-2499
4	Murrah	3500 & above	3000-3499
5	Surti	2700 & above	2000-2699
6	Jaffarabadi	3500 & above	3000-3499
7	Sahiwal	3500 & above	3000-3499
8	Tharparkar	3000 & above	2500-2999
9	Rathi	3300 & above	2800-3299
10	Mehsana	3300 & above	2800-3299
11	Ongole	2400 & above	2000-2399
12	Red Sindhi	3500 & above	3000-3499
13	Nili Ravi	3500 & above	3000-3499
14	Pandharpuri	2000 & above	1600-1999

Gir Bull

CFSP&TI laboratory

Sl. No.	Program Name	Target	Achievement
1	Laboratory techniques... for GM	1	1
2	Laboratory techniques for QCO	1	1
3	Modern cryopreservation technology for QCO and VO	4	2
4	Bull breeding soundness and andrological examination for QCO and VO	4	2
5	Laboratory techniques for Lab technicians	3	1
	EIA Level Trainings:		
6	Orientation of Lab attendant	3	3
7	Orientation of bull attendant	10	10
8	Orientation on ISO, First aid and safety of workers	13	13




Task	Target	Achievement
Awareness camps on Zoonotic Diseases (Number of Camps)	20	20
Training on Workers' Health and Safety (ESAP)	1	1



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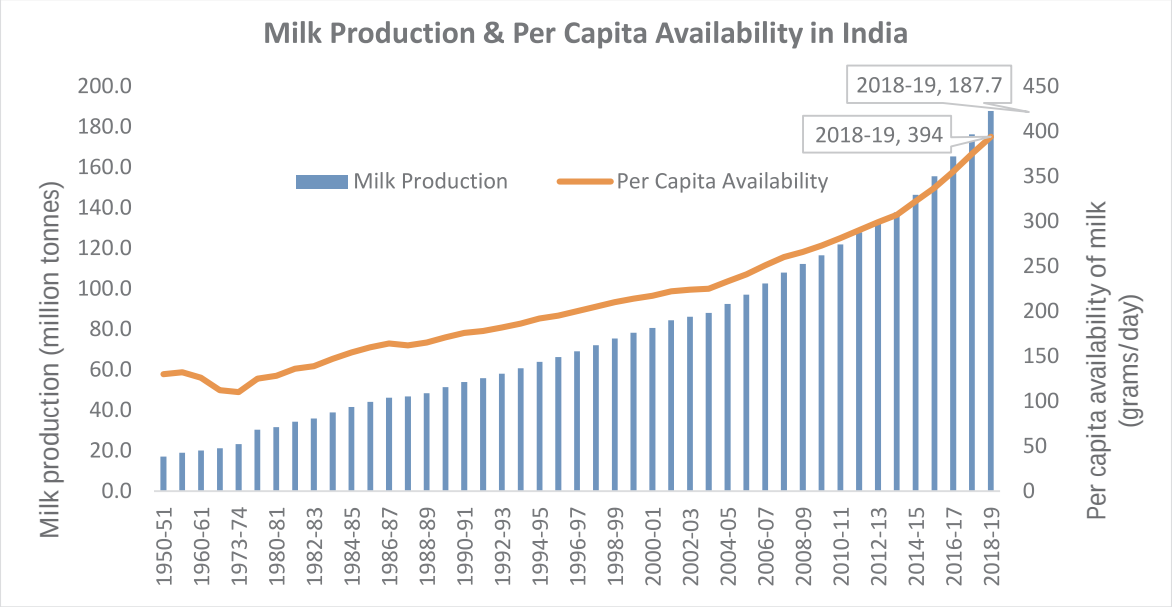
Chapter 4

DAIRY DEVELOPMENT

DAIRY DEVELOPMENT

4.1 Overview

The Dairy sector in India has grown substantially over the years. As a result of prudent policy intervention, India ranks first among the world's milk producing nations, achieving an annual output of 187.75 million tonnes during the year 2018-19[1] as compared to 176.35 million tonnes during 2017-18 recording a growth rate of 5.33%. FAO reported 1.4% increase in world milk production from 840.5 million tonnes in 2018 to 852.0[1] million tonnes in 2019. This represents a sustained growth in the availability of milk and milk products for the growing population.



Dairying has become an important secondary source of income for millions of rural families and has assumed the most important role in providing employment and income generating opportunities particularly for women and marginal farmers. The per capita availability of milk has reached a level of 394 grams per day during the year 2018-19[1], which is more than the world average of around 301.6 grams per day in 2019. Most of the milk in the country is produced by small, marginal farmers and landless laborers.

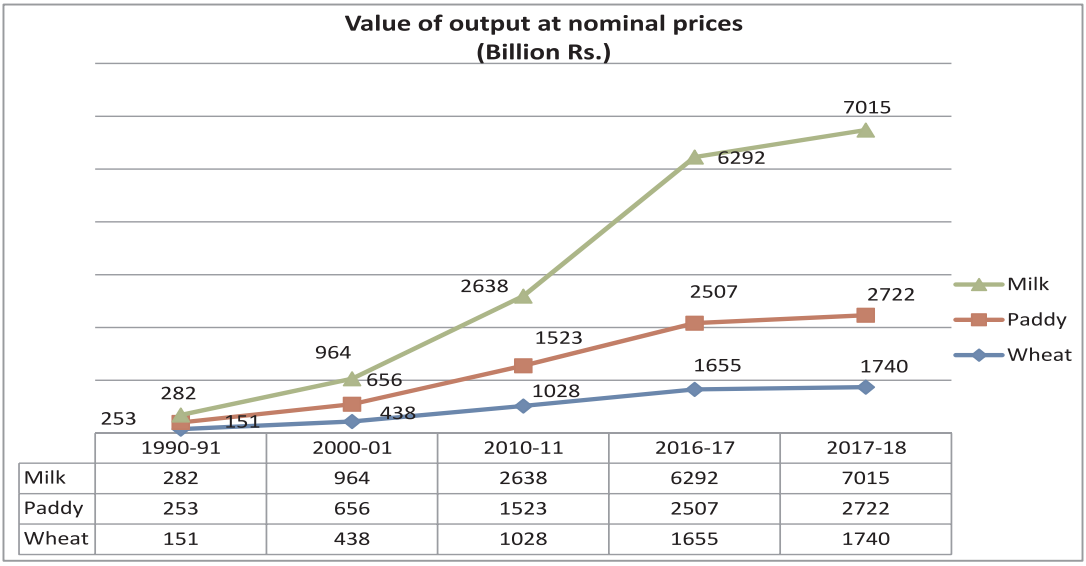
4.1.1 Economic Significance of Dairying

Livestock sub-sector plays a vital role in the Indian economy and also in the socio-economic development of millions of rural households. Livestock is a principal source of draught power in rural areas and provides milk, meat, eggs, wool, hides & skins, manure and fuel. It accounted for about 4.9% of total GDP/GVA of India (at current prices[1]) and 28.4% of the GDP/GVA of Agriculture & allied sector. Although, the contribution of agriculture &allied sector to the national GDP has declined during past few decades, the contribution of the livestock sub-sector has remained stable. In real terms, the contribution of agriculture & allied sector to the national GDP has been falling from a level of 23% in 1999-20 to 17% in 2017-18[1]. However, the contribution of livestock to agriculture & allied sector gross domestic product (GDP) has increased from 23.12% to 28.4% during the same period.

Meaning of the Superscript has been given at the end of the chapter.

Milk & milk products constitute a major share of the value of output from the livestock sub-sector; their share increased from less than 50% in 1950-51 to 67% in 2017-18 (at current prices). Milk has become the single largest agricultural commodity in terms of the value of commodity produced. The value of milk output in 2017-18[3] was Rs. 701530 Crore – surpassing total value of output from food grains.

Value of output in 2017-18



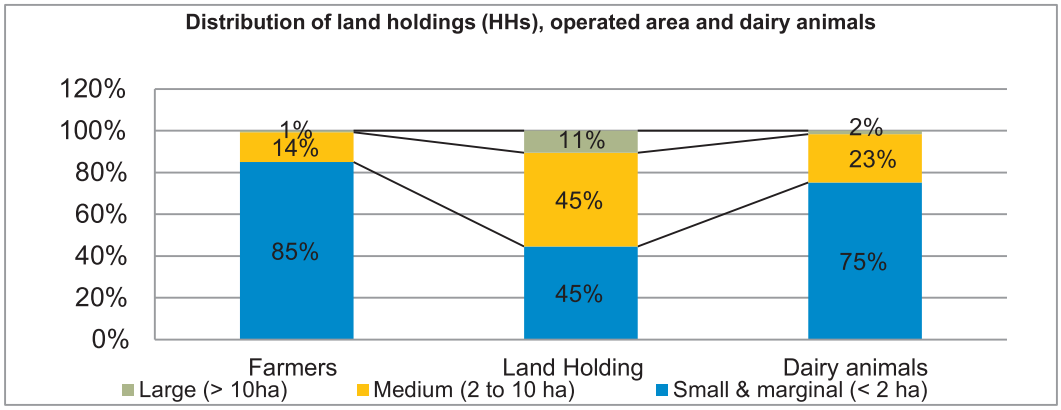
	1990-91	2000-01	2010-11	2016-17	2017-18
Milk	282	964	2638	6292	7015
Paddy	253	656	1523	2507	2722
Wheat	151	438	1028	1655	1740

4.1.2 Dairy as a source of livelihood

Dairying plays an important role in socio-economic development of rural households in the country. About 80 million rural household are engaged in milk production with very high proportion being small & marginal farmers and landless.

Livestock holding in general and milch-animal holding in particular, is far more equitable than land holding. About 86% of the total farmers are small and marginal[4], they together own about 47.34% of farm land whereas own about 75.24% of milch animals[1](please refer the figure below).

Category wise farmers' land holding and animal holding

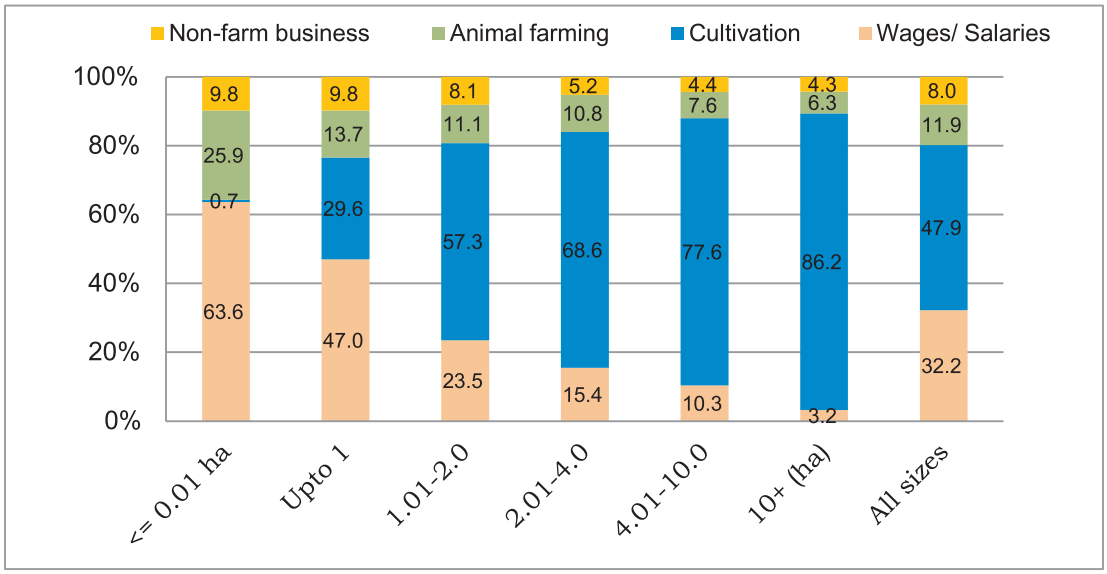


Source: Basic Animal Husbandary Statistics, DAHD

Small land base encourage farmers to practice dairying as an occupation subsidiary to agriculture. Income from crop production is seasonal, whereas dairying provides year-round income and generates gainful employment in the rural sector. Therefore, it is an important economic incentive for the landless, small & marginal farmers particularly women to take up dairying as a source of livelihood. Further, women contribute large portion of requirement of labour in dairying. The dairy sector is therefore an important vehicle for inclusive development in the country.

Unlike leading milk producing countries in the world, large proportion of milk producers (about 95%) in the country hold 1 to 5 milch animals per household as a part of subsistence farming system. The livestock sub-sector contributes significantly to the rural income - about 26%[5], of which 78.3% is from milk in case of the poorest farmers' (farmers with less than 0.01 Ha of land holding) and about 12%[5] in case of all classes of farmers. About 67% of income from "farming of animals" is attributed to income from dairying (milk). (please refer the table below)

Source of income for Rural Households in India



Source: NSSO (July 2012-June 2013)

During 2003 to 2013, the share of income from "farming of animals" increased from 4.3% to 12%, while the share from both non-farm business and wages & salaries declined over this period.All these indicate that any intervention in dairying would directly contribute towards poverty alleviation and improve income of farmers.

4.1.3 Share of milk production and supply

In India, about 46% of the milk produced is either consumed at the producer level or sold to non-producers in the rural area, the balance 54% of the milk is available for sale to organised and unorganised players. Organised sector comprise of Government, Producers' Owned Institutions (Milk Cooperatives & Producer Companies) and Private players which provides fair and transparent system of milk collection round the year at the village level. Unorganized/informal sector involves local milkman, dudhias, contractors etc. and they are mostly found to be opportunistic, as there is no uniformity of milk

price paid to producers and it varies depending upon the situation. Possibility of adulteration of milk is higher among these unorganized groups. In the areas where competition is high and presence of formal sector is strong, they generally give higher prices and at the same time, they don't offer remunerative prices to the producers where organized sector is not present.

4.1.4 Demand

The drivers of demand for milk in India are - population growth, urbanisation and increasing per capita income. The consumption of milk has been rising, commensurate with the increase in purchasing power of people, changing food habits & life-styles and demographic growth. Milk with its varied benefits is the only source of animal protein for the largely vegetarian population of the country. Further, factors such as increased consumer interest in high protein diets and increasing awareness & availability of dairy products through channels such as organised retail chain are also driving this growth.

The milk consuming population has been consistently rising in the country both in rural and urban areas. According to Consumer Expenditure Survey (CES, 2011-12) of NSSO, about 78% and 85% of rural and urban population respectively reported consumption of milk in the country. The growth in above factors indicates that the demand for milk & milk products will rise consistently in future.

4.1.5 Organised Sector

4.1.5.1 Cooperative Sector

Three tier structure

Village Cooperative Society: The main pattern followed by Village Cooperative Societies in India is an Anand model village dairy cooperative society (DCS) of milk producers. Any producer can become a DCS member by buying a share and committing to sell milk only to the society. Each DCS has a milk collection centre where members take milk every day. Each member's milk is tested for quality with payments based on the percentage of fat and Solids-Not Fat (SNF). At the end of each year, a portion of the DCS profits is used to pay each member a patronage bonus based on the quantity of milk poured.

The District Union: A District Cooperative Milk Producers' Union is owned by dairy cooperative societies. The Union buys all the societies' milk, then processes and markets fluid milk and products. Most Unions also provide a range of inputs and services to DCSs and their members: feed, veterinary care, artificial insemination to sustain the growth of milk production and the cooperatives' business. Union staff train and provide consulting services to support DCS leaders and staff.

The State Federation: The cooperative milk producers' unions in a state form, a State Federation, which is responsible for marketing the fluid milk and products of member unions. Some federations also manufacture feed and support other union activities.

The Current status[6]: 222 dairy cooperative milk unions have covered about 17.01 million farmers under the ambit of 1,94,007 village level dairy corporative societies up to December 2019. The Cooperative Milk Unions have procured an average of 464.34 lakh Kg per day of milk during the year 2019-20 up to December 2019 as compared to 494.27 lakh per day during same period in the previous year recording a decline of 6.1%. The sale of liquid milk by the Cooperative Dairies has reached 370.04 lakh liters per day during the year 2019-20 up to December 2019 as compared to 353.05 lakh liters per day during last year, an increase of 4.8%.

4.1.5.2 Milk Producer Companies

NDDB Dairy Services (NDS), the wholly owned subsidiary of NDDB has facilitated incorporation and operationalisation of 15 Milk Producer Companies (MPCs). Out of the 15 MPCs, six were supported under National Dairy Plan-I (NDP-I), five are supported by the Tata Trusts / Dairy Health and Nutrition Initiative (DHANII) and four are supported by the National / State Rural Livelihoods Mission (NRLM / SRLM).

As on December 2019, 15 MPCs were operational and covering 14,054 villages in 73 districts of eight states having membership base of 5.72 lakh (including 61% small holders having up to three milch animals) and procured an average volume of 28.41 Lakh Liters per Day of milk during the year. Women members in the MPCs constitute about 53%, significant part of it is contributed by nine MPCs who have exclusively women membership. The members of these 15 companies contributed about Rs 141 crore towards share capital. They are expected to achieve a budgeted turnover of about Rs 5482 crore during the year 2019-20.

NDS continued to support the Six large Milk Producer Companies, namely Paayasin Rajasthan, Maahi in Gujarat, Shreeja in Andhra Pradesh, Baani in Punjab, Saahaj in Uttar Pradesh and Bapudham in Bihar, who are also End Implementing Agencies (EIAs) under NDP I. NDS provided Project Management Support to the MPCs in successful implementation of sub projects under NDP I.

Under Collaborative agreement with the Tata Trusts/ DHANII, NDS has facilitated setting up 5 MPCs namely, Sakhi in Alwar and Asha in Pali Rajasthan, Shwetdhara in Pratapgarh, Uttar Pradesh, Ruhaanii in Mansa, Punjab and Indujaa in Yavatmal, Maharashtra.

NDS is recognised as Deen Dayal Antyodaya Yojana National Support Organization (DNSO) by the Ministry of Rural Development, Government of India. NDS has entered into agreement with State Rural Livelihoods Mission (SRLM) of Madhya Pradesh, Bihar and Uttar Pradesh to set up Milk Producer Companies approved by NRLM.

A total of 4 MPC projects are approved under NRLM to cover about 2300 villages and enrolled 1,07,000 members and achieve breakeven volume within 2-3 years of grant support. All NRLM supported projects are green field projects mainly in districts with limited milk potential and market access. The MPCs are designed to have exclusive women membership comprising predominantly the members of SHG groups.

Under the above arrangement, NDS facilitated setting up 4 MPCs namely, Muktaa in Sagar and Maalav in Rajgarh, Madhya Pradesh, Kaushikee in Saharsa, Bihar and Balinee in Jhansi, Uttar Pradesh. Balinee MPC operationalized during 2019-20, will cover 5 out of 7 districts in Bundelkhand region of Uttar Pradesh. Another MPC in Kota, Rajasthan is in the process of incorporation in the coming year.

4.1.5.3 Private Dairy Sector

Post 1991, when the era of reform in industrial licensing began, the private sector companies have made an impressive growth in building capacities for processing milk and milk derivatives. They made large investment in dairy sector creating capacities which surpassed the combined capacity of the dairy cooperatives and the government dairies in past 20 years. Some of these private players are now much larger than some cooperative dairies and they have large potential for growth. Since Private Sector functions purely on commercial lines with an aim to earn maximum profit, the social responsibility

towards farmers' development is largely affected. The Private Players prefer to procure mil through vendors affecting the farmers' getting remunerative price. However, growth in Private Sector provides market access to large number of farmers.

The total number of Private Dairies (Milk Processing Units) as per FSSAI Licenses (till May 2019) is 1944 with a capacity of 901.6 LLPD.

4.2 Role of Dairy Division

- Increase in livestock production and productivity and increasing share of organised sector through improvement in procurement, processing and marketing of milk and milk products.
- Trade policy relating to milk & milk products.
- Monitoring of milk situation and Policy decisions to maintain supply of milk & milk products to the consumers and reasonable prices for milk to the milk producers.
- Approval of schemes/projects, review of progress, re-appropriation of physical & financial targets, audit and inspection, scheme/project Governance, signing of loan agreements with external/ domestic agencies, hedging liability, repayment of external loans etc.
- Quality improvement of milk and milk products in compliance to FSSAI Act.
- Formulation of national action plan and policy for implementation.
- Collection and updation of requisite data for suitable policy interventions

4.3 Milk Scenario

4.3.1 Domestic:

The average milk procurement during the month of December-19 was lower by 9.35% while liquid milk sale was higher by 4.10% when compared to 2018-19. During December 2019, the stocks of Skimmed Milk Powder (SMP) in cooperative sector came down to 34,288 metric tonnes (MT) and the stock of white butter came down to 20,238 MT as against the stock of 1,30,653 MT of SMP and 86,345 MT of white butter respectively in December 2018. This indicates a quite comfortable position of Cooperatives against previous year situation of holding of huge stock that affected their working capital.

4.3.2 Increasing Domestic Demand:

The Department of Animal Husbandry and Dairying had issued an advisory to States to include milk in the Mid-day Meal Scheme, Anganwadi Scheme etc. through dairy cooperatives to increase demand on a sustained basis. The Department of Food and Public Distribution were requested to consider inclusion of milk in the PDS system. The Ministry of Health and the Ministry of Women and Child Development was requested to include milk in their ongoing schemes. This will increase the consumption of milk and subsequently better returns to dairy farmers even in flush season as well. The matter was also taken up with NITI Aayog.

Twelve State/ UT Cooperatives in Karnataka, Bihar, Andhra Pradesh, West Bengal, Maharashtra, Gujarat, Madhya Pradesh, Chhattisgarh, Sikkim, Haryana, Puducherry, and Himachal Pradesh have supplied milk and milk products through Anganwadis and Mid Day Meal programme.

4.3.3 Swatchhata Hi Sewa:

Hon'ble Prime Minister in his Independence Day Speech called for an end to single use plastics. Subsequently, in the milk situation review meeting held on 21.08.2019, Secretary (AHD) has requested all the

stakeholders to halve the use of plastic in milk pouches by 2nd October 2019. In this connection, suggestions were also made to subsidize one litre milk pouch and discourage the use of 500 ml packs by increasing its price and to offer a rebate to customers on return of plastic pouches which can then be recycled by hiring a recycling waste management agency. The use of plastic alternatives like use of returnable bottles of glass was also explored.

On 11.09.2019 Hon'ble Prime Minister launched the scheme Swachhta hi Sewa 2019 at Mathura. In Swachhta hi Sewa 2019, theme is 'plastic waste awareness and management'. This is a massive nationwide awareness and mobilization campaign on Swachhta. The movement was organized from September 11 till October 2, 2019 by all the Cooperatives Milk unions in the country.

Mother Dairy, Delhi and 17 State Cooperative Federations in Gujarat, Karnataka, Tamil Nadu, Rajasthan, Haryana, Punjab, Kerala, Tripura, Himachal Pradesh, Uttarakhand, Manipur, Sikkim, Nagaland, Meghalaya, Arunachal Pradesh, Maharashtra and Uttar Pradesh have taken initiatives to reduce the use of single use plastic through various measures like increasing the cost of half litre milk pouches, awareness generation programmes, research programmes on eco-friendly packaging, encouraging bulk handling of milk, ban on pouch film of lower microns (less than 50 microns), replacement of plastic spoons, introduction of woven bags, buy-back of used milk sachets, introduction of stainless steel and wooden boards in place of acrylic/ PVC boards, etc. besides arranging collection and recycling of milk pouches.

4.3.4 Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities:

A Scheme named "Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities" has been approved to provide working capital loan to State Cooperatives and Federations with a corpus of Rs.300 Crore. An amount of Rs. 3 Crore has been released to NDDB during 2018-19.An amount of Rs. 103 crore has been released to National Dairy Development Board till December 2019 for implementation of the scheme during 2019-20.

4.3.5World:

Global milk production is forecast at 852 million tonnes in 2019, an increase of 1.4 percent from 2018 – a smaller rate of growth than earlier anticipated in May, reflecting downward revisions made for India and the European Union. Much of the anticipated output expansion will originate in India, Pakistan, China, the European Union and Brazil, partially offset by declines in some countries including Australia, Colombia and Argentina. In India and Pakistan, herd expansions drive output growth, while in China, farm efficiency improvements underpin the higher growth. In the European Union, output is rising, albeit slowly as dry weather during the summer constrained milk deliveries, while in Brazil, rising dairy herd and stable milk prices support higher production. By contrast, output may decline in Australia and Colombia due to dry weather, whereas in Argentina, rising feed costs and restrained consumer demand may dampen production. Elsewhere, in the United States, higher milk yields sustain the growth momentum, whereas in New Zealand, favourable weather supports a positive production outlook.

World trade in dairy products (in milk equivalent) in 2019 is forecast at 76 million tonnes, up 0.8 percent from 2018, significantly lower than the previous growth forecast. This emanates largely from a more subdued import growth forecast for China, reflecting expected

import curtailments of butter, but also of whey products due to reduced demand from piggeries. Elsewhere, the Russian Federation, the Philippines, Indonesia and Japan may purchase more dairy products in 2019. Much of the expanded global supply is likely to come from New Zealand and the European Union, thanks to increased export availabilities and new trade agreements. By contrast, retaliatory tariffs, reduced demand for whey products as hog feed and strong competition will constrain dairy exports from the United States, while tighter export availabilities weigh on exports from Australia.

International dairy prices, measured by the FAO Dairy Price Index[2], rose by 24 percent between January and May of this year, largely driven by a strong global demand. Since June, price quotations for butter and cheese were subject to more downward pressure due to increased export availabilities, especially from New Zealand, whereas those for Skim Milk Powder (SMP) and Whole Milk Powder (WMP) drifted higher, reflecting strong import demand from Asia.

Due to in-depth examination and analysis of the situation and SIP (sanitary Import Permit) applications based on risk analysis criteria, the import of milk & milk products were reasonably lower than past years. The data will reveal that import have been substantially lower for products for which import application are received:

Import: Commodity-wise (Value) (Rs in Lakh)

HS Code	Commodity	2017-18	2018-19	2019-20 (Apr-Oct)
401	Milk and cream, not concentrated nor containing added sugar or other sweetening matter	649.09	1,268.54	746.31
402	Milk and Cream Concentrated/ Containing sugar/sweetening matter	2,825.81	855.31	1,541.63
403	Butter milk, curdled milk and cream, yogurt, kephir and other fermented acidified milk and cream	1,013.90	655.54	536.48
404	Whey and whey products	14,826.13	8,557.27	5,876.70
405	Butter and other fats and oils derived from milk; dairy spreads	3,095.33	1,426.78	944.42
406	Cheese and curd	5,798.52	7,085.26	4,109.79
	Grand Total of all above products	**28208.78**	**19848.7**	**13755.33**

(Source: D/o Commerce)

4.4 Dairy Development Schemes

Department is implementing Central Sector Scheme viz. National Programme for Dairy Development(NPDD), National Dairy Plan Phase – I (NDP-I), Dairy Entrepreneurship Development Scheme(DEDS), Supporting State Cooperative Dairy Federation (SSCDF) as a part of Umbrella

Scheme namely "White Revolution". This Department has also initiated a new scheme during December 2017 namely "Dairy processing & Infrastructure Development Fund(DIDF)" successfully with the Technical Team and with the feedback and with the operational experiences, the schemes were restructured as per requirement and for betterment of dairy farmers.

4.4.1 National Programme for Dairy Development (NPDD)

National Programme for Dairy Development was initiated in March 2014 with a total scheme outlay of Rs.600 crore for period upto the end of 12th Plan i.e. 2016-17. The scheme is aimed at strengthening dairy infrastructure covering village level procurement centres, establishment of bulk milk cooling units, milk processing plants at district & State level and marketing infrastructure for facilitating Milk Unions and Federations to market their products. The scheme with the same objectives and target has been implemented during 2017-18 to 2019-20.

Objectives of NPDD

The NPDD focuses on creating/ strengthening of infrastructure for Production of quality milk, Procurement, Processing and Marketing of Milk & Milk Products by the State Implementing Agency (SIA) i.e. State Cooperative Dairy Federations/ District Cooperative Milk Producers' Union.

Funding Pattern under NPDD

50% Grants-in-aid to NDP States, for non NDP States 75% grants to profit making milk unions with accumulated profit of more than Rs. 1 crore in previous Year, 90% grants to loss making milk unions with accumulated profit of less than Rs. 1 crore in previous year, 90% grants to Hilly & North-Eastern States and 50% grants for rehabilitation of sick milk unions. The central assistance is restricted to Rs.15 crore per project and Rs. 5 crore for rehabilitation of the milk unions.

Major components funded under the scheme

Milk Chilling, Milk Processing & Marketing, Milk Procurement, Input services, Cattle induction, Training of farmers and dairy

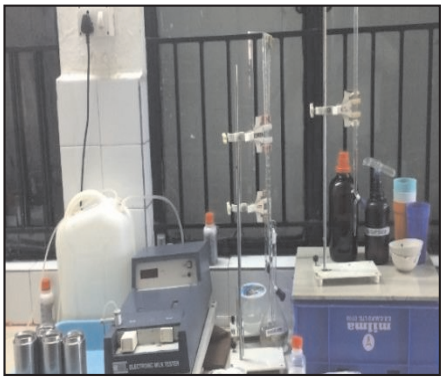
personnel, information and communication technology etc.

Achievements under NPDD

129 projects in 28 States and 2 Union Territory have been approved with the total cost of Rs. 1535.17 Crore (Central Share Rs. 1249.36 Crore) from 2014-15 to 2019-20(till 31.12.2019). A total sum of Rs. 850.63 Crore has been released for implementation of new projects approved under the scheme up to 31.12.2019. The State-wise financial progress till December, 2019 is at Annexure-VII.

Physical Progress under NPDD

- 2.65 lakh new farmers were given benefit of membership of dairy co-operative societies.
- 16.89 lakh litres per day new milk processing capacity has been established.
- 731 Bulk Milk Coolers with 8.07 lakh litres chilling capacity installed,8158 Automatic Milk Collection Unit and Data Processing and Milk Collection Unit installed at village level dairy cooperative societies.
- 2667 Electronic Milk Adulteration Testing Equipments and 502 ButyroRefractometer has been approved for checking adulteration in milk.
- Approval has been granted for strengthening of milk testing laboratories of all 231 Cooperative Milk Unions in the country to check adulteration in milk.
- State Central Laboratory has been approved in 18 States.
- The State-wise physical progress, targets and achievements are at Annexure-VIII.



4.4.2 Dairy Entrepreneurship Development Scheme

Dairy Entrepreneurship Development Scheme (DEDS) was started in September, 2010. This scheme is being implemented through NABARD which provides financial assistance to commercially bankable projects with loans from Commercial, Cooperative, Urban and Rural banks.

Objective of the scheme

To generate self-employment and provide infrastructure for dairy sector, to set up modern dairy farms and infrastructure for production of clean milk, to encourage heifer calf rearing for conservation and development of good breeding stock, to bring structural changes in the unorganized sector, so that initial processing of milk can be taken up at the village level, to upgrade traditional technology to handle milk on a commercial scale, to provide value addition to milk through processing and production of milk products.

Pattern of Assistance

A back ended capital subsidy of 25% of the project cost to the beneficiaries of general category and 33.33% of the project cost to SC & ST beneficiaries. Entrepreneur contribution (Margin) for loans beyond Rs.1 lakh (Subject to any revision in RBI guidelines) -10% of project cost (Minimum). Bank Loan - Balance portion.

Activities covered

Establishment of small dairy unit from 2 to 10 milch animals, Rearing of heifers (upto 20 calves), Vermi-Compost, Purchase of Milking Machines, Milko testers & BMCs (upto 5000 litres capacity), Purchase of Milk Processing equipments for manufacture of indigenous milk products, Transportation & Cold Storage facilities, Establishment of private veterinary clinics, Setting up of Milk Parlour for enhancement of milk production, Procurement, Cold chain and Transportation facilities, Processing and Marketing of milk & milk products.

Eligible Beneficiaries

An individual entrepreneur, farmer, Group of farmers, Self Help Groups, Dairy Cooperative Societies, District Milk Unions and Panchayati Raj Institutions are eligible under the scheme. An applicant may avail assistance for all components under the scheme but only once for each component. More than one member of a family can be assisted under the scheme provided they set up separate units with separate infrastructure at different locations. The distance between the boundaries of two such farms should be at least 500 m.

Achievement under DEDS

Since inception, under DEDS, NABARD as implementing agency has disbursed Rs. 1712.37 Crore as back ended capital subsidy (as on 31.12.2019) to 387872 beneficiaries out of which are 1,02,078 women beneficiaries and 65,782 SC/ST beneficiaries. The State-wise details of the same are given in Annexure IX.

4.4.3 National Dairy Plan Phase-I

National Dairy Plan Phase-I (NDP-I) is a scientifically planned multi-state initiative to increase productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk through scientific breeding and feeding and to provide rural milk producers with greater access to the organised milk processing sector.

NDP-I is an externally aided project with the total outlay of Rs 2242 crore comprising Rs 1584 crore as International Development Association assistance, Rs 176 crore as Government of India share, Rs 282 crore as share of EIAs for the period 2011-12 to 2018-19.

Objectives:

- Increase productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk.
- Provide rural milk producers with greater access to the organized milk-processing sector.

Coverage

NDP-I is being implemented in 18 major milk producing States, viz. Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal. These States account for more than 90 per cent of the country's milk production. However, the benefits from the project are accruing across the country.

Funding Pattern

Pattern of funding under the scheme is 100 per cent grant-in-aid for nutrition and breeding activities and in the case of village milk procurement systems, 50 per cent of the cost of capital items is being contributed by the End Implementing Agencies.

Major components funded under the scheme

Breed Improvement: Production of High Genetic Merit (HGM) cattle and buffalo bulls, Strengthening of "A" and "B" graded Semen Stations, Pilot Model for Viable Doorstep AI delivery Services

Animal Nutrition: Ration Balancing Programme, Ration Balancing Programme, Fodder Development Programme

Village Based Milk Procurement System: Strengthening and Expanding Milk Procurement System at Village level

Achievements under NDP-I:

Under NDP I, 577 sub projects of 172 EIAs from 18 States have been approved till November 2019, with a total grant assistance of Rs 1759.97 crore. The approved sub projects include 100 sub projects on Project Management and Learning activities with the total outlay of Rs 103 crore.

Till November 2019, the entire amount of Rs 1760 crore has been received by NDDB from DAHD for implementation of NDP I and Rs 1664.01 crore has been disbursed to EIAs as advance and for expenditure on centralized activities. Total fund utilisation till Sep 2019 has been Rs 1949.79 crore out of which Rs 1568.45crore is NDP I grant and Rs 379.34 crore is contribution of EIAs implementing VBMPS sub projects. The project has come to a close on 29 November 2019 as per the World Bank project closure date. However, expenditure incurred for approved activities completed till 29 November 2019 would be booked under the project till March 2020.

Financial and Physical Progress and MPC-wise details of achievements under NDP-I is given at Annexure-X. The details of expenditure under NDP-I is as under:

Particulars	Amount in Rs. Crore									
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Fund Received by NDDB from DADF till date	4.00	123.00	139.79	164.00	300.00	314.32	389.98	324.91	--	1760.00
Fund Released by PMU*	0.00	77.37	127.18	218.64	314.38	268.64	266.56	360.49	29.73	1662.99
Fund Utilisation excluding EIA Contribution*	0.00	3.53	85.44	197.85	358.76	299.06	183.36	321.11	178.91	1628.02
EIA Contribution* Fund	0.00	0.00	19.32	40.32	83.64	49.68	25.83	105.62	81.31	405.72
Utilisation including EIA Contribution*	0.00	3.53	104.75	238.17	442.40	348.74	209.20	426.72	260.22	2033.72

* Fund Release is up to 29 November 2019 while the fund utilisation is till November 2019

Component wise achievement

a.) Animal Breeding Activities

Under the National Dairy Plan-I, implemented by NDDB, 14 Progeny Testing (PT), 9 Pedigree Selection (PS), 5 Bull Production through Transfer of Imported Embryo (BPTIE) projects were implemented through various End Implementing Agencies (EIAs) to produce the replacement requirement of High Genetic Merit (HGM) bulls of all the "A" and "B" graded semen stations of the country. All these projects together have made available a total of 2525 (2456 PT+PS and 69 BPTIE) and have distributed 2211 HGM bulls to different semen stations of the country. Besides, 171 exotic bulls were also imported from Germany and Denmark and allotted to different semen stations in the country. Under National dairy plan, 28 semen stations were also strengthened for production of disease free frozen semen doses.

Subsequently, considering the importance of PT and PS programmes, the DAHD, GoI decided to continue implementing such projects under the Rashtriya Gokul Mission Programme (RGM) with an outlay of Rs. 300 crore for a period of next 5 years (2019-20 to 2023-24) and so far, have approved 14 PT and 7 PS projects under the scheme Together, these projects envisage to procure 4157 genetically superior bulls of various breeds namely Gir, Sahiwal, Hariana, Kankrej, Rathi, Tharparkar, Crossbred HF, Crossbred Jersey and Jersey breeds of Cattle, and Murrah, Mehsana, Jaffarabadi and Pandharpuri breeds of Buffaloes during the project period.

Under NDP-I, three sub projects are being implemented as part of the initiative to set up a pilot model for doorstep AI delivery services operating in a financially self-sustainable manner using Standard Operating Procedures including animal tagging and performance record. These pilot sub projects have covered 12558 villages through 1367 Mobile AI technicians and have carried out 10.21 Lakh artificial inseminations during April 2018-November 2019.

b.) Animal Nutrition Activities

Under the 'Ration Balancing Programme' (RBP), a 'Local Resource Person' (LRP) formulates a least cost balanced ration for milch animals from locally available feed resources using the software "Information Network for Animal Productivity and Health (INAPH)". This ensures that the milch animals produce milk commensurate with their genetic potential, in addition to optimization of feeding cost per kg of milk and reduced methane

emission (a greenhouse gas). During 2019-20, 17,324 animals of 11,092 farmers were added in RBP covering 106 villages. Additionally, 281 local resource persons (LRPs) were also orientated on different aspects of animal nutrition activities at NDDB Anand. Cumulatively by December 2019, 28.65 lakh milch animals were covered under the RBP in 33,374 villages.

As part of the 'Fodder Development' programme, the End Implementing Agencies (EIA) produced 923 MT fodder seed during 2019-20 with cumulative production of 13038 MT. Sale of fodder seed of improved varieties was 863 MT in 2019-20 and the cumulative figure was 30548 MT. Eight silage and 40 mower demonstrations were organized with cumulative achievements of 2144 and 3831 respectively. About 44,076 farmers were trained on improved fodder cultivation practices in 20 Micro-Training Centre (MTC) established in 10 EIAs. A total of 127 biomass bunkers were constructed, which are being used for storing dry fodder during harvesting season for use in the deficit season.

Two 'Straw Enrichment and Densification plants' (plants which can manufacture Total Mixed Ration, TMR, pellets) were established in Sri Ganganagar and Kolhapur Milk Unions. 2484 Metric Tons (MT) of TMR pellets were sold in 1400 villages and reaching about 10,000 milk producers.

Two 'Seed Processing Plants' were commissioned at Samastipur and Barauni Milk Unions during the year. A novel initiative to popularize Moringa Oleifera fodder was initiated in Mysore milk union.

c.) Village Based Milk Procurement System

Village Based Milk Procurement System under NDP-I aims to provide rural milk producers with greater access to organized milk processing sector and improve milk quality by forming village level dairy cooperatives and strengthening existing Dairy Cooperative and Producer Companies.

To expand coverage and provide greater market access to milk producers, village level infrastructure viz., Electronic Weighing Scale, Data Processor Based Milk Collection Unit, Automated Milk Collection Units and Electronic Milk Tester are being provided to ensure a fair and transparent milk collection. Further, to improve raw milk quality across dairy cooperatives and producer companies, 4211 Bulk Milk Coolers (BMC) have been approved under NDP I. Additionally, 29590 Data Processor Based Milk Collection Unit/ Automated Milk Collection Unit have also been provided under NDP I.

Total 243 sub projects (233 of Cooperatives and 10 of Producer Companies) have been approved till Nov 2019 under Village Based Milk Procurement System.

Till Nov 2019, 52461 villages have been covered of which 22005 new DCS/MPP have been formed which include 7269 women DCS/MPP in which 16.86 lakh additional members are enrolled, which include 7.64 lakh women and 11.35 lakh small holders. Total beneficiaries of 2810 lakh including additional members and existing members of strengthened DCS villages have been covered.

d.)Project Management and Learning

NDP I project monitoring and evaluation system is in place which is supported by ICT based Management Information System and has facilitated learning and evaluation along with internal and external monitoring, evaluation, quality assurance, special studies etc. Various ICT based MIS applications being used for reporting and analysing the progress made include:

- Enterprise Project Management (EPM)
- Information Network for Animal Productivity & Health (INAPH)
- Procurement MIS (ProcMIS)
- Grievance Redressal System (GRS)
- Fund Utilisation Tracking System (FUC Tracker)

NDP I Regional Review Meetings were organized regularly to review the progress made, identify the bottlenecks/ shortcomings, highlight the success and work out the future action plan etc. These regional review meetings were chaired by Secretary, DAHD and Chairman, NDDB; and attended by Executive Director, NDDB; World Bank Team, Secretaries and Directors of State AH Department, MDs of Federations, General Manager CMC-PMU, CEOs and Project Coordinators of concerned EIAs; DAHD and NDDB officers. Each Sub Project was assigned to a monitoring officer of NDDB for concurrent monitoring and providing implementation support to EIAs.

While implementing the activities under NDPI, social inclusion and environment mitigation measures are being undertaken with a focus on increasing participation of women, small holders and schedule caste & schedule tribes across the activities.

For external Monitoring and Evaluation of NDPI and to assess the impact of activities being implemented under NDP I, external agencies have evaluated the progress of the project. Some of the major highlights of the reports include:

- The RBP impact study undertaken highlighted that due to feeding of balanced ration to animals, there has been reduction in cost of feeding to animals by more than 11 per cent on an average.
- Women Empowerment study has highlighted that direct participation of women as Dairy Cooperative Society (DCS) members has increased to 50 percent in NDP I project area.
- Inclusion of women has substantially increased in the governing bodies and management committees and other leadership positions at the DCS level.

4.4.4 Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities

Department has approved a new Central Sector Scheme "Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities" from 2016-17 with a corpus of Rs. 300 crore to be kept in perpetuity with National Dairy Development Board to be used for providing soft loans for working capital to enable State Dairy Cooperative Federations to provide a stable market access to farmers. The scheme is being implemented by National Dairy Development Board.

Objectives

- To assist the State Dairy Cooperative Federations by providing soft working capital loan to tide over the crisis on account severely adverse market conditions or natural calamities.
- To provide stable market access to the dairy farmers.
- To enable State Cooperative Dairy Federations to continue to make timely payments of dues to the farmers.
- To enable the cooperatives to procure milk at a remunerative price from the farmers, even during the flush season.

An amount of Rs. 103 crore has been released to National Dairy Development Board till December 2019 for implementation of the scheme during 2019-20.

4.4.5 Dairy Processing & Infrastructure Development Fund (DIDF)

Government of India (GoI) launched the Central Sector Scheme – Dairy Processing and Infrastructure Development Fund (DIDF) during 2017-18.The scheme has a total outlay of Rs 10,881 crore comprising Rs. 8,004 crore as a loan from National Bank for Agriculture and Rural Development (NABARD), Rs. 2,001 crore as End Borrower's contribution, Rs. 864 crore as GoI's Interest Subvention and Rs. 12 crore to be contributed by Implementing agencies (NDDB and NCDC) towards project management and learning.

Objectives

The scheme focuses on creation/ modernisation/ expansion of processing infrastructure and manufacturing facilities for Value Added Products so as to make operations of milk processing plants more efficient as well as geared on production of higher Value Added Products. The project also focuses on setting up of chilling infrastructure & installation of electronic milk adulteration testing equipment at village level.

Implementing Agencies

The project will be implemented by NDDB/ NCDC directly through the End Borrowers such as Milk Unions, State Dairy Federations, Multi-state Milk Cooperatives, Milk Producer Companies and NDDB subsidiaries meeting the eligibility criteria under the project.

Salient Features

- Under the Scheme, long term loan at rate of 6.5% per annum is provided to End Borrowers for a maximum period of 10 years including maximum 2 years moratorium on repayment of principal.
- With this investment, additional milk processing capacity of 126 lakh litre per day, value added products manufacturing capacity of 59.78 lakh litre per day of milk equivalent, milk drying capacity of 210 MT per day, milk chilling capacity of 140 lakh litre per day shall be created along with installation of 28,000

electronic milk testing equipments.

- About 95,00,000 farmers in about 50,000 villages would be benefitted under the scheme.

Implementation Status

- Till February 2020, 33 projects has been approved with a total project outlay of Rs. 4059 crore including loan of Rs. 2722 crore. Further, 4 projects with an outlay of Rs. 399 Crore (Loan Component: Rs. 485 Crore) are in pipeline.
- Till February 2020, NABARD has released an amount of Rs. 1110 crore to NDDB.
- Union Cabinet has increased the interest subvention up to 2.5%.

Achievements under DIDF scheme

So far, 33 projects have been approved under the scheme 'Dairy Processing and Infrastructure Development Fund (DIDF)'. The details of projects approved under the scheme are as below:

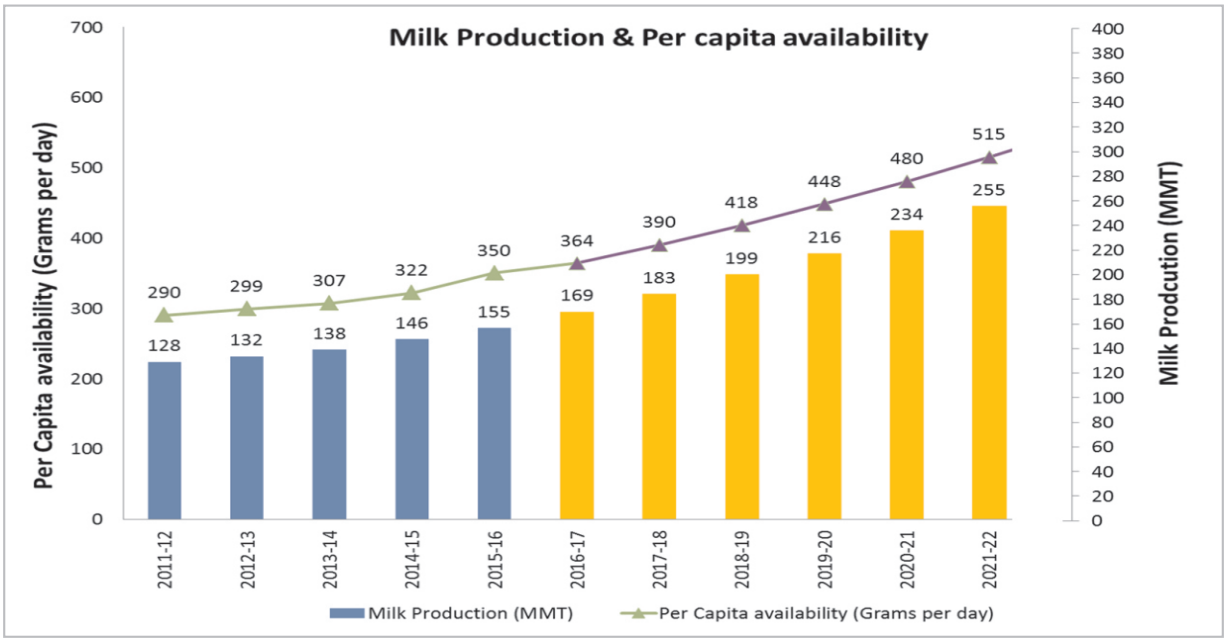
Sr. No.	State	No.	Approved Financial Outlay (Rs. in crore)		Capacities sanctioned				
			Project outlay	Loan under DIDF	Milk processing (TLPD)	Drying (MTPD)	BMC capacity (KL)	No. of Electronic Milk Testing Equipment	Value Added Products - milk equivalent (TLPD)
1	Karnataka	8	1626.39	941.37	3950	165	354	0	819.10
2	Punjab	4	322.70	254.41	1070	0	0	250	573.00
3	Haryana	6	54.21	43.37	0	5	15	15	0.70
4	Maharashtra	4	488.92	282.88	1000	0	0	0	494.10
5	Gujarat	2	976.50	780.71	3500	100	0	75	802.55
6	Andhra Pradesh	1	97.75	78.20	400	0	0	10	250.00
7	West Bengal	1	130.00	104.00	1200	0	0	0	556.50
8	Kerala	3	26.02	20.81	0	0	0	0	0.00
9	Telangana	3	261.51	156.70	550	0	0	0	162.80
10	Rajasthan	1	74.72	59.77	500	0	0	0	0.00
	Sub-total	33	4058.72	2722.23	12170	270	369	350	3658.75

4.5. National Action Plan-Dairy Development[7]

The cooperatives & private dairies procure about 20% of the milk produced in the country while 32% is sold in the unorganised market and about 48% is consumed locally. About 40 per cent of the milk sold is handled by the organised sector and the remaining 60 percent by the unorganised sector. However, in most of the developed nations, 90 percent of the surplus milk is processed through organised sector. With the increase in population, rise in per capita income, changing lifestyle, affordable aspirational food habits, export opportunities etc., the demand for milk is expected to rise. It is estimated that the demand for milk would be in the range of 200 - 210 million MT by 2021-22.

The Department of Animal Husbandry and Dairying has formulated a National Action Plan for Dairy Development with following objectives –

- To increase the national milk production from 163.7 MMT in 2016-17 to 254.55 MMT by 2021-22 for meeting the increasing milk demand by domestic milk production and also ensuring nutritional security at household level.
- To double milk producers' income at farm level by 2021-22 by providing rural milk producers with greater access to the organised milk processing sector.



The milk production is envisaged to be 254.5 Million MT by 2021-22 from existing 155.5 Million MT requiring an annual growth rate of 8.56% which would lead to increase in per capita availability of milk from current level of 337 grams per day to 515 grams per day in 2021-22 addressing the substantial nutritional requirement of growing population. To achieve the desired milk production targets, average In-milk animal productivity would be required to grow annually at the rate of 4.7% to 6.14 KgPD by 2021-22 from existing 4.65 KgPD. The present status and targets envisaged under the National Action Plan-Dairy Development is as follows:

Parameters	Total (Coop+PC+Pvt)			Coop.+PC		
	2015-16	2021-22	2023-24	2015-16	2021-22	2023-24
Human Population (in millions)	1254.02	1354.26	1389.43	---	---	---
Milk Production (Million MT)	155.5	254.5	300.0	---	---	---
Per Capita Availability (gm/day)	337	515	592	---	---	---

Milk Procurement (LLPD)	890	2896	4260	460	1323	1793.9
Organised (% of milk production)	20.5	41	52	10.5	18	22
Village Coverage (in lakhs)	1.76	3.35	3.58	1.76	2.82	3.29
Farmer Member (in million)	21	32	37	16	32	37
Milk Yield per animal/day (ltr)	4.65	6.14	6.73	4.76	8.67	10.51
Procurement Price (Rs./ltr)	32.19	43.14	47.56	32.19	43.14	47.56
Farmer Income (Rs./month)	516	1306	1697	549	1587	2260

National Action Plan for Dairy Development is targeted to increase organised milk handling from 20% at present to 41% in 2021-22. The milk handling by cooperatives has been targeted to increase from 10% to 20% and private sector from 10% to 30%. Based on the National Action Plan, a Vision Document has been prepared by the Department.

4.6. Milk Quality Initiatives

4.6.1 Quality Milk Programme

There have been reports in the media expressing apprehension about the quality of milk available in the market. National Milk Safety and Quality Survey Report 2018 by FSSAI, which was the largest sample survey done so far, revealed that 48.2% of the samples were found to be non-compliant. Parliamentary Standing Committee in its meetings held on 18th May 2018 and 22nd October 2018, discussed the issue relating to quality of milk and milk products and expressed concern on reports of adulteration and contamination. DAHD, FSSAI and ICAR collectively apprised the committee regarding initiatives taken up by the Government to ensure quality milk production and food safety of consumers.

Recognising the importance DAHD launched Quality Milk Programme on 24.07.2019 with the objectives to achieve Global (Codex) standards for domestic consumption and ensuring traceability & increasing share in world exports.

Accordingly Strategy was made for equipping all Cooperative Dairy Plants & Dairy Co-op Societies for chemical & microbiological tests. In the first phase of the programme during 2019-20, approval has been granted for strengthening of 231 dairy plants under "National Programme for Dairy Development" scheme to equip them to detect adulterants in milk (Urea, maltodextrin, ammonium sulphate, detergent, sugar, neutralisers etc.). FTIR technology based Milk Analyser (for accurate detection and estimation of milk composition and adulterants) to 139 dairy plants of 30,000 litre capacities and above and 92 Dairy Plants below 30,000 litres capacity with Electronic Milk Analyser with adulteration testing equipment. In addition one State Central laboratory for 18 States has been approved. Instant testing of chemical and microbiological quality of milk will be ensured before reaching the consumers. The total cost of the project was Rs.271.64 crore. An amount of Rs.128.56 crore has been released to States as first instalment.

4.6.2 Quality Assurance

NDDB's Quality Mark, an umbrella brand identity, for dairy cooperatives is aimed at bringing about process improvement in the entire value chain from producer to the consumer to ensure food safety. The initiative aims to create

requisite awareness amongst cooperatives across the country for adopting the best practices that are continually updated in the guideline document. The initiative also aims at enhancing consumers' confidence, as the "Quality Mark" logo reflects the dairy's "commitment to quality". Knowledge sharing and the food safety aspects are the prominent features of Quality Mark assessment process.

After the successful launch of Quality Mark initiative in 2017, NDDB continued to strengthen the same by encouraging and handholding various milk unions and federations to align with the updated guidelines. Since the rollout of the "Quality Mark" in 2016, 104 cooperative dairies across the country showed interest and voluntarily applied for the Quality Mark, of which 41 units have been awarded the same. The remaining 63 dairies are undertaking improvements suggested by the panel to be eligible to receive it. Surveillance and Surprise audits form an integral part of the "Quality Mark". Hence, during the year, 22 surveillance audits were undertaken to ascertain compliances by the awardees units.

The NDDB continued to support various regulatory / scientific / advisory bodies like the DADF GoI, Codex Alimentarius Commission (CAC), Food Safety and Standards Authority of India (FSSAI) etc., and worked as a Secretariat of the Indian National Committee (INC) of the International Dairy Federation (IDF) to coordinate various activities. The NDDB also continued to work closely with the BIS and provide Technical support, through participation in the scientific/technical committees, for the updation of the Indian Standards (IS) for milk and milk products. Support for evaluation of the dairies export worthiness was also provided to the Exports Inspection Council of India (EIC) as a panelist.

NDDB continued to conduct education & training program for farmers, procurement personnel and supervisors, newly recruited dairy staff of various federations board of cooperatives in quest of achieving highest standards of quality & hygiene in complete value chain from the farm level up to consumer.

NDDB also undertakes need-based studies from time to time at the request of co-operative milk unions and federation. Milk solids recovery study at various milk unions of Milkfed, Punjab and KMF, Karnataka were conducted to help these cooperatives in setting new benchmarks.

4.7 Delhi Milk Scheme (DMS)

4.7.1 Delhi Milk Scheme (DMS) was set up in 1959 with the primary objective of supplying wholesome milk to the Citizens of Delhi at reasonable prices as well as for providing remunerative prices to milk producers. The initial installed capacity of Delhi Milk Scheme was for processing /packing of 2.55 lakh litres of milk per day. However in order to meet increasing demand for milk in the city, the capacity was expanded in phases to the level of 5.00 lakh litres of milk per day. The Department has developed a web site http://dms.gov.in for use by related users.

4.7.2. I.S.O 22000-2005 & ISO 14001-2004 Certification.

4.7.2.1 DMS has been awarded Certificate No. IRQS/18601477 Standard ISO 22000-2005 Certification valid up to 18.06.2021 and ISO 14001 - 2015 certification valid up to 29.03.2022 by M/s IRQS Mumbai.

4.7.3. Procurement of Milk

4.7.3.1 Delhi Milk Scheme has been procuring raw/fresh milk from the State Dairy Federations of the neighboring States of Punjab, Haryana, and Uttar Pradesh. Rajasthan, Madhya Pradesh and Bihar.

4.7.3.2 The total quantity of milk procured by DMS since 2016-17 is indicated below:

Table 4.1: Milk Procured by DMS

(in Lakhs kgs.)

Year	Total Qty. of milk procured.	Average/per day
2016-17	766.13	2.10
2017-18	805.08	2.21
2018-19	607.86	1.67
2019-20 up to (December,2019)	366.08	1.33

4.7.3.3 During the current financial year, 2019 (up to December,2019), DMS procured 1.33 lakh Kg. milk per day as compared to the last year,2019-20 due to flood in their region/states. DMS has been authorized to decide milk procurement rates at its own level and it is delinked with Mother Dairy, Delhi.

4.7.4 Production and Distribution of Milk

4.7.4.1 Delhi Milk Scheme is processing and supplying milk (Toned, Double Toned and Full Cream). DMS is also manufacturing & marketing Dahi, Ghee, Butter, Paneer,Chhachh and Flavored Milk for supply to the citizens of Delhi.

4.7.4.2. DMS is supplying milk through its 490 booths in Delhi. The DMS also supplies milk to about 111 institutions such as Hospital, Parliament House, Annexes, Government Canteens, Hostels and Defense Units etc. In addition, DMS also supplies Milk to the consumers through milk distributors and private entrepreneurs.

4.7.4.3. The milk booths are allotted to and manned by Ex-servicemen/ retired Govt. servants, physically handicapped, widows, unemployed persons.

4.7.5 Performance/capacity Utilization

4.7.5.1 The sale of DMS and custom packing of Sudha (COMFED, BIHAR) milk by DMS taken together has reached 2.15 lakh litres per day (LLPD) during the financial year 2019-20 (Up to Dec, 2019).The capacity utilization in term of sale of milk since 2016-17 is given in the table below:

Table 4.2: Performance of DMS

Year	Total quantity of sale of milk (In lakh litrs)	Average sale of milk(LLPD)*	% age of average sale of milk with reference to installed capacity of 5 LLPD.*
2016-17	1035.24	2.84	56.8%
2017-18	954.21	2.61	52.2%
2018 -19	493.27	2.30	46.0%
2019-20 (up to Dec,19	593.87	2.16	43.2%

Note: 1.* LLPD (Lakh Litre per Day)

2. Capacity utilization is limited according to volume of sale of milk.

4.7.6. Financial Outlay

4.7.6.1. Expenditure on all head of accounts including the expenditure on inputs like raw milk, SMP, Butter etc. and capital items is made from consolidated fund of Government of India through annual budget allocation of Ministry of Fisheries, Animal Husbandry and Dairying (Department of Animal Husbandry & Dairying). Sale proceeds of milk and milk products are credited to the revenue account of the Government.

4.7.6.2. The funds provided/proposed and expenditure for the year 2018-19 (R.E.) and B.E. 2019-20 (up to Dec, 2019) are given in table 4.3 below:

Table 4.3: Expenditure of DMS

(Rupees in Crores)

Head/Scheme	2018-19 (R.E)		2019-20		
	R.E. (Approved)	Expendi -ture	B.E (Approved)	R.E. (Provisional)	Expenditure (tentative) (up to Dec,2019)
1	2	3	4	5	6
I. NON-PLAN	360.27	323.33	366.64	390.27	298.87
II. PLAN (including civil & electrical works)	0.00	0.00	23.76	10.00	0.21

4.7.6.3 During the current financial year 2019-20 (up to December, 2019) DMS generated a Deficit of Rs.35.91crore (tentative figure) on cash basis.

4.7.7. Reduction in the Staff Strength of DMS

4.7.7.1. In pursuance of instructions issued by Ministry of Finance to downsize Government machinery and to reduce the administrative expenses, the DMS decided to reduce its working strength by not making fresh recruitment. The total staff strength of DMS has come down from 560 as on 31.03.2019 to 539 as on 31.12.2019.

4.7.8 Upgradation and Modernization of DMS Plant

4.7.8.1 The DMS plant which was installed at the time of its commissioning has become old and required up gradation. The installed capacity of the plant is for processing 5.00 lakh litres of milk per day for one type of Milk. Presently, the DMS is processing approx. 2.16 lakh litres of milk per day up to December, 2019.

4.7.8.2. As the plant is old, it may not be possible to process the milk at the level of its installed capacity without its entire up-gradation/ automation. During the financial year 2019-20 (up to December, 2019), the following machineries and equipments were replaced.

i) Supply, installation and commissioning of electrical cubical panel for Central Dairy.

ii) Milk Cold Store diffuser capacity 10 TR.

iii) NDBR diffuser capacity 7 TR.

iv) Replacement of NDBR liquid line with assembly & float valve.

v) Replacement of Gasket of 150 TR PHE.

4.7.8.3. With optimum utilization of available resources and installed capacitor banks in Central Dairy, DMS could achieve a power factor greater than 0.98 which help in savings of electrical consumption.

4.7.8.4 The present capacity utilization of DMS is about 43.2% up to December, 2019. Efforts are being made to utilize its capacity by increasing the sale of milk and milk products leading to reduction in losses. DMS is initiating sales of milk by engaging distributors in the new areas of NCT of Delhi.

Source (Meaning of the superscript)

1. Basic Animal Husbandry Statistics 2019
2. Food Outlook, November 2019
3. National Accounts Statistics 2019
4. Agriculture Census 2015-16
5. NSS report No. 576: Income, Expenditure, Productive Assets and Indebtedness of Agriculture Households in India, 2012-13
6. National Dairy Development Board
7. Vision 2022-National Action Plan for Dairy Development

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Chapter 5

SMALL RUMINANTS, POULTRY AND LIVESTOCK HEALTH

SMALL RUMINANTS, POULTRY AND LIVESTOCK HEALTH

5.1 NATIONAL LIVESTOCK MISSION

5.1.1 For sustainable and continuous growth of livestock sector by emulating the success achieved in Dairy and Poultry sectors, across species and regions, the National Livestock Mission was launched in 2014-15 with an approved outlay of Rs. 2,800 crore during XII Plan. This Mission is formulated with the objectives of sustainable development of livestock sector, focusing on improving availability of quality feed and fodder, risk coverage, effective extension, improved flow of credit and organisation of livestock farmers / rearers, etc. with the following four Sub-Missions:

I. Sub-Mission on Livestock Development,

II. Sub-Mission on Pig Development in North-eastern Region,

III. Sub-Mission on Fodder and Feed Development,

IV. Sub-Mission on Skill Development, Technology Transfer and Extension.

5.1.2 It broadly covers all the activities required to ensure quantitative and qualitative improvement in livestock production systems and capacity building of all stakeholders. The major outcomes of the Mission envisaged are mainstreaming of livestock rearing as business models and linkages for successful business ventures to achieve 5-6% annual growth rate, optimal utilization of scarce nutritional resources – reducing the gap in demand and availability of fodder, conservation and improvement of indigenous breeds, higher productivity and production in a sustainable and environment friendly manner, enhanced livelihood opportunities, especially in rainfed areas and for landless, small and marginal farmers, increased awareness, improved risk coverage and better availability of quality animal products to consumers overall socio-economic upliftment of livestock rearers.

Following are the main activities under the above four sub Mission of NLM

5.1.3 Sub-Mission on Livestock Development:

5.1.3.1 Risk Management and Insurance

5.1.3.1.1 The objective of the Risk Management & Insurance as component of sub-mission on livestock development of NLM is to manage risk and uncertainties by providing protection mechanism to the farmers against any eventual loss of their animals due to death and to demonstrate the benefit of the insurance of livestock to the people.

5.1.3.1.2 The 'Risk Management & Insurance' as component of sub-mission on livestock development of NLM is being implemented in all the Districts of the country from 21.05.2014 and in case new Districts are carved out of the existing Districts, then the new districts will also be covered. The indigenous / crossbred milch animals, pack animals (Horses, Donkey, Mules, Camels, Ponies and Cattle/Buffalo. Male) and other livestock (Goat, Sheep, Pigs, Rabbit, Yak and Mithun) will be under the purview of the 'Risk Management & Insurance'. Benefit of subsidy is to be restricted to 5 animals per beneficiary per household for all animals except sheep, goat, pig and rabbit. In case of sheep, goat, pig and rabbit the benefit of subsidy is to be restricted based on 'Cattle Unit' and one cattle unit is equal to 10 animals i. e. for sheep, goat, pig and rabbit.

Therefore, the benefit of subsidy to sheep, goat, pig and rabbit is to be restricted to 5 'Cattle Unit' per beneficiary per house hold. A beneficiary with less than 5 animals / 1 Cattle Unit can also avail the benefit of subsidy.

5.1.3.1.3 The funds under the scheme are being utilized for payment of premium subsidy, Honorarium to the Veterinary practitioners and publicity. An amount of Rs. 44.76 crore has been released to States/UTs for livestock insurance of 16.63 lakh animal units during 2019-20 up to December, 2019.

5.1.4 Poultry

5.1.4.1 Poultry Development in India has been a household activity. Through policy interventions by Government and enterprise of private players, poultry farming has transformed into a very scientific operation. Poultry continues to be one of the fastest growing subsectors of Animal Husbandry. The Government of India is implementing the National Livestock Mission (NLM) and following components related to Poultry are covered under NLM:

5.1.4.1.1 Modernization and Development of Breeding Infrastructure

5.1.4.1.1.1 Central Farms: Central Poultry Development Organizations: Central Poultry Development Organisations (CPDOs) located at four regions viz. Chandigarh, Bhubaneswar, Mumbai and Bengaluru have been playing a pivotal role in the implementation of the policies of the Government with respect to poultry. The mandate of these organizations is to focus on improved variety of birds for backyard poultry which can survive at the farmer's doorstep, provide basic training to backyard poultry farmers and conduct feed analysis.

5.1.4.1.1.2 Kalinga Brown, Kaveri, Chhabro and Chann are the varieties / strain of Low Input Technology birds (Chicken) developed by these CPDOs. Based on demand they supply hatching eggs, Day old chick of parent / commercials of these varieties to the States / UT's and individual farmers. Besides they also maintain indigenous varieties like Kadaknath, Aseel etc. to promote breed conservation.

5.1.4.1.1.3 CPDOs are also promoting diversification with species other than poultry like ducks, Japanese quail, Turkey and Guinea fowl. White Pekin (meat type) and Khaki Campbell (egg type) are the duck varieties maintained by CPDO, Bengaluru for supply to the various States based on demand. CPDOs are also doing feed analysis for all animal feed. Three CPDOs at Bhubaneshwar, Mumbai and Hessarghatta have Near Infra-Red (NIR) Spectrophotometer to analyze feed samples. Automation System for feeding and watering the birds has been installed at Hessarghatta, Chandigarh and Bhubaneswar.

5.1.4.1.1.4 In these CPDOs, training is imparted to the farmers and a training module for training of Poultry farmers / Entrepreneurs has been devised and followed at these CPDOs. The poultry production course curriculum includes practical sessions and demonstration of poultry farming activities including brooding arrangements, feeding, watering, vaccination, temperature management, medication etc. and other management aspects apart from tips on feed mill management and hatchery management. Training is also given for basic economics in poultry farming with special reference to obtaining financial assistance (bank loan) through funds from nationalized banks. The farmers are also

briefed about viable projects of commercial poultry farming with various models in different regions.

5.1.4.1.1.5 CPDO & Training Institute (CPDO&TI), Hessarghatta is also imparting Trainers' training to in-service personnel from within the country as well as overseas. Regular poultry management courses and tailor-made specialized, advanced and laboratory courses are available at this institute. CPDO&TI has opened a Skill Development and Training Centre exclusively for training purpose.

5.1.4.1.1.6 This organization (CPDO & TI) is accredited with ISO 9001:2008 by Bureau of Indian Standards since 2005. The four CPDOs have been affiliated as Training centers under National Skill Development framework.

5.1.4.1.1.7 The Central Poultry Performance Testing Center (CPPTC), located at Gurgaon is entrusted with responsibility of testing the performance of layer and broiler varieties. This Centre gives valuable information relating to different genetic stock available in the country. One layer and two broiler tests are usually initiated in a year.

5.1.4.1.1.8 During the year 2019-20, so far till December, 2019, around 0.72 lakh & 10.49 lakh no. of parent chicks and commercial chicks respectively have been supplied by the CPDOs to the different States/Agencies/Individuals. Similarly, this year 2019-20, 0.44 lakh & 12.7 lakh no. of parent hatching eggs and commercial hatching eggs respectively have been supplied by the CPDOs. Around 1950 no. of farmers and trainers have been trained and about 2700 no. of feed samples have been analyzed.

5.1.4.1.2 Strengthening of Breeding infrastructure of State/University farms

The Government of India is strategically bringing in technological interventions in the areas of bio-security, automation and modernization of Infrastructure in various Central / State Government poultry farms through the National Livestock Mission. This component of the NLM aims at strengthening existing State poultry farms so as to enable the flow of suitable germplasm from the Research Institutions / Laboratories to the grassroots level alongwith other technical services like capacity building, developing and implementing package of practices at the ground level for different types of poultry system including family poultry system for supplementary income generation and family nutrition.

5.1.4.1.3 Interventions towards Productivity enhancement

5.1.4.1.3.1 Rural Backyard Poultry Development: This component is envisaged to cover beneficiaries from BPL families to enable them to gain supplementary income and nutritional support. The SHGs/NGOs, entrepreneurs may take up mother unit activity which will procure the day old chicks either from the State Poultry Farms or from the private hatchery and will rear the birds upto 4 weeks of age. This scheme component aims at supporting BPL beneficiary families wherein 4-week old chicks, suitable for rearing in the backyard, reared at the 'mother units' are further distributed to them in batches. Further, there is provision to raise the birds in a bio-secure manner for night-shelter etc. Under this programme, as on 31.12.2019, funding of Rs. 6346.70 lakh has been done to cover around 294754 BPL beneficiaries. A number of

434 Mother Units has been also established for raising day old chicks.

5.1.4.1.3.2 Innovative Poultry Productivity Project (IPPP): To encourage poultry entrepreneurship in rural educated and unemployed youth the following model are proposed to be introduced under Innovative Project of 'Productivity Enhancement' component of Sub-Mission on Livestock Development under NLM in 15 identified Poultry Potential States viz. 400 low-input technology (LIT) birds (dual purpose: egg and meat : 50:50 ratio of hens and cock) in 2 batches with a gap of one and a half years (Batches of 200 each). To encourage Broiler Rearing by giving 600 broiler chicks in 4 batches (150 each every 2-3 months in a year- 4 batches). 3445 units were established in 2019-20 under IPPP.

5.1.5 Small Ruminants

Sheep and Goat, collectively known as small ruminants is a multi-functional animal and plays a significant role in the economy and nutrition of landless, small and marginal farmers in the country. They contribute greatly to the agrarian economy, especially in areas where crop and dairy farming are not economical, and play an important role in the livelihood of a large proportion of landless as well as small and marginal farmers.

Nationally, total livestock population is 536.76 million, of which goat and sheep population stands at 223.14 million (42% of the country's total livestock population). Sheep/Goat rearing is an enterprise which has been practiced by a large section of population in rural areas. These are among the most indispensable of assets owned by resource-poor families.

Goat population in India is 148.88 million; the country stands first in the world in goat population. Sheep population in the country is 74.26 million. The country stands third in the world in sheep population.

Population statistics of Sheep & Goats from the 20th Livestock Census 2019

Small Ruminant	Population as per 2019 census
Sheep	74.26 million
Goat	148.88 million

Keeping in mind the various challenges, Government of India has emphasized the technological advancement and growth of these sectors through the National Livestock Mission.

The components under National Livestock Mission to develop the Small Ruminant are as follows:

5.1.5.1 Central Farm: Central Sheep Breeding Farm, Hisar (Haryana)

5.1.5.1.1 The farm was established in 1969-70 in collaboration with the Government of Australia under Colombo Plan during the Fourth Five Year Plan with the objectives of producing acclimatized exotic rams for distribution to various State Sheep

farms and training of personnel in Sheep Management and Mechanical Sheep Shearing. Presently the farm is keeping Nali X Rambouilett and Sonadi X Corriedale crosses, as well as purebred Beetal goats.

5.1.5.1.2 During 2019-20, the farm supplied 895 rams, 25 ewes, 81 bucks and 10 does to different State agencies and farmers. In addition, a total of 15 farmers were trained in sheep management and production, while another 73 farmers were trained in machine shearing techniques and 845 nos of farmers have been trained under one day training programme till 31st December, 2019.

5.1.5.2 Strengthening of breeding infrastructure of State / University farms

During 2019-20, one Goat/Sheep farm each in State of Maharashtra, Kerala and Arunachal Pradesh were assisted to strengthen and modernize their set-up and infrastructure and funds to the tune of Rs. 250.20 lakh, Rs. 192.00 lakh and Rs. 32.68 lakh were released to the States respectively.

5.1.5.3 Interventions towards productivity enhancement

5.1.5.3.1 Under the Sub-component – Propagation of Artificial Insemination (A.I.), during 2019-20, an amount of Rs. 122.896 lakh was released to the State of Uttarakhand for pilot project on Artificial Insemination in Sheep and Goat through heat synchronization.

5.1.5.3.2 During 2019-20, under Sub-component – Cluster based mass de-worming/ health cover programmes, Rs. 495.00 lakh was released to the State of Himachal Pradesh to cover 6 lakh animals.

5.1.5.4 Innovative project on Genetic Development of Sheep and Goat

In 2017-18, the erstwhile Department of Animal Husbandry, Dairying and Fisheries introduced an "Innovative project on Genetic Improvement of Sheep and Goat (GISG)" on pilot basis for up gradation of indigenous sheep and goat. It is envisaged that with the implementation of the *Innovative project of Goat and Sheep* there will be the triple advantages of higher population of high genetic merit coupled with increased farmer's income per animal and at the same time it will address the increased demand of meat, milk and wool of the country. In 2017-18, Gujarat, Rajasthan and Uttar Pradesh were assisted for Genetic Improvement in Goats and funds to the tune of Rs. 1800.27 lakh, Rs. 1217.4 lakh and Rs. 564.294 lakh were released to the States respectively. Similarly in 2017-18, Tamil Nadu, Telangana, Rajasthan, Karnataka and Himachal Pradesh were assisted for genetic improvement of Sheep and funds to the tune of Rs. 315.246 lakh, Rs. 586.18 lakh, Rs. 87.5 lakh, Rs. 75.12 lakh and Rs. 161.524 lakh for sheep were released to the States respectively. In 2018-19, the State of Punjab was assisted for Genetic Improvement of Beetal Goat and fund to the tune of Rs. 19.83 lakh was released to the State.

In 2019-20, Himachal Pradesh, Tamil Nadu and Karnataka were assisted for Genetic Improvement of Sheep and fund to the tune of Rs. 292.00 lakh, Rs. 402.246 lakh and Rs. 162.37 lakh were released to the States respectively.

In 2019-20, an amount of Rs. 360.00 lakh was released to the state of Andhra Pradesh for purchase and distribution of 4000 superior genetic merit rams and bucks under the subcomponent 'Community led Breed Improvement Programme'.

5.1.5.5 Rural Backyard Development Programme for Sheep, Goat and Pigs

In 2018-19, the erstwhile Department of Animal Husbandry, Dairying & Fisheries has introduced a scheme named Rural Backyard Development Programme for Sheep, Goat and Pigs to assist and encourage poor/marginal farmers for doing animal husbandry with improve breeds of animals, to enhance productivity of Sheep, Goat and Pigs, to increase farmer's income, to ensure better nutrition and also to utilize agriculture food waste. This project involves distribution of Sheep/Goat Unit involving 10 (ten) nos. of high yielding young female of age group 4-5 months and 1 (one) no. of high yielding young male of age group 5-6 months to farmers.

In 2019-20, so far 7382 farmers have been benefitted in Rural Backyard Sheep and Goat Development Schemes in the State of Tamil Nadu, Karnataka, Telengana, Kerala, Himachal Pradesh and UT of Puducherry, Andaman & Nicobar Islands and Lakshadweep and funds to the tune of Rs. 3123.912 lakh have been released to these States.

Further more 1371 farmers have been supported in Rural Backyard Pig Development Scheme in the States of Uttar Pradesh, Karnataka, Himachal Pradesh, Assam and UT of Andaman & Nicobar Islands and funds to the tune of Rs. 449.39 lakh have been released to these States.

5.1.5.6 Conservation of Threatened Breed

Under this component, the States are encouraged to undertake a structured programme of identification and registration of new breeds.

- The States are funded for conservation of those livestock breeds whose numbers goes below ten thousand.
- CTB works for conserving the biodiversity of the country
- The universities are also being involved under this programme so that new varieties proposed to be registered are first studied at the State University level, then at the level of NBAGR before they are finally registered as breeds.
- These activities will be monitored by a State Level Committee on Animal Genetic Resources which will also take stock of population dynamics of the existing breeds whose native tracts lie in the State.
- Annual seminars, workshops, etc. will also be organized to enhance awareness of all stakeholders.
- Establishment of farmers / breeders organizations with the objective of registration of two specimens of the breed and maintenance of breed registry will also be supported under this component.

During 2019-20, the State Government of Tamil Nadu has been assisted for conservation of Donkeys and funds to the tune of Rs. 13.128 lakh has been released to the State.

5.1.6 Pig Development in North-Eastern Region

5.1.6.1 Keeping in view the vision of doubling farmers' income, “Innovative Pig Development Project for North East (IPDPNE)” has been formulated under the National Livestock Mission, which will increase the income of the Pig rearing farmer / entrepreneur/ NGO / Cooperative Society, etc in the North Eastern States including Sikkim as pig husbandry is acceptable in these

States and has no social taboo associated with it. This is envisaged to be done by incorporation of superior germplasm of high genetic merit through import and then crossing them with the low productive indigenous breeds to eventually result in cross breds which would perform and yield better harvest to the pig rearers.

5.1.6.2 During the year 2019-20, till December, 2019, an amount of Rs. 133.98 lakh has been released to the State of Arunachal Pradesh for import of Pig germplasm under the "Innovative Pig Development Project for North East (IPDPNE)". Under the same project the State of Assam has been assisted for construction of liquid semen laboratory, renovation of one nucleus farm and two multiplier farms and funds to the tune of Rs. 223.992 lakh has been released to the State Government of Assam.

5.1.6.3 During the year 2019-20, till December, 2019, an amount of Rs. 677.31 lakh has been released to the State of Mizoram and Rs. 1501.19 lakh has been released to the State of Meghalaya for Strengthening of seven Pig breeding farms.

5.1.6.4 During the year 2019-20, Rs. 48.90 lakh has been released to the State of Kerala for propagation of pig AI by strengthening of pig breeding Centre, Koothatukulam.

5.1.7 Entrepreneurship Development and Employment Generation (EDEG)

In order to encourage Entrepreneurship Development and technology infusion, under the Sub-mission of Livestock Development of NLM, there is a Component Entrepreneurship Development and Employment Generation (EDEG), wherein a basket of bankable activities related with poultry, pig and sheep/goat rearing and breeding units are placed from which farmers, individuals, NGOs, etc, can choose from. During 2019-20, an amount of Rs. 13999.00 lakh has been released to NABARD to channelize the funds for establishment of poultry, pig and sheep/ goat rearing & breeding units in various States. A total number of 7168 beneficiaries have been assisted under Poultry Venture Capital Fund (1038), Integrated Development of Small Ruminants and Rabbits (5878), Pig Development (232) and salvaging of male buffalo calves (2) units for Entrepreneurship Development and Employment Generation among women, poor and marginal farmers.

5.1.8 Fodder and Feed Development:

The Department of Animal Husbandry and Dairying is implementing Centrally Sponsored Scheme National Livestock Mission with a Sub mission on feed and fodder development since 2014-15 wherein financial assistance is provided to the States/UTs under the following components thereby ensuring the availability of quality feed and fodder in the country.

An amount of Rs.181.25 crores has been released to the States/UTs for feed and fodder development since the launch of the Mission till 31st December 2019.

The component wise physical and financial achievement since launch of Mission is as follows (till 31st December 2019)

Components	Physical Units	Financial (Rs in lakhs)
Forage production from Non-forest wasteland /rangeland/ grassland / non-arable land (ha)	5130	2225.18
Forage production from Forest Land (ha)	945	575.00
Fodder seed production/ procurement and distribution (tons)	17600	7588.92
Assistance for introduction of hand driven chaff cutters (Nos)	26525	1009.21
Assistance for introduction power driven chaff cutters (Nos)	30975	2912.535
Establishment of high capacity Fodder Block Making units (Nos)	5	147.90
Distribution of low capacity, tractor mountable Fodder Block Making units/ Hay Bailing Machine/ Reaper/Forage Harvesters (Nos)	54	540.00
Establishment of Silage making units (Nos)	3974	1292.43
Establishment of Bypass protein making units (Nos)	3	100.00
Establishment of area specific mineral mixture / feed pelleting / feed manufacturing units (Nos)	9	1081.234
Establishment / modernization of Feed testing laboratories (Nos)	13	652.28

Further, under the National Livestock Mission there are Eight Regional Fodder Stations which are located in different agro-climatic zones of the country engaged in the production of foundation seeds of fodder crops.

These Eight Regional Fodder Stations are located at Hessarghatta, Bengaluru (Karnataka), Ravirala, Hyderabad (Andhra Pradesh), Dhamrod Surat (Gujarat), Hisar (Haryana), Suratgarh (Rajasthan), Suhama (Jammu & Kashmir), Alamadhi (Tamil Nadu) and Kalyani (West Bengal).

These stations have produced 250 tonnes of fodder seeds, conducted 9525 demonstrations, and organized 128 training programmes and 112 farmers' fairs/field days, during this financial year till 31st December, 2019.

5.1.9 Sub-Mission on Skill Development, Technology Transfer and Extension:

5.1.9.1 Under National Livestock Mission (NLM), a Sub Mission on Skill Development, Technology Transfer & Extension has been launched with the objective to adoption of new technologies and practices require linkages between stakeholders. The sub-mission will provide a platform to develop, adopt or adapt the technologies including frontline field demonstrations in collaboration with farmers, researchers and extension workers, etc. wherever it is not possible to achieve this through existing arrangements.

5.1.9.2 The Components of the Sub Mission are IEC Support for Livestock Extension, Training and capacity Building, Livestock Farmers Groups/Breeder's Association, Organization of Livestock Mela/Show, Regional Livestock fair, Operationalization of Farmers Field Schools, Exposure Visit for livestock Extension facilitators, Exposure Visit of farmers and Staff component of livestock Extension.

5.1.9.3 An amount of Rs. 2.66 crore for training and capacity building and Rs. 1.35 crore for organizing 126 livestock melas have been released during 2019-20 upto December, 2019 under the Sub-mission of Skill Development, Technology Transfer and Extension.

Management Training

5.1.10 National Action Plan-National Livestock Mission

5.1.10.1 The proposed objectives under National Livestock Mission (NLM) are sustainable growth of livestock and poultry for nutritional security and economic prosperity. In order to achieve the goal, five year action plans have been

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5.1.10.2.1.2 Sheep and Goats are important species of livestock for India. They contribute greatly to the agrarian economy, especially in areas where crop and dairy farming are not economical, and play an important role in the livelihood of a large proportion of landless as well as small and marginal farmers.

5.1.10.2.1.3 In the 2019 Livestock Census, the population of Sheep is 74.29 million and Goat is 148.88 million; there is a increase in population of Sheep by 14.1% and Goat by nearly 10.1% from the 2012 Livestock Census. This is because of the implementation of various breeding programme under National Livestock Mission and also effective cooperation of states.

5.1.10.2.1.4 Thus, to increase the meat, milk and wool production, breed improvement even while increasing the farmers income in case of indigenous breeds and upgrading through imported germplasm in case of non-descript small ruminants through breed Improvement of the goat and sheep with focus on separate identified breeds for meat, milk and wool production, Importing germplasm of suitable genetic traits for higher meat, milk and wool production. States of Uttarakhand and Himachal Pradesh have imported 440 numbers of High Genetic Merit multipurpose Merino sheep from Australia to boost wool production.

5.1.10.3 Transform Backy

Shearing Training

ard Poultry to commercial economic model

5.1.10.3.1 Already Private Industry and NABARD encourage economically viable/ bankable projects, wherein the scale is much higher and so, beyond the reach of small and marginal/ BPL farmers. The goal is to bring these landless, small and marginal farmers into mainstream of economic activity.

5.1.10.3.2 Presently, a component under National Livestock Mission (NLM), namely, Rural Backyard Poultry Development (RBPD) which covers beneficiaries from BPL families to enable them to gain supplementary income and nutritional support. Under RBPD, the chicks/ birds suitable for rearing in the backyard are reared in the mother units upto 4 weeks and are further distributed to the BPL beneficiaries in at least two batches.

5.1.10.3.3 It is proposed to move incrementally from this subsistence model of backyard poultry farming to a scaled-up entrepreneur model, up scaling incrementally upto 200-400 birds. In case of Low-input technology (LIT) birds, these would help in transition and up scaling later to 1,000-2,000 birds for larger commercial scale Poultry farming. Similarly, it is also envisaged to introduce smaller scale broilers in rural households for later scaling up to commercial scale and have Poultry as a mainstream source of income.

5.1.11 Animal Insurance:

5.1.11.1 Attention is also being paid, to insure the animals of poor farmers, as per availability of budget.

5.1.11.2. Utilization of Fallen Animals: A component under National Livestock Mission with the objectives to Prevent bird-hit hazards to civil and defense aircrafts, to prevent environmental pollution and spread of livestock diseases and to produce better quality hides and skins through timely recovery, better handling and transport is under implementation. Financial assistance are provided for the establishment of carcass utilization plants, bone crushing units, renovation / modernization of existing carcass utilization centres etc. which are implemented through Panchayati Raj Institutions. During 2019, a proposal submitted by State Govt. of Maharashtra, with a processing capacity of 20-25 animals per day and recommended Rs.220.00 lakh has been supported.

5.1.11.3. Establishment of Rural Slaughter Houses: Establishment/modernization/ expansion of Rural Slaughter Houses is also implemented under National Livestock Mission. These slaughter Houses are established in collaboration with Panchayati Raj Institutions. Assistance are provided to support slaughter houses in rural areas, with grants-in-aid. The funding pattern for this component will be 75% Central Share and 25% State share subject to a limit of central share of Rs1.50 crore. During 2019, a total of Rs. 292.50 lakhs(Rupees Two Hundred and Ninety Two lakhs and Fifty thousand only), for establishment / modernization of Five Rural slaughter houses submitted by State Govt. of Nagaland have been assisted.

5.1.12 Observation of World Rabies Day 2019

"Rabies Free India"

Municipal Corporation Chandigarh, organised National Conference on "Prevention of Rabies and Stray Dog Management" during World Rabies Day on 28th September, 2019 at Chandigarh. Hon'ble Governor of Punjab Shri. V.P. Singh Badnore was the Chief Guest. Dr O P Chaudhary, Chairman, Animal Welfare Board of India also attended the

event as Guest of honour.

One Day Interactive workshop on "Stall Feeding"

One Day Interactive workshop on "Stall Feeding" organized by Department of Animal Husbandry and Dairying in collaboration with Karnataka Sheep and Wool Development Corporation (KSWDC) and Karnataka Veterinary, Animal & Fisheries Sciences University (KVAFSU-B) held at Bangalore on 26th July, 2019. Sheep goat farmers practicing stall feeding with the technical officers/scientists from the States/ Universities/ Boards participated in the Workshop. Stall fed Goat/Sheep farming is a system in which animals are being grown in protected area with well maintenance and feed of cultivated fodder, forages and concentrated feed.

5.1.13 Celebration of World Egg Day 2019

The "World Egg Day" is celebrated every 2nd Friday of October and Department of Animal Husbandry and Dairying (DAHD), Government of India facilitates its celebration every year. This year the World Egg Day falls on 11th October, 2019. World Egg Day 2019 was organized by Department of Animal Husbandry and Dairying in collaboration with Govt. of Punjab at CPDO, Chandigarh involving the major stakeholders of poultry industry and State Governments. A road show /Rally on theme "creating awareness on importance of eggs in human nutrition & health among general public" was also being organised in this event.

5.2 LIVESTOCK HEALTH

5.2.1 With improvement in the quality of livestock through cross-breeding programmes, the susceptibility of these livestock to various diseases including exotic diseases has increased. In order to reduce morbidity and mortality, efforts are made by the State/Union Territory Governments to provide better healthcare through Polyclinics/Veterinary Hospitals, Dispensaries and First-Aid Centres including Mobile Veterinary Dispensaries available with them. The State-wise list of veterinary institutions is given at Annexure-XI. In order to provide referral services, over and above the existing disease diagnostic laboratories in the States, one Central and five Regional Disease Diagnostic Laboratories have been established andare fully functional. Further, for control of major livestock and poultry diseases by way of prophylactic vaccination, the required quantity of vaccines is produced in the country.

5.2.2 While efforts are made to ensure better livestock health in the country, the same are also being made to prevent ingress of diseases from outside the country, and to maintain standards of veterinary drugs and formulations. At present, Drug Controller General of India regulates the quality of veterinary drugs and biologicals in consultation with this Department.

5.3 ANIMAL HEALTH INSTITUTES

5.3.1 Animal Quarantine and Certification Service (AQCS)

The purpose and scope of setting up of Animal Quarantine Stations is to prevent ingress of exotic diseases into the country through imported livestock and livestock products. The increased and faster international trade and travel exposes every country to the dangers of infiltration of known and unknown transmissible animal diseases which have the potential of rapid spread and also have adverse socio-economic and human/animal health consequences. The Quarantine Services are necessary to keep the country free from exotic diseases.

There are many infectious diseases of livestock which are prevalent in other countries but India is free from them. It is therefore necessary that such exotic diseases do not gain entry into our country through movement of livestock and livestock products from abroad. The entire procedure of keeping a watch on livestock disease is the responsibility of the Office of International Epizooties (O.I.E.) through its Terrestrial and Aquatic Animal Health Codes. OIE has a list of the prevalent diseases (aquatic and terrestrial). Zoonosis is also an important component of AQCS wherein human health is ensured by strict implementation of AQCS regulations.

An efficient Animal Quarantine Organization is necessary for conducting checks at the international airports/seaports and land routes as livestock may covertly carry pathogens without any overt sign of clinical disease; they must be held in quarantine for observation and testing to establish their pathogen-free status before release

into the country. There are Animal Quarantine stations at Delhi, Mumbai, Chennai, Kolkata, Bengaluru and Hyderabad.

Information related to AQCS is available inits official *website: www.aqcsindia.gov.in.* Details of the activities of the Animal Quarantine and Certification Service Stations can be accessed at *http://aqcsindia.gov.in/import-export-annual-report.html.*

5.3.2 Chaudhary Charan Singh National Institute of Animal Health, Baghpat

5.3.2.1 Chaudhary Charan Singh National Institute of Animal Health has been established at Baghpat, Uttar Pradesh to undertake the quality control and assurance of standard, efficient and safe veterinary biologicals in India and to act as a nodal institute to recommend licensing of veterinary vaccines in the country with a vision to promote healthy and productive livestock in Indian subcontinent using standard, efficient and safe veterinary biologicals. During the period under report, following activities were carried out:

- The institute has developed its systems for undertaking quality control testing of veterinary biological to initiate its regulatory function. It was examined by the Joint Inspection Team of Drug Controller General of India, CDSCO, Ministry of Health and Family Welfare, Govt of India and accordingly the institute has been recognized as Central Drugs Laboratory by Ministry of Health and Family Welfare, Govt of India for undertaking the Quality Control Testing of Veterinary Biologicals, of two diseases namely *Haemorrhagic Septicaemia* and *Ranikhet* Disease vide Gazette notification No. G.S.R. 213(E), dated 11th March 2019.
- QC testing has been continued for diseases (HS, RD, Sheep Pox, Fowl Pox, PPR and FMD) and completed the same with success on 12 batches of vaccines procured by the institute from various State BP units besides private manufacturers, based on the revised SOPs as per IP 2018, for internal standardization. Standardization of complete QC testing of FMD component of FMD+HS combined vaccine has been completed including challenge testing in cattle calves. Exhaustive revised SOPs for quality testing of vaccines have been reviewed, to include changes as per IP 2018 monographs, including protocols for biosafety and biosecurity. The institute is maintaining 16 reference cultures of bacteria and viruses; fresh viral culture (IBDV, PPR, FMD virus) and bacterial culture *(Clostridium sporogenes, Bacillus subtilis, Candida albicans and Pseudomonas aeruginosa)* have been procured from NRCE Hisar, IVRI and MTCC, Chandigarh respectively for use in the lab to strengthen our laboratory. Besides this few cell-lines (including Vero and BHK-21 cells) are also being maintained in the institute.
- Database of all the veterinary vaccine producers (private and public) in India has been prepared.

- The IAEC meetings (31/08/2019 and 02/11/2019) were conducted for statutory clearances of biological work in the institute. The process of renewal of online registration of Institute for IBSC has been completed.
- To undertake research to refine QC testing methods, MoUs with the universities have been initiated. MoUs with LUVAS, Hisar has been signed. MoUs with other universities like GADVASU Ludhiana, IVRI Izatnagar, CSHAU Hisar, SVBPUAT Meerut, NDUAT, Faizabad and GBPUAT Pantnagar are underway.
- Master Vaccinator Trainings were conducted to train field veterinarians and para- veterinarians to reducevaccination failures due to human errors. During 2019 training was imparted to the field veterinarians of Uttar Pradesh.
- A short training course of two weeks for DADF officers was organized by CCSNIAH during 21/01/2019 to 01/02/2019required for promotion of the Livestock Officers to the post of Assistant Commissioner. The program was designed so as to cover the basic syllabus to fulfil the requirement as prescribed in RR's including entire gamut of activities both technical as well as administrative that these officers are required to performance while discharging their duties.

"Short training course of two weeks for DADF officers organized by CCSNIAH"

- Besides, one day visit of ICAS officers was organised successfully on 26/04/2019.
- The Institute, alone and in coordination with KVKs and NGOs, has participated in various extension activities comprising the agricultural fairs like Pashu Arogya Mela at Pt Deen Dayal Upadhyay Dham, Mathura, 9th Vibrant Gujarat 2019 Global Trade Show, Gandhinagar, Gujarat etc. and livestock health and awareness camps locally.
- One day workshop with the theme *"Bhartiya Krishakkiunnati main pashupalan ka yogdan"*was organized successfully at CCSNIAH, Baghpatin collaboration with Bhartiya Kisan Sangh in February 2019. About 400 participants including farmers, livestock owners, officers from State Animal Husbandry Department, Scientists from ICAR, private organizations and dairy owners participated in the Camp.

- Officers of the institute participated in various scientific conferences, trainings and meetings like *"Workshop on GST"* at ISTM, New Delhi, training Course on *"Safety and Potency Testing of Veterinary Biologicals"* conducted by IVRI Izatnagar and One Health India Conference organized by DBT, New Delhi etc.

5.3.3 Central/Regional Disease Diagnostic Laboratories

5.3.3.1 In order to provide referral services over and above the 250 existing disease diagnostic laboratories in the States, a Central and five Regional Disease Diagnostic Laboratories have been set up by strengthening the existing facilities. The Centre for Animal Disease Research and Diagnosis (CADRAD) of Indian Veterinary Research Institute (IVRI), Izatnagar is functioning as the Central Disease Diagnostic Laboratory (CDDL). The Disease Investigation Laboratory (Pune), Institute of Animal Health and Veterinary Biologicals (Kolkata), Institute of Animal Health &Biologicals (Bangalore), Animal Health Institute (Jallandhar) and Institute of Veterinary Biologicals,Khanapara (Guwahati) are functioning as referral laboratories for Western, Eastern, Southern, Northern and North-Eastern regions, respectively. The laboratories at NRDDL (Jalandhar), SRDDL (Bangalore), ERDDL (Kolkata) and CDDL (Izatnagar) have been strengthened with pre-fabricated BSL-III laboratories while a mobile BSL-III laboratory has been provided to NERDDL, Guwahati. These RDDLs aid in surveillance and diagnosis of various livestock and poultry diseases, including Avian Influenza and Bovine Spongiform Encephalopathy (BSE).

5.4 Livestock Health & Disease Control

5.4.1 In order to effectively tackle the issue of livestock health, the Department supplements the efforts of the State Governments / Union Territories by way of financial assistance through the 'Livestock Health & Disease Control (LH&DC) Scheme. At present, the scheme has been clubbed under umbrella scheme "White Revolution - Rastriya Pashudhan Vikas Yojana" as "Veterinary Services" and the funding pattern is 60:40 between Centre and State (90:10 for North Eastern states and Himalayan States and UT's 100%). The scheme comprises of the following sub-components -

(a) Assistance to States for Control of Animal Diseases (ASCAD)

(b) Professional Efficiency Development (PED)

(c) National Project on Rinderpest Surveillance & Monitoring (NPRSM)

(d) Foot and Mouth Disease Control Programme (FMD-CP): *(This component is withdrawn from LH & DC from January, 2020 as covered under* National Animal Disease Control Programme (NADCP))

(e) National Animal Disease Reporting System (NADRS)

(f) Peste des Petits Ruminants Control Programme (PPR-CP)

(g) Brucellosis Control Programme (Brucellosis - CP) *(This component is withdrawn from LH & DC from January, 2020 as covered under* National Animal Disease Control Programme (NADCP))

(h) Establishment and Strengthening of existing Veterinary Hospitals and Dispensaries (ESVHD)

(i) Classical Swine Fever Control Programme (CSF-CP)

5.4.1.1 Assistance to States for Control of Animal Diseases (ASCAD)

Under this component, assistance is provided to states/UTs for control of economically important diseases of livestock and poultry by way of immunization, strengthening of existing State Veterinary Biological Production Units, strengthening of existing Disease Diagnostic Laboratories and in-service training to Veterinarians and Para-veterinarians. Under this programme funds are also provided for immunization against canine rabies (zoonotic) and control of endo-parasites in cattle & buffaloes.

Against BE of Rs.474.98 crore and RE of Rs.350.00 crore under LH&DC scheme during 2019-20, an amount of Rs.93.56 crore has been released till 31st December, 2019 for implementation of ASCAD component.

5.4.1.2 Professional Efficiency Development (PED)

Central Government provides 100% funds for functioning of Veterinary Council of India (VCI) and 50% funds to State Veterinary Councils for their operations including running their Continuing Veterinary Education (CVE) programmes.

5.4.1.3 National Project on Rinderpest Surveillance and Monitoring (NPRSM)

The main objective of the scheme is to strengthen the veterinary services to maintain required vigil to sustain the country's freedom from Rinderpest & Contagious Bovine Pleuro-pneumonia (CBPP) infection secured in November 2006 and May 2007, respectively.

Under the programme, surveillance of various animal diseases including syndromic diseases with focus on Contagious Bovine Pleuro-pneumonia (CBPP) and Bovine Spongiform Encephalopathy (BSE) are undertaken throughout the country to maintain India's freedom status from these diseases. This physical surveillance is done with the help of the staff of Animal Husbandry Department of the States & Union Territories.

Against BE of Rs. 474.98 crore and RE of Rs. 350.00 crore under LH&DC scheme during 2019-20 an amount of Rs. 2.09 crore has been released till 31st

December, 2019 for implementation of NPRSM component. The freedom status of these diseases is maintained.

5.4.1.4 Foot & Mouth Disease Control Programme (FMD-CP) and Brucellosis Control Programme (Brucellosis - CP)

Foot and Mouth Disease is a highly contagious viral disease primarily of cattle, buffaloes and pigs. However, other animals namely sheep, goats etc. and several other species of wild and captive animals are also susceptible to the disease. In order to prevent economic losses due to Foot and Mouth Disease and develop herd immunity in cloven-footed animals, 'Foot and Mouth Disease Control Programme (FMD-CP) is implemented throughout the country*.

The major activities of the intensive programme component includes vaccination of all eligible cattle and buffaloes at six monthly interval, publicity and Mass Awareness Campaigns, sero-surveillance/monitoring of animal population on random basis, procurement of cold cabinets, assessment of the randomly collected samples of vaccines for their quality, virus typing in case of outbreaks and recording/regulation of animal movement from unvaccinated areas through temporary quarantine/ check-posts.

Foot and Mouth disease Control Programme has been endorsed by the OIE in May 2015. OIE Expert Mission visited India for assessment of the progress of OIE Endorsed Control Programme for FMD and OIE has reconfirmed India's official FMD – CP in 2019.

Against BE of Rs.474.98 crore and RE of Rs. 350.00 crore under LH&DC scheme during 2019-20, Rs.216.58 crore has been released till 31st December, 2019 for implementation of FMD-CP component and about 182.58 million vaccinations have been carried out till 31st December, 2019.

5.4.1.4.1 Training /workshop in Foot and Mouth disease control

The Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India in collaboration with European Union (EU) under the *"Better Training for Safer Food"* initiative, organised a training of trainers on FMD vaccination in India from 5th to 9th August 2019 at New Delhi.

The training of trainers provided participants with an improved knowledge of FMD vaccines, monitoring of the effectiveness of a vaccination campaign and what to do in the event of reported vaccine failure. The aim of the course was to equip the veterinarians involved in managing, supervising and implementing a vaccination campaign with knowledge and develop skills on methods to better evaluate the impact of FMD vaccines and vaccination programmes in endemic settings.

The programme was attended by 38 participants covering 22 states and UTs. The training was imparted by a technical expert from EU and an Indian expert.

5.4.1.5 National Animal Disease Reporting System (NADRS)

5.4.1.5.1 In order to streamline the system of animal disease reporting from States/UTs, a web-based Information Technology system for reporting the diseases from the field level has been implemented known as National Animal Disease Reporting System (NADRS). The objective of NADRS is to record and monitor livestock disease situation in the country with a view to initiate preventive and curative action in a timely and speedy manner. NADRS is a web-based System which will report the occurrence of animal diseases data from the Block & District level Veterinary Units.

5.4.1.5.2 The software for data entry in NADRS has been modified to make it user friendly and revamped/ reoriented on the technical and operational front giving rise to NADRS 2.0 application. A mobile android application for the NADRS 2.0 app is developed to capture animal disease information.

5.4.1.5.3 Against BE of Rs. 474.98 crore and RE of Rs. 350.00 crore under LH&DC scheme during 2019-20, an amount of Rs.6.50 crore was released to BSNL for internet connectivity for implementation of NADRS component.

5.4.1.5.4 The disease outbreak information compiled at headquarters is notified to World Organization for Animal Health (OIE) on every six-monthly basis. Incidence of diseases of livestock and Poultry in India during year 2018 is at Annexure-XII.

5.4.1.6 Peste des Petits Ruminants Control Programme (PPR-CP)

5.4.1.6.1 Peste des Petits Ruminants (PPR) is a viral disease characterized by high fever, inflammation of the gastro-intestinal tract leading to necrosis and ulceration of the mucous membrane and diarrhoea. PPR causes huge losses to the rural economy, both in terms of morbidity

and mortality in sheep and goats. The PPR Control Programme involves vaccinating all susceptible goats & sheep and three subsequent generations.

Against BE of Rs. 474.98 crore and RE of Rs. 350.00 crore under LH&DC scheme during 2019-20, an amount of Rs. 8.63 crore was released to States/UTs till 31st December, 2019 for implementation under PPR-CP component.

5.4.1.7 Classical Swine Fever Control Programme (CSF-CP)

Classical Swine Fever or 'hog cholera' is a viral disease of pigs. Its outbreaks cause heavy economic losses to pig farmers. In order to control this disease, the Department implements the sub-component CSF – Control Programme (CSF-CP) focussing on the North eastern states of the country.

Against BE of Rs. 474.98 crore and RE of Rs. 350.00 crore under LH&DC scheme during 2019-20, Rs.2.22 crore have been released to the North Eastern States under this sub-component.

5.4.1.8 Establishment and Strengthening of Existing Veterinary Hospitals and Dispensaries (ESVHD)

In order to assist the states to set up infrastructure for new veterinary hospitals and dispensaries and to strengthen/equip the existing ones, the Department provides funds financial assistance to the states /UTs.

Against BE of Rs.474.98 crore and RE of Rs. 350.00 crore under LH&DC scheme during 2019-20, an amount of Rs.2.47 crore has been released to States/UTs for implementation construction/ strengthening of Veterinary Hospitals/ Dispensaries under ESVHD component.

5.4.2 'ONE HEALTH' and ZOONOSIS

It is well known that human health and animal health are interdependent and bound to the health of the ecosystems in which they exist. This concept is envisaged to understand risks for human and animal health (including both domestic animals and wildlife) and environment as a whole.

Diseases of animal origin that can be transmitted to humans (zoonotic diseases) such as avian Influenza, rabies, brucellosis, glanders, nipah, etc. pose worldwide risks to public health. These risks increase with globalization, climate change and changes in human behaviour, giving pathogens numerous opportunities to colonise new territories and evolve into new forms. As per OIE (World Organization for Animal Health), 60% of existing human infectious diseases are zoonotic and at least 75%of emerging infectious diseases of humans have an animal origin. Controlling zoonotic pathogens at their animal source is the most effective and economic way of protecting people.

5.4.2.1 Trainings / workshop/table top exercises on 'One Health'

Whether under'One Health' or zoonotic diseases, collaboration and coordination among the stakeholders, especially human health experts and veterinarians is important.

The Department, in collaboration with US Centres for Disease Control (CDC) India office, National Centre for Disease Control (under the aegis of Ministry of Health & Family Welfare, GOI) and with support from US Biological Threat Reduction Program (BTRP) conducted 'One Health' table top exercises for state level veterinary and human health officials to improve coordination and

communication between the two sectors. Two such workshops had been conducted in collaboration with National Centre for Disease Control, New Delhi and US Centers for Disease Control and Prevention (CDC), India office with support from US Biological Threat Reduction Program during the year. In this series, atable top exercise was held in January 2019 at Bengaluru focussed on novel / avian influenza and anthrax. The specific objectives of this exercise were -

- To sensitize the state veterinary and health departments about the risks posed by the zoonotic diseases especially due to emerging/re-emerging pathogens like avian influenza and anthrax
- To update the state level veterinary and public health professionals on the epidemiologic, veterinary, medical, and laboratory components related to avian/novel influenza virus outbreaks
- To sensitize the state veterinary and public health professionals on importance of standard operating procedures (SOP) and inter-sectoral coordination for early detection and response to zoonotic diseases threats for effective response

The workshop was attended by 21 state veterinary and 20 state health departments representing seven states (Chhattisgarh, Jharkhand, Odisha, Telangana, Andhra Pradesh, Tamil Nadu, Maharashtra and two UTs (Pondicherry and Lakshadweep).

Another such table top exercise was held in May 2019 at New Delhi on novel/avian influenza and CCHF for the officials from the veterinary and health departments of 11 states and UTs. The objectives were training on joint response to outbreaks of avian influenza and CCHF and formulation of draft SOPs for priority zoonotic diseases. It was attended by 16 state veterinary and 15 state health departments representing 11 states (Delhi, Haryana, Odisha, West Bengal, Bihar, Uttar Pradesh, Uttarakhand, Himachal Pradesh, Rajasthan, Gujrat and Jammu).

5.4.2.2 Avian Influenza: Preparedness, Control and Containment

Since 2006, the country has been reporting H5N1 Avian Influenza virus. The Government carried out control and containment operations immediately and contained the disease. The guidelines were further devised for Zoological Parks and were issued to them for necessary action.

The Department has at present, an Action Plan for Prevention, Control & Containment of Avian Influenza (AI), known as Bird Flu. States/UTs are provided financial assistance under ASCAD for carrying out control and containment activities.

The details of Avian Influenza outbreaks till 31st December, 2019 are as under -

Table: Outbreaks of Avian Influenza during the year (upto 31st December 2019)

Episode	Period	State Affected	Number of Epicentres	No. of birds culled (in lakhs)
1	5th February 2019	Jharkhand	1	0.048
2	28th March 2019	Odisha	1	0.0069
3	27th December 2019	Chhattisgarh	1	0.1543
Total			3	0.209

The following measures have been taken up by the Government of India for control and containment of current Avian Influenza outbreak as well as to prevent its ingress into the country.'

(i) The Surveillance Plan on Avian Influenza in the country' has been prepared and is part of the Action Plan

(ii) The extant Action Plan on "Preparedness, Control and Containment of Avian Influenza" was circulated to the State/UT Governments for implementation. New guidelines were devised for Zoological Parks

(iii) Culling of entire poultry population in the affected zone of 0-1 Km is carried out in affected zone

(iv) Continuous strengthening of preparedness to tackle any future eventuality in terms of up-gradation of laboratories, training of manpower stockpiling of materials for control and containment, etc.

(v) To strengthen diagnosis of Avian Influenza, four Bio-Safety Level 3 (BSL-III) laboratories have been established at Jalandhar, Kolkata, Bangalore & Bareilly. Also, a mobile BSL-III laboratory has been provided to NERDDL, Guwahati. These laboratories are already in operation.

(vi) Sensitization of general public on Avian Influenza through Information, Education and Communication (IEC) campaigns

(vii) Transparent approach towards reporting not only outbreaks but also

information of unusual sickness/ mortality in poultry and results of laboratory diagnosis

(viii) All the state governments are alerted from time to time to be vigilant about the outbreak of the disease

(ix) Imports of poultry and poultry products are banned from HPAI positive countries

(x) Advisories are issued to the states for guidance of poultry farmers from time to time on various aspects of disease control, surveillance and importance of bio security

5.4.2.2.1 Training / workshop on Avian Influenza

The Department, in collaboration with United States Department of Agriculture (USDA), organized a 'Disease Regionalization' workshop in July (8th to 12th) 2019 at ICAR- Indian Veterinary Research Institute, Bareilly (Uttar Pradesh). The objective of the workshop was to provide an increased understanding and utilization of regionalization as a disease surveillance and control strategy.

The workshop was attended by 25 veterinarians from the states/UTs. The training was imparted by two technical experts from USDA and an Indian expert from NIHSAD.

5.4.2.3 National Action Plan for control and containment of Glanders in equines

Glanders is a contagious and fatal disease of equines, viz., horses, donkeys and mules, caused by infection with the bacterium *Burkholderia mallei (B. mallei)*. Control of Glanders requires testing of suspect clinical cases, screening of apparently normal equids, and elimination of reactors. *B.mallei* has zoonotic potential and has been considered as a potential biological warfare

or bioterrorism agent as it can cause highly fatal disease in humans.

The Department of Animal Husbandry and Dairying has framed the National Action Plan for Control and Eradication of Glanders in India for the entire population of equids reared in different management and animal husbandry practices in India and the biology, pathogenesis and epidemiology of B. mallei/Glanders under the overall conceptual framework of the OIE Terrestrial Code and the OIE Terrestrial Manual 2018 (Chapters 1.4, 4.3, 12.10 and 3.5.11 respectively). The overall objective issurveillance, control and eradication of Glanders in equines from India.

5.4.2.4 Training / workshop on canine Rabies

The Department, in collaboration with NCDC and Global Alliance for Rabies Control (GARC), conducted the Step Wise Approach for Rabies Elimination in India (SARE) Workshop during 6th to 8th June 2019 at New Delhi. The workshop was attended by participants both from the Department of Animal Husbandry and Department of Health and Family Welfare from different States and Union Territories and NGOs working for rabies control. The technical expert (Dr. Terence Scott) from the GARC facilitated the Workshop.

The Stepwise Approach towards Rabies Elimination-Practical Work plan towards Rabies Elimination (SARE-PWARE) tool has been developed as a template that countries may use to develop activities and measure progress towards the development or refinement of a national program and strategy for sustainable rabies prevention, control and eventually elimination.

The aim of the Workshop was to assess the current situation with regards to rabies in India and to form a comprehensive workplan to address key activities that are required to achieve rabies elimination.

The result of the self-assessment undertaken during this workshop was that India was at stage

1.5. This suggests that India has sufficient baseline data and experience from local level/small-scale implementations to use this information to scale up towards the development and implementation of a One Health National Rabies Control Strategy.

5.5 National Animal Disease Control Programme for FMD and Brucellosis:

Foot and Mouth Disease is considered the most significant economically damaging disease which is estimated to cause economic loss up to Rs. 20,000 crore every year and affects the acceptability of Indian animal products outside India. The disease is globally recognized by World Organization for Animal Health (OIE) as priority disease for control and eradication.

Similarly, Brucellosis is an economically important reproductive disease of cattle and buffaloes having an adverse impact on human health as it is zoonotic (transmissible to humans). It is also a serious occupational hazard.

Foot and Mouth Disease Control Programme (FMD-CP) and Brucella Control Programme was implemented under Livestock Health and Disease Control Scheme earlier. However, the existing efforts needed to be strengthened in a more concerted way so that country is able to control this disease and ultimately its eradication from the country which is benefitted for the export of milk and other animal products.

Hon'ble Prime Minister launched the "National Animal Disease Control Programme for Foot and Mouth Disease (FMD) and Brucellosis (NADCP)" on 11 September 2019. NADCP is a new Central Sector Scheme with a total outlay of Rs. 13,343 Crore for five years (2019-24). The objective of the scheme is (i) to achieve control of FMD by 2025 with vaccination and its eventual eradication by 2030 and (ii) to control Brucellosis in livestock.

The Administrative approval for the scheme has been issued on 9.10.2019. The Operational Guidelines of NADCP have been circulated to States/UTs on 10.10.2019. A National Steering Committee (NSC) is constituted under the Chairmanship of Secretary, AHD to oversee activities of the NADCP, give overall direction and guidance, monitor and review its progress and performance. Joint Secretary (Cattle & Dairy Division) in the Department of Animal Husbandry & Dairying is designated as Mission Director for the National Animal Disease Control Programme for control of Foot and Mouth Disease and Brucellosis.

Four meetings of NSC under the Chairmanship of Secretary, DAHD, have been conducted. Department of Animal Husbandry of States/UTs shall monitor the Programme through State Monitoring Units (SMU) to be headed by the Addl. Chief Secretary /Principal Secretary / Secretary of the Department of Animal Husbandry of the State /UT concerned. A Programme Management Agency has also been engaged to assist the National Steering Committee (NSC) for effective implementation of the scheme. National Steering Committee (NSC) has approved the funds for release to States for procurement of necessary logistics for implementation of the programme in mission mode.

Department has engaged NAFED as Programme Logistics Agency (PLA) for centrally procuring and distributing vaccines and ear tags so that one rate is followed in the entire country. Tenders were floated by NAFED for procurement of ear tags with applicators, FMD and Brucella vaccines domestically. Cattle and buffaloes will be

vaccinated in first round which has commenced from January, 2020. PLA will also ensure that the detailed programme for district wise availability of vaccines maintaining the cold chain is maintained and followed. As adequate number of eartags are not available from domestic suppliers, NAFED has also floated global tender for procurement of the same on 30.01.2020. A tentative vaccination calendar has been approved in the 3rd NSC meeting held on 17.12.2019 and communicated to all States/ UTs.

To ensure good quality of vaccine and conforming to OIE (World Organization for Animal Health) standards, Department of Animal Husbandry & Dairying has formulated mechanism of vaccine testing to ensure supply of quality vaccine and also finalized the SoPs for seromonitoring and serosurveillance of FMD in consultation with concerned Institutes of Indian Council of Agriculture Research.

Against a B.E of Rs. 500 crore and R.E. of Rs. 811.07 Crore for 2019-20, funds to the tune of Rs. 444.17 crore has been released till 31.12.2020.

5.6 Animal Husbandry Statistics

5.6.1 The Schemes of Livestock Census and Integrated Sample Survey are continuing Central Sector Scheme. Currently the Schemes are placed as central components under "White Revolution".

5.6.1.1 Integrated Sample Survey

The scheme is implemented throughout the country to bring out estimates of Major Livestock Products (MLP) such as Milk, Egg, Meat and Wool. Under the scheme the estimates are to be brought out annually which is used for policy and planning purposes All the States and Union Territories are implementing the Scheme with Central Assistance to the tune of 50%, 90% and 100% to the States, NE States and UTs respectively for the expenditure on salary for the entitled posts. 100% Central Assistance is also provided for (i) TA/DA to Enumerators and Supervisor for the conduct of the survey at a prescribed rate; and (ii) refresher training on ISS methodology. The sample survey is conducted from March to February on seasonal basis by dividing in 3 seasons; Summer, Rainy and Winter. The State/UT level seasonal estimates were compiled by Animal Husbandry Statistics Division, DAHD and Annual Estimates for the year 2018-19 were brought out. The estimates are accordingly published in Annual Publication "Basic Animal Husbandry Statistics (BAHS)-2019" of the Department and survey for the period 2019-20 is in progress.

5.6.1.2 Livestock Census

The Livestock Census is being conducted quinquenially through all States/UTs in India. It is the only source, which gives disaggregated information on various species of animals and poultry birds. Recently, 20th Livestock Census has been completed with the participation of Animal Husbandry Department of all the States/UTs. The main objective of Livestock Census is to provide information on livestock population, species-wise and breed-wise along with age, sex-composition etc. up to household level in rural and urban areas. The All India report containing species-wise and State-wise population of livestock has been published.

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Chapter 6

TRADE MATTERS

TRADE MATTERS

6.1 Introduction

6.1.1 After the removal of Quantitative Restrictions (QRs) on various livestock products, the Department amended the Livestock Importation Act, 1898 bringing all the livestock products under its purview for the purpose of regulating their import. Accordingly, Notifications No. 655(E) dated, 7th July,2001 for livestock products, No.1043(E) dated 16.10.2001 for fishery products and No. 1175(E) dated 27.11.2001 for Grand Parent stock of poultry had been issued making it mandatory to import livestock products against Sanitary Import Permit(SIP). On 28.03.2008 vide Notification No. 794 (E), the Department had further amended the Notification No. 655(E) dated, 7.07.2001 whereby it had categorized the livestock products requiring Sanitary Import Permit (SIP), the products that may be cleared on the basis of No Objection from the Animal Quarantine and Certification Services and the products which require neither SIP nor No objection.

6.1.2 In the year 2014, by supersession the principal notification S.O. 655(E) dated 7.07.2001, a consolidated notification S.O. 2666(E) dated 16.10.2014 has been issued listing out the livestock products under Section 2(d) and procedure for import of livestock products under Section 3A of Livestock Imploration Act 1898. The SIP is issued after conducting a risk analysis on the basis of disease situation of the exporting country vis-a–vis disease situation of this country.

6.1.3 Further, notifications had also been issued vide S.O. 1495(E) and 1496(E) dated 10th June, 2014 under Livestock Importation Act, 1898 wherein the Department has laid down the import and quarantine procedure of live animals as per Section 3 and the definition of “Livestock” has been further extended to number of animals as per Section 2 (d) of Livestock Importation Act., 1898.

6.1.4 Procedure for Import: The Department has constituted a Committee on Risk Analysis under the Chairmanship of Joint Secretary (Trade) with all the Joint Secretaries or representative as its members to consider the applications received for issuance of SIP to import various livestock products. After necessary amendment in the notification S.O. 2666 (E) dated 16.10.2014, the Department has launched the website, https://sip.nic.in, for online submission of SIP applications and issuance of Sanitary Import Permit to various firms/ Organizations engaged in activities of import of livestock products. The procedure for submission of on-line SIP application along with the relevant information regarding sanitary requirements is also available on Department's website www.dahd.nic.in. The SIP applications received are examined and a risk analysis is undertaken by the technical experts of the Department on the basis of scientific evidence and OIE regulations. The recommendations of the technical experts are considered by the Risk Analysis Committee for rejecting the application or issuance of SIP. 41 meetings of the Committee have been held till December 2019. The Trade Unit of the Department has issued 3407 Sanitary Import Permits till December 2019 to various firms/organizations to enable them to import various livestock products, including Fisheries products.

6.1.5 This Department also processes the proposals of State Governments/firms/ organizations for import /export/manufacturing /marketing of livestock and livestock related commodities including vaccines, drugs, biological and restricted category livestock and livestock products received from Directorate General of

Foreign Trade (DGFT)/Drugs Controller of India (DCI). The views of the Department on these proposals are communicated to the Directorate General of Foreign Trade (DGFT)/Drugs Controller of India (DCI) for issuance of necessary import license in favour of concerned State Governments/firms/ Organizations after considering the same by a Committee on Trade & Investment Matters. The Committee on Trade & Investment Matters also meets under the Chairmanship of Joint Secretary (Trade) with all the Joint Secretaries or representative as its members. Till December 2019, 41 meetings of said Committee were held and 308 nos. of No Objection Certificates were issued in favour of various firms/Organizations/ as well as to various State Governments.

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Chapter 7

SCHEDULED CASTES SUB-PLAN (SCSP) AND TRIBAL SUB-PLAN (TSP)

SCHEDULED CASTES SUB-PLAN (SCSP) AND TRIBAL SUB-PLAN (TSP)

7.1 The Department is implementing various Schemes, mainly aimed at strengthening the infrastructure of the State Governments for the development of animal husbandry and dairying. Most of the schemes are not directly beneficiary-oriented. A large population of the country belonging to the Scheduled Castes, Scheduled Tribes, other weaker sections of the society and women are engaged in activities in the livestock sectors. As a corollary, the various schemes implemented by the Department benefit these sections of the society. However, the Department is not maintaining a record of people belonging to Scheduled Cates, Scheduled Tribes and women benefiting from these schemes. Keeping in view the nature of the schemes, the State Governments/ Implementing Agencies are also not maintaining such a record.

7.2 As per the guidelines issued by the Planning Commission vide D.O. letter No. N-11016/12(1)/ 2009-PC dated 15.12.2010 to earmark 16.2% of funds under Scheduled Castes Sub Plan (SCSP), the Department earmarked Rs. 402.93 crore in 2018-19 at RE stage under different schemes/programmes under SCSP component. Against this, Rs. 405.74 crore was incurred under different schemes in 2018-19. For the current financial year 2019-20, the Department has earmarked Rs. 425.72 crore at RE Stage, out of which expenditure of Rs. 352.95 crore has been incurred (upto 31.12.2019) under different schemes/programmes under SCSP component.

7.3 The Department was exempted for earmarking of funds under Tribal Sub Plan (TSP) upto 2017-18. From 2018-19, 8.60% has been fixed under TSP. Under different schemes/ programmes under STSP component, the Department has earmarked Rs. 209.76 crore in 2018-19 at RE stage. Against this, Rs. 211.41 crore was incurred under different schemes in 2018-19. For the current FY 2019-20, the Department has earmarked Rs. 221.81 crore at RE stage, out of which Rs. 178.44 crore has been incurred as on 31.12.2019.

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Chapter 8

EMPOWERMENT OF WOMEN

EMPOWERMENT OF WOMEN

8.1 Women in Animal Husbandry & Dairying Sector.

8.1.1 The Department does not have any specific scheme designated for empowerment of women. However, the Department has always emphasized on providing benefits to women engaged in animal husbandry and dairying.

8.1.2 In the Animal Husbandry sector, men and women work hand in hand. Feeding the animals, milking of animals etc. mostly performed by women. However, role of both men and women are complementary in the field of animal husbandry and it is not possible to segregate the functions into specific grouping.

8.1.3 Women have been at the fore front of dairy cooperative movement, which was initially carried under the Operation Flood Programme and later also under the Integrated Dairy Development Programme implemented by the Government.

8.1.4 In the poultry sector, the rural backyard poultry is an income supplementing scheme mostly implemented by women, priority in training are given to women.

8.1.5 Similarly, in the scheme for conservation of breeds, the conservation of sheep, goat and small ruminants are oriented in such a way that women are being identified to take up such schemes.

8.1.6 Schemes/Programmes implemented by the Department have been beneficial to women. All States/Union Territories have been requested to maintain record in this regard.

8.1.7 A Gender Budget Cell has been set up in the Department with the objective of influencing and effecting a change in the Ministry's policies & programmes in a way that could tackle gender imbalances, promote gender equality and development of women. The Cell is headed by Joint Secretary (PC) with five members. The Department has not earmarked any specific funds for women component, However, it is advising States/Implementing Agencies for utilizing around 30% of allocated funds towards women beneficiaries under the existing Centrally Sponsored/Central Sector schemes being implemented by the Department. The Gender Budget Cell has identified the following schemes under which funds are allocated towards women beneficiary:

- Dairy Entrepreneurship Development Scheme (DEDS)
- National Livestock Mission (NLM)

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Chapter 9

INTERNATIONAL COOPERATION

INTERNATIONAL COOPERATION

9.1 Document signed with foreign country:

The Department signed a Comprehensive Work Plan with Mongolia on 20-09-2019 for cooperation in the field of Animal Health and Dairy production under the Agreement concluded with that country on cooperation in Animal Health & Dairy Sector in May, 2015.

9.2 Membership of international organizations / bodies:-

Department of Animal Husbandry and Dairying is a regular member (paying annual membership contribution) to the following International Organizations related to animal health and dairying.

a. Office International des Epizooties (OIE), Paris, France.

b. Animal Production and Health Commission for the Asia and the Pacific (APHCA), Bangkok, Thailand an organization under FAO.

c. International Dairy Federation (IDF), Belgium.

9.3 Deputation/Training/abroad attended by Officers:-

As on 31.12.2019, 34 officials of the Department and its Subordinate offices were deputed abroad for attending various Meetings/Seminars/Trainings/Workshops etc. so as to mark the presence of the Department at important international fora, provide exposure to the officers and to hold bilateral discussions on mutual cooperation with foreign countries.

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Chapter 10

ANIMAL WELFARE

ANIMAL WELFARE

10.1 The Animal Welfare subject has been transferred to the Ministry of Fisheries, Animal Husbandry and Dairying from Ministry of Environment, Forest and Climate Change in pursuance to the notification No. S.O. 1531(E) dated 4th April, 2019 after amending the Allocation of business Rules. Accordingly, the Animal Board of India, Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) and National Institute of Animal Welfare (NIAW) are under the administrative control of the Ministry of Fisheries, Animal Husbandry and Dairying. The activities of these organizations are as under:

10.2 ANIMAL WELFARE BOARD OF INDIA

The Animal Welfare Board of India (AWBI) was set up in 1962 in accordance with Section 4 of the Prevention of Cruelty to Animals Act 1960 (No.59 of 1960). The well-known humanitarian Smt. Rukmini Devi Arundale was the Founder Chairperson of the Board.

The Board consists of 28 Members including six Members of Parliament (4 from Lok Sabha and 2 from Rajya Sabha – yet to be nominated in the present Board) and others from different walks of life, all nominated by the Government of India. The Board is reconstituted once in three years. The present Board was re-constituted for a period of three years by the Ministry of Environment, Forest and Climate Change, Govt. of India w.e.f. 01.03.2017 having 18 members and 4 members were nominated on 08.12.2017.

The objective of the Animal Welfare Board of India is provided under Section 9 of the Prevention of Cruelty to Animals Act, 1960. In short the AWBI is mandated to keep the law in force in India for the Prevention of Cruelty to Animals under constant study and advise the Central Government on the making of rules under the Act, amendment needed with a view to prevent unnecessary pain or suffering to animals.

10.3 ACTIVITIES UNDERTAKEN SO FAR DURING THE FINANCIAL YEAR 2019-20

Recognition:

The Board grants recognition to Animal Welfare Organisations (AWOs) that apply to the Board for recognition. The Board has granted recognition to 3498 Animal Welfare Organisations (AWOs) up to the year 2018-19. During the year 2019-20, the Board has granted recognition to 242 AWOs as on 31.12.2019. Thus total 3593 AWOs have been granted recognition by the Board till 31.12.2019.

The AWBI is also implementing the following schemes:

Regular Grant: The Animal Welfare Board of India provides financial assistance to the recognized Animal Welfare Organisations as regular grants towards maintenance of animal shelters, animals medicines, purchase of medical equipments and conducting of veterinary camps etc. and rescued cattle maintenance grant for maintenance of the animals rescued from illegal transportation/slaughter houses. The regular grant is being given on the basis of no. of animals sheltered/treated/rescued by the Animal Welfare Organization duly verified by the Animal Husbandry Department. The Board provides financial assistance to the recognized Animal Welfare Organisations (AWOs).

Scheme for Shelter House for looking after the animals

The objective of this scheme is to establish and maintain shelter houses for distressed animals in the country. Primarily, Non-Governmental Organizations (NGOs) and Society for Prevention of Cruelty to Animals (SPCAs) are given grants for construction of boundary walls, shelter, water tank, drains, in-house Dispensary, medical equipment, contingencies etc. The maximum grant provided under the scheme is Rs. 22.50 lakh excluding 10% of contribution from AWO. During 2019-20 upto 31.12.2019 Rs. 250 lakh released for 24 shelter houses.

Scheme for Animal Birth Control (ABC) & Immunization of Stray Dogs

The scheme is meant for controlling the population of stray (homeless / besahara) dogs by sterilization and reducing incidence of rabies by immunization. Non-Governmental Organisations, Society for Prevention of Cruelty to Animals and local bodies are eligible for this grant.

Under this scheme financial assistance is given @ Rs.370/- per dog for pre & post- operative care, including medicines and Anti-Rabies Vaccine (ARV); and Rs.75/- per dog for catching and relocation of the dog.

Scheme for Provision of Ambulance Services to Animals in Distress

Under this scheme, the animal welfare organizations are given grants for purchase of suitable vehicles for transportation, rescue and also for providing emergency services to animals in distress.

Non-Governmental Organizations are provided grants to the extent of 90% of the cost of a suitable vehicle and equipment and fitting thereon. The maximum amount of grant-in-aid is limited to Rs. 3.50 lakhs for purchase of vehicle and Rs.1.00 lakhs for equipments and fittings thereon. During the year 2019-20 till 31.12.2019, Rs. 26.4 lakh has been released for 6 ambulances.

Scheme for Relief to Animals during Natural Calamities

Every year, there are natural calamities in the form of flood, drought, earthquake etc. In such circumstances there is an immediate requirement for provision of fodder, adequate shelter, medical attention etc. for the affected animals. Funds for relief to such animals are provided under this scheme through the AWOs.

10.4 ACHIEVEMENTS (PHYSICAL/FINANCIAL) MADE DURING 2019-20:

The Animal Welfare Board of India has completed 57 years of dedicated service in the promotion of Animal Welfare and Prevention of Cruelty to them. During the year under report, the activities of the Board continued to extend all over the country including Jammu & Kashmir, North Eastern States and even in remote rural areas of the country. The activities of the Board of the relevant period under report are as under:

(i) The Board has granted recognition to 3498 Animal Welfare Organisations (AWOs) up to the year 2018-19. During the year 2019-20, the Board has granted recognition to 242 AWOs as on 31.12.2019. Thus total 3593 AWOs have been granted recognition by the Board till 31.12.2019.

(ii) As on 31.12.2019, the Board has given grant-in-aid to 30 AWOs.

(iii) The Board have conducted meetings with the Minister / Principal Secretary, Animal Husbandry Department of the States / UTs

for activation of State Animal Welfare Board and District SPCAs to achieve the objectives of the Board and to implement various Provisions of Prevention of Cruelty to Animal Act, 1960 and Rules framed there under to reduce the unnecessary pain or suffering to animals.

(iv) The Board has reconstituted Jallikattu Committee for monitoring the Jallikattu event to examine that no cruelty is inflicted to participating bulls in the State of Tamil Nadu.

(v) One of the main functions of the Board is the propagation of Humane Education. World Animal Day (4th October) were celebrated by all Animal Welfare Organisations, SPCAs, Animal Welfare Trainers, Honorary Animal Welfare Officers, Govt. Animal Husbandry Departments, Zoological Parks and Voluntary Organisations throughout the country with great interest, zeal and enthusiasm. The Board has conducted one training programme wherein 32 Honorary State / Legal / District Animal Welfare Officers have been trained.

(VI) REGISTRATION OF PERFORMING ANIMALS

Under Rule 3 of the Performing Animals (Registration) Rules, 2001, the Board is the prescribed authority to issue registration certificates. During the year 2019-20 (up to 31.12.2019) 774 Films / Advertisement were granted No Objection Certificates and 573 Films /Advertisement have been granted pre-shoot permission for using animals in their Films / Advertisements.

(VII) CRUELTY MATTERS AND ACTION TAKEN ON THE COMPLAINTS

The Board has received many complaints regarding cruelty to animals from various parts of the country and the same were informed to the concerned officers of the State Governments, District Collectors / Magistrates / District Superintendent of police for conducting an enquiry and forwarding action taken report on the complaints.

10.5 The Board has issued the following advisories to the States / UTs for the report period for preventing unnecessary pain and suffering to animals:

a) Letter to the Chief Secretary(s) and the Director General of Police of all States and UTs for taking action regarding illegal sacrifice of animals on the occasion of Id ul Zuha vide letter dated 29.07.2019.

b) Letter to the Chief Secretary(s) of all States and UTs requesting to furnish the status of State level ABC monitoring and implementation committee vide letter dated 15.10.2019.

10.6 Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)

10.6.1 The Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) is a statutory Committee constituted under Section 15 of the Prevention of Cruelty to Animals Act, 1960. There are 19 members in the CPCSEA and Joint Secretary (Animal Welfare) is the Chairman of CPCSEA and Deputy Commissioner (Animal Welfare) is the Member Secretary of CPCSEA. The term of the Committee is three years which is valid upto 11th June, 2021.

10.6.2 CPCSEA is duty bound to take all such measures as may be necessary to ensure that animals are not subjected to unnecessary pain or suffering *before, during or after* performance of experiments on them. For this purpose, the Committee formulated the "Breeding of and Experiments on Animals (Control & Supervision) Rules, 1998" (amended in 2001 & 2006) to regulate the experimentation on animals. Under the provisions of the above rules, establishments engaged in Bio-medical research are required to get themselves registered with CPCSEA, constitute Institutional Animal Ethics Committee (IAEC), get their Animal House Facilities inspected, and also get specific projects for research cleared by CPCSEA before commencing the research on animals. Further, breeding and trade of animals for such experimentation are also regulated under these Rules. As on 31.12.2020, 1765 establishments are registered with CPCSEA.

Objective:

- To bring untapped Academic and Bio-medical Research organizations under the ambit of the Rules framed by registering them to regulating the experiments on animals.
- To create awareness of Ethics while conducting experiments on animals by way sponsoring and conducting conferences.
- Conducting Regional Workshops cum Training Programmes for Nominees of CPCSEA.

Functions:

- Registration of establishments conducting experiments on animals.
- Registration of establishments engaged in Breeding of Laboratory animals.
- Constitution of Institutional Animals Ethics Committees (IAECs) in the establishments registered with CPCSEA.
- Approval of Animal House Facilities for Small and Large animals.
- Permission for conducting experiments on large animals.
- Conduct of Training Programmes for the Nominees of CPCSEA.
- Conduct / Support of Conference / workshop on Animal Ethics.
- Recommendation for import of animals for experimentations and breeding.

10.6.3 Achievements (from 01.01.2019 to 31.12.2019):

i.	Registration and Constitution of IAEC	: 40
ii.	Renewal and Reconstitution of IAEC	: 78
iii.	Revision of IAEC	: 149
iv.	Meetings of the CPCSEA	: 5
v.	Research Protocols of large animals approved	: 323
vi.	Nominees of CPCSEA trained	: 90

10.7 National Institute of Animal Welfare

10.7.1 National Institute of Animal Welfare (NIAW) is a subordinate office of Government of India under the Department of Animal Husbandry and Dairying (DAHD), Ministry of Fisheries, Animal Husbandry and Dairying set up in a sprawling campus on 8 Acres of land at Ballabhgarh, Faridabad, Haryana.

10.7.2 The mandate of the institute consists of providing basic courses in Animal Welfare to individual and organizations engaged in research, experimentation and industrial houses. The aim is to create an enabling environment for fulfilment of

the statutory requirements as laid down in the Prevention of Cruelty to Animals Act, 1960.

10.7.3 The overall management of NIAW has been handed over to Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS, Hisar) through a Memorandum of Agreement (MoA) signed between LUVAS, Hisar and DAHD on 03.12.2019 for running animal welfare courses.

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Annexures

Total Number of Livestock & Poultry During 20th Livestock Census-2019-State wise

S.No.	State/UT	Cattle	Buffalo	Sheep	Goat	Pigs	Horse + Ponies	Mules	Donkeys	Camel	Yaks	Mithun	Total Livestock	Total Poultry
1	A & N Islands	36438	3700	5	64761	40488	0	0	2	0	0	0	145394	1289160
2	Andhra Pradesh	4600087	6219499	17626971	5522133	91958	1884	240	4678	166	0	0	34067616	107863152
3	Arunachal Pradesh	339221	6379	7345	159740	271463	3051	0	0	0	24075	350154	1161428	1599575
4	Assam	10909239	421715	332100	4315173	2099000	12783	724	900	567	0	0	18092201	46712341
5	Bihar	15397980	7719794	213377	12821216	343434	32176	1491	11264	88	0	0	36540820	16525349
6	Chandigarh	13440	12177	0	998	138	237	0	0	0	0	0	26990	48883
7	Chhattisgarh	9983954	1174722	180229	4005657	526901	675	21	142	1	0	0	15872302	18711824
8	D&N Haveli	39736	997	84	7548	0	39	0	0	0	0	0	48404	89671
9	Daman And Diu	1840	374	68	987	0	15	0	0	0	0	0	3284	18264
10	Delhi*	86433	162142	932	30470	76346	2694	136	1087	157	0	0	360397	43831
11	Goa	60247	27207	8	9446	35480	15	1	0	2	0	0	132406	349543
12	Gujarat	9633637	10543250	1787263	4867744	658	21811	5	11286	27620	0	0	26893274	21773392
13	Haryana	1928682	4368023	288370	334640	108240	9683	2499	800	5154	0	0	7046091	46294965
14	Himachal Pradesh	1828017	646565	791345	1108413	2477	8851	20415	4797	26	1940	0	4412846	1341951
15	Jammu & Kashmir	2539240	690829	3247503	1730218	1215	63335	16722	9563	466	26221	12	8325324	7366308
16	Jharkhand	11223052	1350313	641183	9121173	1276973	1378	73	400	0	0	0	23614545	24832906
17	Karnataka	8469004	2984560	11050728	6169392	323836	7018	51	8790	33	0	0	29013412	59494481
18	Kerala	1341996	101504	1482	1359161	103863	560	0	65	26	0	0	2908657	29771905
19	Lakshadweep	2493	16	0	43188	0	0	0	0	0	0	0	45697	226025
20	Madhya Pradesh	18750828	10307131	324585	11064524	164616	13260	2543	8135	1753	0	0	40637375	16659898
21	Maharashtra	13992304	5603692	2680329	10604883	161000	18892	681	17572	465	0	0	33079818	74297765
22	Manipur	224472	36230	5921	38697	235255	1083	0	2	0	0	9059	550719	5897637
23	Meghalaya	903570	15714	15679	397503	706364	273	0	0	0	0	0	2039103	5379532
24	Mizoram	45701	2109	485	14820	292465	159	8	0	0	0	3957	359704	2047810
25	Nagaland	78296	15654	361	31602	404695	70	0	2	0	0	23123	553803	2838944
26	Odisha	9903970	458324	1279149	6393452	135162	143	18	83	8	0	0	18170309	27439257
27	Puducherry	71984	2395	2445	73630	880	29	0	4	1	0	0	151368	235999
28	Punjab	2531460	4015947	85560	347949	52961	14243	1644	471	120	0	0	7050355	17649984
29	Rajasthan	13937630	13693316	7903857	20840203	154808	33679	1339	23374	212739	0	0	56800945	14622975
30	Sikkim	148010	1144	2016	90506	27320	115	0	2	0	5219	0	274332	580864
31	Tamil Nadu	9518660	518795	4500491	9888746	66772	5417	305	1428	7	0	0	24500621	120781100

S.No.	State/UT	Cattle	Buffalo	Sheep	Goat	Pigs	Horse + Ponies	Mules	Donkeys	Camel	Yaks	Mithun	Total Livestock	Total Poultry
32	Telangana	4232539	4226306	19063058	4934673	177992	3878	91	2031	71	0	0	32640639	79999404
33	Tripura	739031	7131	5460	360204	206035	17	2	10	2	0	0	1317892	4168246
34	Uttar Pradesh	19019641	33016785	984725	14480025	408678	75718	8933	16016	2424	0	0	68012945	12515704
35	Uttarakhand	1852123	866318	284615	1371971	17659	7452	26293	589	15	54	0	4427089	5018684
36	West Bengal	19077916	630921	952886	16279340	540356	1593	26	94	45	61	0	37483238	77322602
	Total	193462871	109851678	74260615	148884786	9055488	342226	84261	123587	251956	57570	386305	536761343	851809931

**19th Livestock Census -2012 figures in case of Delhi*
Source: 20th Livestock Census, Department of Animal Husbandry and Dairying, M/o Fisheries, Animal Husbandry and Dairying

Annexure-II

Production of Major Livestock Products – All India

Year	Milk (Million Tonnes)	Eggs (Million Nos.)	Wool (Million Kgs.)	Meat (Million Tonnes)
1950-51	17.0	1,832	27.5	-
1955-56	19.0	1,908	27.5	-
1960-61	20.0	2,881	28.7	-
1968-69	21.2	5,300	29.8	-
1973-74	23.2	7,755	30.1	-
1979-80	30.4	9,523	30.9	-
1980-81	31.6	10,060	32	-
1981-82	34.3	10,876	33.1	-
1982-83	35.8	11,454	34.5	-
1983-84	38.8	12,792	36.1	-
1984-85	41.5	14,252	38	-
1985-86	44.0	16,128	39.1	-
1986-87	46.1	17,310	40.0	-
1987-88	46.7	17,795	40.1	-
1988-89	48.4	18,980	40.8	-
1989-90	51.4	20,204	41.7	-
1990-91	53.9	21,101	41.2	-
1991-92	55.7	21,983	41.6	-
1992-93	58.0	22,929	38.8	-
1993-94	60.6	24,167	39.9	-
1994-95	63.8	25,975	40.6	-
1995-96	66.2	27,187	42.4	-
1996-97	69.1	27,496	44.4	-
1997-98	72.1	28,689	45.6	-
1998-99	75.4	29,476	46.9	1.9
1999-2000	78.3	30,447	47.9	1.9
2000-01	80.6	36,632	48.4	1.9
2001-02	84.4	38,729	49.5	1.9
2002-03	86.2	39,823	50.5	2.1
2003-04	88.1	40,403	48.5	2.1
2004-05	92.5	45,201	44.6	2.2
2005-06	97.1	46,235	44.9	2.3
2006-07	102.6	50,663	45.1	2.3
2007-08	107.9	53,583	43.9	4.0
2008-09	112.2	55,562	42.8	4.2

Year	Milk (Million Tonnes)	Eggs (Million Nos.)	Wool (Million Kgs.)	Meat (Million Tonnes)
2009-10	116.4	60,267	43.1	4.5
2010-11	121.8	63,024	43	4.9
2011-12	127.8	66,449	44.7	5.5
2012-13	132.4	69,731	46.1	5.9
2013-14	137.7	73,438	47.9	6.2
2014-15	146.3	78,484	48.1	6.7
2015-16	155.5	82,929	43.6	7.0
2016-17	165.4	88,137	43.5	7.4
2017-18	176.3	95,217	41.5	7.7
2018-19	187.7	1,03,318	40.4	8.1

"-Not received/not available

Source: State/UT Animal Husbandry Departments

Annexure-III

Financial Allocation and Expenditure during 2018-19 & 2019-20 (till 31.12.2019)

(Rs. in crore)

Sl. No.	Name of the Scheme	2018-19			2019-20		
		BE	RE	Expenditure	BE	RE	Expenditure (as on 31.12.2019)
1	2	3	4	5	6	7	8
	Cattle & Dairy Development						
1	National Pro gramme for Dairy Development	280.00	270.07	269. 90	325.00	266.46	254.16
2	Dairy Entreneurship Development Scheme	323.00	323.00	323.00	325.00	250.00	250.00
3	National Dairy Plan -I	324.91	324.91	324.91	-	-	-
4	National Dairy Plan -II				0.01	0.00	0.00
5	Delhi Milk Scheme	455.00	360.27	322.57	390.40	390.27	297.84
6	Rashtriya Gokul Mission	301.50	750.50	750.40	302.00	270.00	253.64
7	Breed Improvement Institutes	47.64	47.00	43.21	52.00	44.00	29.71
8	Dairy Processing infrastructure Development Fund	37.00	15.00	10.00	58.00	34.59	34.59
9	Dairying through Cooperatives(EAP)	0.01	0.01	0.00	0.01	0.00	0.00
10	Supporting State Cooperative Dairy Federations	0.50	3.00	3.00	100.00	100.00	100.00
	Sub Total	1769.56	2093.76	2046.99	1552.4 2	1355.3 2	1219.94
	National Livestock Mission						
11	National Livestock Mission-CSS component	380.00	300.00	299.64	480.00	405.39	331.69
12	Small Livestock Institutes	45.00	50.00	44.81	50.00	50.00	34.33
13	Animal Husbandry Infrastructure Development Fund	0.00	1.00	0.00	25.00	0.00	0.00
	Sub Total	425 .00	351.00	344.45	555 .00	455.39	366.02
	Livestock Health						
14	Livestock Health & Disease Control	508.77	391.43	390.67	474.98	346.00	333.36
15	National Animal Disease Control Programme for Foot and Mouth Disease (FMD) and Brucellosis				500.00	811.07	444.33
16	Animal Health institute	20.75	30.00	22.88	30.00	21.00	9.89
	Sub Total	529.52	421.43	413.55	1004.98	1178. 07	787.58

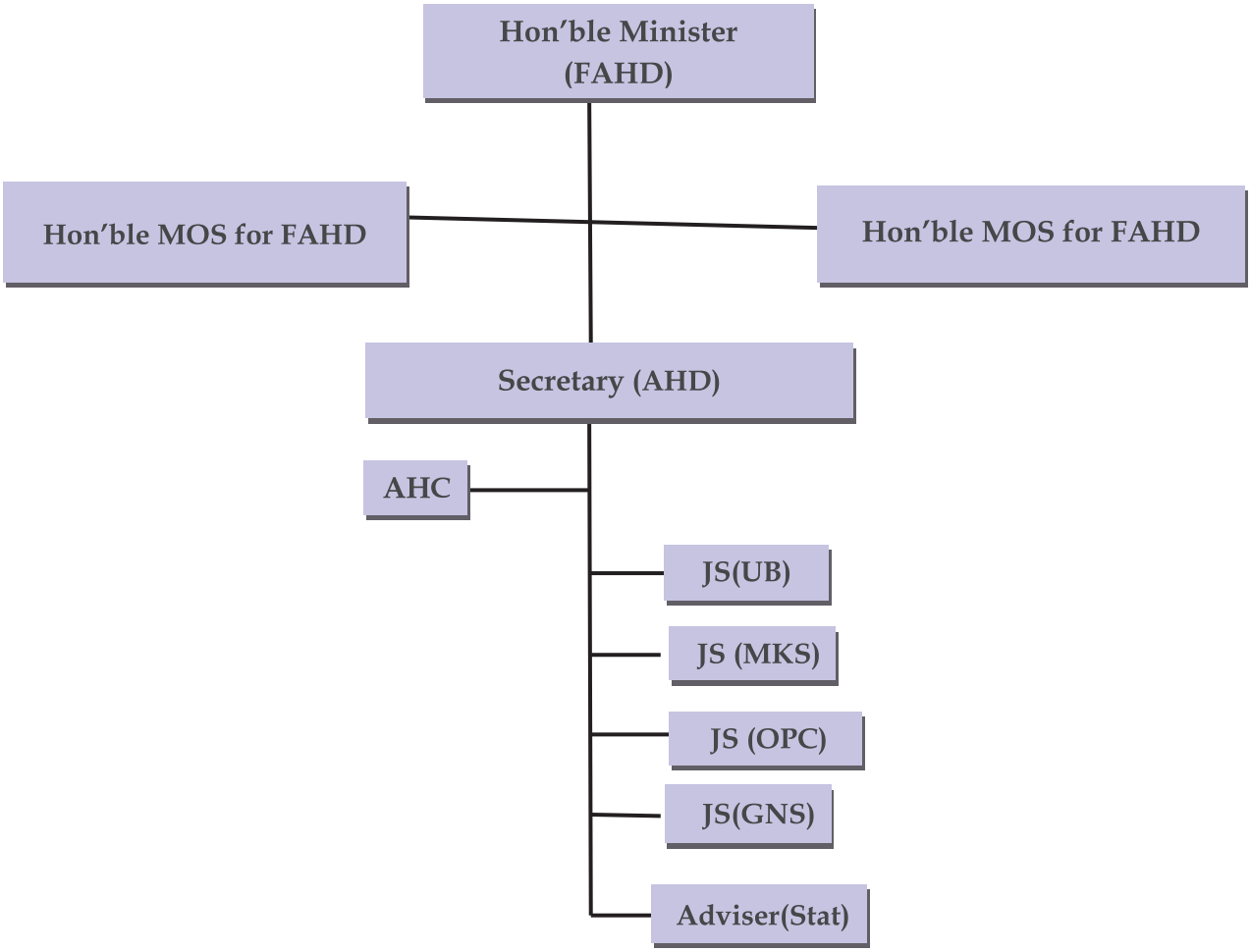
(Rs. in crore)

Sl. No.	Name of the Scheme	2018-19			2019-20		
		BE	RE	Expenditure	BE	RE	Expenditure (as on 31.12.2019)
17	Secretariat Economic Services	44.27	43.51	40.84	63.25	57.00	28.20
18	Livestock Census	64.20	52.00	50.80	150.00	126.49	120.09
19	Integrated Sample Survey						
20	Animal Welfare Board				12.00	6.00	5.24
21	National Institute of Animal Welfare				5.00	2.00	0.33
	Sub Total				230.25	191.49	153.86
	Fisheries Scheme						
22	Blue Revolution	747.45	701.58	683.70			
	Grand Total	3580.00	3663.28	3580.33	3342.65	3180.27	2527.39

Annexure-IV

ORGANISATIONAL CHART AND WORK ALLOCATION AMONG DIVISIONS IN THE DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING

Organisational Chart



WORK ALLOCATION

Animal Husbandry Commissioner

All technical matters pertaining to Animal Health and Production, Animal Genetic Resources, Animal Germplasm/Biodiversity, Animal Care & Welfare, Bio-security and quarantine issues, Preparation of Animal Husbandry and Dairy Manuals for Production, Breeding, Animal Health and Bio-security for animal farms, Veterinary Council of India, Trade and Sanitary Phyto-Sanitary issues, Preparation of Livestock and Dairy Development Work Plans and National Livestock Policy, setting up of Bureau of Indian standards for Livestock Products, Monitoring of drugs and pesticides residues in livestock products, meat and dairy products, coordination with Department of Agriculture Research and Education (DARE)/Indian Council of Agriculture Research (ICAR) and any other technical issue with Central Government/State Government Agencies.

Joint Secretary (UB)

Livestock Health, National Institute of Animal Health, National Project on Rinderpest Surveillance & Monitoring, National Focal Point for Animal Diseases Notification and Veterinary Products, OIE, Avain Influenza and Publicity Campaign, Coordination with States/UTs of West Bengal, Chhattisgarh, Odisha, Jharkhand, Tamil Nadu, Telangana, Karnataka, Kerala, Andhra Pradesh, Puducherry, A&N and Lakshadweep, work relating to Veterinary Council of India, Coordination with Ministry of Health and Family Welfare, Department of Bio-technology and Department of Science and Technology.

Joint Secretary (MKS)

National Dairy Plan, Dairy Development Schemes, NPBB, Central Cattle Development Organization, and Estt. Matter of DMS and NDDB, and all matters related to Dairy Sector, Matters related to National Animal Disease Control Programme for FMD and Brucellosis, Vigilance, Coordination with States/UTs of Gujarat, Goa, Daman & Diu, Dadra & Nagar Haveli, Maharashtra, Rajasthan and Bihar; Coordination with Ministry of Food Processing Industries, Ministry of Rural Development and Ministry of Skill Development and Entrepreneurship and FSSAI, IEC activities and publicity related activities of the Department through all mediums including social media across the country.

Joint Secretary (OPC)

Poultry Development, Central Poultry Development Organizations, Piggery, Equine & Pack animals, Feed & Fodder, Slaughterhouses, Meat and Meat Products, Central Fodder Development Organizations, Goat, Sheep Development including Admn. Work relating to Central Sheep Breeding Farms, Animal Husbandry Extension, Livestock Insurance Scheme All matters related to Rashtriya Kamdhenu Aayog and Plan Coordination of the Department, Coordination with States/UTs of Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Delhi, Chandigarh, J&K and Ladakh, Coordination with Department of Agriculture, Cooperation and Farmers' Welfare, Matters relating to Equine Development, Registration of Stud Farms of India and all matters relating to Animal Welfare Board.

Joint Secretary (GNS)

Work relating to establishment matters of officers and staff posted in Headquarters , Cash and General Admin, Trade and International Cooperation, General Coordination, Matter related to IT, Public Grievances and Administrative Reform, International Cooperation, Official language, All matter related to AQCS, Coordination with States/UTs of Assam, Arunachal Pradesh, Manipur, Meghalaya, Tripura, Mizoram, Sikkim and Nagaland, Coordination with Ministry of Tribal Affairs, DONER, Department of Commerce and APEDA, National Focal Point for Sanitary and Phyto-sanitary (SPS) matters with WTO and FAO.

Adviser (STAT)

Livestock Census, Integrated Sample Survey and all matters related to Animal Husbandry Statistics.

Annexure-V

List of Subjects allocated to the Department of Animal Husbandry and Dairying

PART-I

The following subjects which fall within List I of the Seventh Schedule to the Constitution of India:

1. Industries, the control of which by the Union is declared by Parliament by law to be expedient in public interest as far as these relate to development of livestock and birds feed and dairy and poultry products with the limitation that in regard to the development of industries. The functions of the Department of Animal Husbandry and Dairying do not go further that the formulation of the demand and fixation of targets.
2. Promotion and development of livestock, dairy and poultry and its associated activities, including infrastructure development, marketing, exports and institutional arrangements etc.
3. Welfare of persons engaged in activities relating to livestock, dairy and Poultry.
4. Liaison and cooperation with international organizations in matters relating to livestock and poultry development.
5. Livestock Census.
6. Livestock Statistics.
7. Matters relating to loss of livestock due to natural calamities.
8. Regulation of livestock importation, animal quarantine and certification.
9. Gaushalas and Gausadans.
10. Matters relating to pounds and cattle trespass.
11. Prevention of cruelly to animals.
12. The Prevention of Cruelty to Animals Act, 1960 (59 of 1960).

PART-II

The following subjects which fall within List III of the Seventh Schedule to the Constitution of India (as regards legislation only):

13. Profession of veterinary practice.
14. Prevention of the extension from one State to another of infectious or contagious diseases or pests affecting animals and birds.
15. Conversion of indigenous breeds; introduction and maintenance of Central Herd Books for indigenous breeds of livestock.

16. Pattern of financial assistance to various State undertakings, Dairy Development Schemes through State agencies/Co-operative Unions. PART III For the Union territories the subjects mentioned in parts I and II above, so far as they exist in regard to those territories and, in addition, to the following subjects which fall within List II of the Seventh Schedule to the Constitution of India

17. Preservation, protection and improvement of stocks and prevention of diseases of animals and birds, veterinary training and practice.

18. Courts of Wards.

19. Insurance of livestock and birds.

PART-III

20. Matters relating to cattle utilization and slaughter.

21. Fodder development.

Annexure-VI

List of Attached/Subordinate Offices of the Department of Animal Husbandry and Dairying

1) Central Cattle Breeding Farm, Dhamrod, District Surat, Gujarat.
2) Central Cattle Breeding Farm, Andesh Nagar, District Lakhimpur, (UP).
3) Central Cattle Breeding Farm, Similiguda, Sunabada (Koraput), Odisha.
4) Central Cattle Breeding Farm, Suratgarh (Rajasthan).
5) Central Cattle Breeding Farm, Chiplima, Basantpur, District Sambalpur, (Odisha).
6) Central Cattle Breeding Farm, Avadi, Alamadhi (Chennai).
7) Central Cattle Breeding Farm, Hessarghatta, Bengaluru North.
8) Central Frozen Semen Production and Training Institute, Hessarghatta, Bengaluru North.
9) Central Herd Registration Unit, Rohtak (Haryana).
10) Central Herd Registration Unit, Ajmer.
11) Central Herd Registration Unit, Ahmedabad.
12) Central Herd Registration Unit, Santhapat, Ongole, District Prakasam (A.P.)
13) Regional Fodder Station Kalyani, District Nadia, (West Bengal).
14) Regional Fodder Station, Jammu (J&K).
15) Regional Fodder Station, Suratgarh (Rajasthan).
16) Regional Fodder Station Hisar (Haryana).
17) Regional Fodder Station, Dhamrod (Gujarat).
18) Regional Fodder Station, Avadi, Alamadhi, Chennai (Tamil Nadu).
19) Regional Fodder Station, Hyderabad.
20) Regional Fodder Station, Hessarghatta, Bengaluru North.
21) National Institute of Animal Health, Baghpat (Uttar Pradesh).
22) Animal Quarantine & Certification Service Station, Kapashera Village, New Delhi.
23) Animal Quarantine & Certification Service Station, Pallikarni Village, Chennai.
24) Animal Quarantine & Certification Service Station, Gopalpur, District 24 Parganas (West Bengal).

25) Animal Quarantine & Certification Service Station, Mumbai.

26) Animal Quarantine & Certification Service Station, Hyderabad.

27) Animal Quarantine & Certification Service Station, Bengaluru.

28) Central Sheep Breeding Farm, Hissar (Haryana).

29) Central Poultry Development Organisation, Southern Region, Hessarghatta, Bengaluru.

30) Central Poultry Development Organisation, Eastern Region, Bhubaneswar (Odisha).

31) Central Poultry Development Organisation, Western Region, Aarey Milk Colony, Mumbai.

32) Central Poultry Development Organisation, Northern Region, Industrial Area, Chandigarh.

33) Central Poultry Performance Testing Centre, Gurgaon (Haryana).

34) Delhi Milk Scheme, West Patel Nagar, New Delhi.

Annexure-VII

Financial Progress under "National Programme for Dairy Development"
(as on 31.12.2019)

(Rs. in lakh)

S. No.	Name Of State	No. of Projects Sanctioned	Approved Cost	Central Share	Total Releases	Funds Utilized	Unspent
1	Andhra Pradesh	3	3242.60	2883.97	2212.18	1333.21	878.97
2	Arunachal Pradesh	2	1191.33	1126.40	883.50	372.31	511.19
3	Assam	1	85.00	85.00	85.00	0.00	85.00
4	Bihar	13	18101.06	13973.35	9331.71	4927.91	4403.80
5	Chhattisgarh	2	2016.04	1845.16	863.41	288.33	575.08
6	Goa	2	1689.97	1393.45	834.00	43.48	790.52
7	Gujarat	4	10910.94	7007.20	5989.66	1065.65	4917.50
8	Haryana	4	2523.99	2132.74	1429.39	651.30	778.09
9	Himachal Pradesh	4	4297.12	3948.47	1968.82	49.98	1918.84
10	Jammu & Kashmir	4	15111.51	13980.77	2622.79	970.14	1652.65
11	Jharkhand	2	2093.97	1765.97	718.90	160.87	558.03
12	Karnataka	4	5318.60	5318.60	3684.80	1551.30	2133.50
13	Kerala	8	12679.39	9549.71	8177.83	4379.23	3798.60
14	Madhya Pradesh	8	5877.84	5198.02	4407.38	2048.00	2359.38
15	Maharashtra	2	3057.51	2998.01	1499.00	184.12	1314.88
16	Manipur	2	1029.15	929.99	924.39	348.37	576.02
17	Meghalaya	3	2540.41	2263.04	1393.18	814.36	578.82
18	Mizoram	2	815.39	761.19	740.81	310.30	430.51
19	Nagaland	4	1306.44	1214.61	470.11	453.32	16.79
20	Odisha	5	4822.68	4396.94	3500.37	2278.51	1221.86
21	Puducherry	3	341.75	325.15	282.65	0.00	282.65
22	Punjab	6	9971.30	6749.60	6095.11	4783.36	1311.75
23	Rajasthan	14	14556.72	11573.96	9514.98	5957.48	3557.21
24	Sikkim	3	1511.74	1417.14	1363.42	969.32	394.10
25	Tamil Nadu	6	10746.44	7453.03	5007.30	2502.84	2504.46

(Rs. in lakh)

S. No.	Name Of State	No. of Projects Sanctioned	Approved Cost	Central Share	Total Releases	Funds Utilized	Unspent
26	Telangana	4	2916.99	2277.81	1768.84	811.75	957.09
27	Tripura	2	2212.77	1952.47	1342.74	0.00	1342.74
28	Uttar Pradesh	6	7985.03	6648.73	4459.18	813.92	3645.26
29	Uttarakhand	3	4160.33	3371.88	3199.62	1525.55	1674.07
30	West Bengal	3	403.47	393.47	291.69	183.12	101.79
	Grand total	129	153517.47	124935.82	85062.74	39778.01	45271.14

Annexure-VIII

Physical Progress under "National Programme for Dairy Development"
(as on 31.12.2019)

State No.	Name of the State/District	Dairy Plant Capacity (TLPD)		Average Daily Milk Procurement (TKGPD) (000')		Functional DCS (No.)		Farmer Member (No)	
		Target	Achiev	Target	Achiev	Target	Achiev	Target	Achiev
1	Andhra Pradesh	0	0	49.5	15	350	350	10500	10600
2	Arunachal Pradesh	15	0	8.5	0	79	0	2165	0
3	Assam								
4	Bihar	201	0	740.48	364.53	3494	2210	229200	112640
5	Chhattisgarh	0	0	12.9	10.48	180	113	4500	3430
6	Goa	90		70.46		70		9970	
7	Gujarat	100	400	348.31	733	611		27880	
8	Haryana	0		51.25		297		13060	
9	Himachal Pradesh	120	0	52.91	0	252	0	10907	0
10	Jammu & Kashmir	115	45	52.04	10	381	96	27500	9500
11	Jharkhand	0		31		260		7000	
12	Karnataka	0	0	159.06		2669	347	422200	12000
13	Kerala	1255	755	581.92	302.15	273	125	98325	21300
14	Madhya Pradesh	15	15	132.69	27.73	423	273	19746	6842
15	Maharashtra			124.69	0	90		22220	
16	Manipur	0	0	14.05	1.55	0	0	2063	263
17	Meghalaya	50		25	0	17	6	520	169
18	Mizoram	0	0	5.46	0.84	15	3	408	60
19	Nagaland	0	0	0	0	0	0	7000	2800
20	Odisha	30	90	64.54	63.15	305	330	19030	20144
21	Puducherry	0		9		3		237	
22	Punjab	60	60	236.87	58.49	484	60	27418	7581
23	Rajasthan	440	159	487.63	279.66	1226	337	42726	27670
24	Sikkim	25	15	25.91	14.01	53	53	6918	1432
25	Tamil Nadu	100	100	282	317.22	477	360	31760	100
26	Telangana	0	0	121.87	162.38	350	150	34426	8000
27	Tripura	16		27.66		55		4800	
28	Uttar Pradesh	10	0	68.8	15.09	517	288	23580	11520
29	Uttarakhand	55	50	167.85	69.78	1126	209	46320	5006
30	West Bengal	0		5.42	3.73	95	70	5170	3532
	Grand total	2697.00	1689.00	3957.75	2448.79	14152	5380	1157549	264589

Annexure-VIII (Contd.)

Physical Progress under "National Programme for Dairy Development"
(as on 31.12.2019)

S. No.	Name of the State	Average Daily Milk Marketing (TLPD)		Bulk Milk Cooler (BMC)				Automatic Milk Collection Unit (AMCU)		Data Processor & Milk Collection Unit (DPMCU)	
				Target		Achiev					
		Target	Achiev	No.	Capacity (KL)	No.	Capacity (KL)	Target	Achiev	Target	Achiev
1	Andhra Pradesh	9.6	87.00					723	515		
2	Arunachal Pradesh	8.5	0.00	13	9.50						
3	Assam										
4	Bihar	398.73	106.97	67	119.50	32	27.00	50	0	2382	1866
5	Chhattisgarh	3.5	0.06	13	26.00	11	22.00				
6	Goa	49		57	43.50			57		70	
7	Gujarat	605		605	1817.00	68	83.50	1083			
8	Haryana	34.71		50	39.00	59	48.00	120		344	513
9	Himachal Pradesh	75.83	0.00	27	25.50	0	0.00	80	40	0	
10	Jammu & Kashmir	80	16.00	55	62.00	4	2.00	292	119		
11	Jharkhand	11		48	108.00	3	6.00	44	2	130	20
12	Karnataka	98.33	0.00					1748	912		
13	Kerala	443.26	107.16	36	156.00	29	111.00	555	200	214	214
14	Madhya Pradesh	60.56	9.15	136	128.00	118	90.50	777	114		
15	Maharashtra	53.43		14	14.00			200		7	
16	Manipur	10.5	1.90	35	7.00	27	5.40	48	0	0	
17	Meghalaya	24.63		32	16.00	6	3.00	21	7	11	
18	Mizoram	5.42	0.84	23	11.50	4	2.00	23	4	0	
19	Nagaland	0	0.00	11	10.00	8	8.50				
20	Odisha	71.77	65.84	22	62.00			430		264	
21	Puducherry	19		15	14.50			15		80	80
22	Punjab	129.33	12.21	216	248.00	58	85.00	689	833	450	250
23	Rajasthan	471.81	153.05	404	394.00	260	264.00	1624	1281		
24	Sikkim	26.45	10.50	41	13.40	23	8.00	146	124		
25	Tamil Nadu	143	0.00	259	439.00	4	20.00	1228		366	
26	Telangana	24.98	19.61	87	81.50			278		158	
27	Tripura	27.66		5	10.00			150			
28	Uttar Pradesh	38.39	2.08	200	40.00			350		210	196
29	Uttarakhand	141.28	77.05	2	2.00	1	1.00	0	0	1324	761
30	West Bengal	1.7	2.37	4	2.00	4	2.00	100	100		
	Grand total	3067.38	671.80	2477	3898.90	719	788.90	10831	4251	6010	3900

State-wise Progress under "Dairy Entrepreneurship Development Scheme"
(as on 31.12.2019)

(Rs. in lakh)

S.No	State	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		Grand Total (since 2010)	
		Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount
1	Andaman and Nicobar	0	0.00	1	1.25	0	0.00	11	6.04	9	2.93	8	4.54	16	2.48	23	3.50	8	2.00	0	0.00	76	22.73
2	Andhra Pradesh	105	120.89	6788	1494.26	6002	1519.38	40679	11205.80	9108	2844.14	2607	989.83	4121	1582.12	11534	4575.96	2660	1810.51	2180	1425.51	85784	27568.40
3	Bihar	0	0.00	60	56.49	1658	530.14	5842	2227.81	2790	1186.98	0	0.00	1326	643.94	1248	487.63	666	311.30	247	157.55	13837	5601.82
4	Chhattisgarh	0	0.00	61	28.83	127	73.58	432	385.99	264	188.78	463	342.76	178	186.22	114	44.87	59	38.81	13	24.23	1711	1314.07
5	Delhi	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
6	Goa	0	0.00	0	0.00	0	0.00	1	4.29	6	15.26	0	0.00	0	0.00	0	0.00	1	0.88	2	0.88	10	21.31
7	Gujarat	195	78.12	740	429.75	4274	1298.01	11324	4886.90	3970	2310.13	743	504.61	2664	1973.73	5924	3081.32	1200	1890.75	544	1992.07	31578	18445.39
8	Haryana	0	0.00	150	87.45	883	384.15	2706	1402.47	647	435.13	187	145.95	294	150.55	308	244.75	579	405.88	109	108.81	5863	5248.40
9	Himachal Pradesh	396	205.62	2079	1093.13	1128	627.24	1855	1007.25	270	187.64	374	286.19	234	198.02	637	649.62	284	266.41	128	144.99	7385	4629.93
10	Jammu & Kashmir	514	196.81	2097	824.39	1832	746.21	1423	660.54	572	281.03	320	144.86	365	211.21	723	448.77	1042	622.05	323	180.37	9211	4280.85
11	Jharkhand	0	0.00	16	11.75	61	35.19	31	27.67	22	20.55	0	0.00	15	14.29	140	101.18	327	336.85	86	116.51	698	727.85
12	Karnataka	2	2.45	1387	362.29	1689	458.58	7160	2968.43	2459	1086.14	439	224.58	964	423.79	2069	1095.05	2759	1219.51	800	353.01	19728	7957.33
13	Kerala	0	0.00	494	200.89	1543	509.63	4965	1578.36	2583	954.56	88	46.05	839	442.08	2168	1167.58	723	380.98	734	359.62	14137	5633.14
14	Madhya Pradesh	52	34.52	605	435.08	384	295.58	1367	1295.73	624	430.06	21	37.54	505	494.17	1484	819.71	2214	1032.06	383	290.53	7639	5234.06
15	Maharashtra	51	23.78	3193	1631.31	4642	1831.61	2753	1387.61	29	647.45	4532	2342.17	431	385.07	6056	3125.96	3826	1804.84	1763	1163.01	27276	13470.32
16	Odisha	0	0.00	148	31.10	927	243.01	3273	938.47	524	192.15	175	51.33	192	92.89	970	383.58	848	364.46	481	211.79	7538	3459.99
17	Punjab	0	0.00	355	332.80	704	585.82	1535	1236.84	1379	811.22	674	482.46	756	559.58	1678	1111.16	1876	1149.23	1172	645.45	10129	6480.90
18	Rajasthan	61	50.21	1725	1244.88	2708	1587.74	3907	2197.36	1165	690.08	43	47.41	92	74.72	4378	2188.75	4322	2725.94	1707	1036.79	20108	11452.53
19	Tamil Nadu	267	46.07	2602	443.37	2437	477.11	25868	4187.76	11915	2076.65	2385	435.77	4098	904.42	7877	1727.77	3563	1042.93	2777	724.18	63789	12378.63
20	Telangana*											914	305.51	265	125.55	4962	2438.35	1311	1005.70	1168	871.03	8620	4599.29
21	Uttar Pradesh	27	12.93	1085	646.72	1077	684.29	1267	782.00	567	314.11	975	555.51	996	588.15	3639	1858.83	6983	4309.80	1953	1162.95	18569	10623.36
22	Uttarakhand	139	71.67	1918	861.84	933	465.34	3226	1587.25	1432	655.98	1349	617.46	1161	560.17	2280	1145.85	1268	709.19	620	380.07	14326	7837.71
23	West Bengal	0	0.00	261	112.93	297	98.92	858	330.73	277	131.93	1	0.67	229	139.14	293	176.32	786	544.12	424	349.27	3426	1914.83
	Total (A)	1809	843.06	25765	10330.49	33306	12451.53	120483	40305.31	40,612	15462.90	16298	7565.18	19741	9752.25	58505	26876.50	37305	21974.20	17614	11698.58	371438	158902.81

(Rs. in lakh)

S.No	N E States	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		Grand Total (since 2010)	
		Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount
1	Arunachal Pradesh	0	0.00	6	6.83	3	5.00	11	17.48	9	15.69	59	113.90	58	101.20	142	280.20	2	4	37	63.6	327	607.90
2	Assam	153	104.70	1385	1021.15	1317	1060.70	1616	1257.91	911	782.09	1350	1051.12	1522	1199.32	1348	1153.91	703	521.46	504	448.911	10809	8601.26
3	Manipur	0	0.00	16	20.00	0	0.00	0	0.00	19	19.00	29	20.23	43	36.27	115	46.13	206	97.79	96	61.296	524	300.72
4	Meghalaya	1	0.83	8	7.58	9	4.16	8	5.42	18	9.73	4	1.50	8	3.60	18	10.60	3	3.63	0	0	77	47.05
5	Mizoram	1	1.00	9	12.19	28	37.84	99	61.74	225	202.99	22	17.10	32	33.60	182	106.24	163	116.95	18	24.109	779	613.76
6	Nagaland	0	0.00	0	0.00	12	3.72	24	8.97	14	5.40	63	29.26	499	217.40	334	149.80	158	116.92	88	94.431	1192	625.89
7	Sikkim	14	19.58	2	3.82	4	5.00	29	11.42	64	64.69	66	50.06	472	267.54	416	266.59	26	25.39	10	16.244	1103	730.33
8	Tripura	0	0.00	128	34.76	65	15.95	60	32.31	103	39.16	286	127.83	151	76.23	433	290.91	181	109.89	91	55.869	1498	782.90
	Total (B)	169	126.12	1554	1106.33	1438	1132.36	1847	1395.238	1363	1138.75	1879	1411.01	2785	1935.16	2988	2304.358	1442	996.03	844	764.46	16309	12309.81
	Union Territory																						
	Daman and Diu															1	1.50	0	0.00			1	1.50
	Puducherry															0	0.00	99	16.46	25	6.20	124	22.66
	Total (C)															1	1.50	99	16.46	25	6.20	125	24.16
	G.Total (Total A+B+C)	1978	969.18	27319	11436.82	34744	13583.89	122330	41700.55	41975	16601.65	18177	8976.20	22526	11687.41	61494	29182.36	38846	22986.69	18483	12469.24	387872	171236.77

** Bifurcated data is not available unit sanction in Telangana is indicated in Andhra Pradesh*

Source: National Bank for Agriculture and Rural Development (NABARD)

Annexure-X

Financial and Physical Progress under "National Dairy Plan Phase-I"

Financial Progress

(Fund Released till 10 February 2020; Fund Utilisation till December, 2019)

Particular	Achievement
No. of Approved Sub Projects (including PMU)	577
Grant Assistance (Rs. Crore)	1759.97
Fund Released (Rs. Crore)	1664.06
Fund Utilisation (Rs. Crore)	1628.02
Utilisation as against EOP Target (%)	93%

Physical Progress

Activity	Particulars	All India		
		Target till Mar 2019	Actual till Nov 2019	% age Achievement till Nov 2019
Progeny Testing Programme	HGM Male Calves Made Available for Distribution (No.)	2183	2185	100%
	HGM Male Calves Distributed (No.)	0	1933	--
Pedigree Selection Programme	HGM Male Calves made available for distribution (No.)	323	271	84%
	HGM Male Calves Distributed (No.)	0	239	--
Bull Production Through Imported Embryos	Embryos transferred (No.)	833	825	99%
	Male Calves born (No.)	133	119	89%
	Bull calves made available for distribution (No.)	106	69	65%
Strengthening of Semen Stations	Semen Production (million doses per annum) (2018-19)	121.74	88.08	72%
	Exotic	37.76	28.35	75%
	Cross Bred	33.25	22.94	69%

Physical Progress

Activity	Particulars	All India		
		Target till Mar 2019	Actual till Nov 2019	% age Achievement till Nov 2019
	Indigenous	13.12	12.74	97%
	Buffalo	37.61	24.05	64%
Pilot AI Delivery Services	MAIT RIs Deployed (No.)	1330	1330	100%
	Villages Covered (No.)	9068	12322	136%
	AIs Carried Out (Lakh) Annual (2018-19)	9.238	7.83	85%
	AI Conception Rate (%)	40%	43%	109%
Ration Balancing Programme	Village Coverage (No.)	34429	33320	97%
	Milch Animals Coverage (No.)	2609120	2866563	110%
	LRPs Inducted (No.)	28202	31007	110%
Fodder Development Programme	Fodder Seed Sale Support to Farmers (MT)	20630.6	30548.53	148%
	Silage Making Demonstrations (No.)	2144	2144	100%
	Procurement of Mowers for Demonstrations (No.)	676	669	99%
	Biomass Bunker Silo Constructed (No.)	128	128	100%
Village Based Milk Procurement System	Village Coverage (No.)	56247	52471	93%
	New/ Revival Village Coverage (No.)	21502	21641	101%
	Additional Milk Producers Enrolled (No.)	1316526	1685517	128%
	Of which, Women (No.)	508210	763698	150%
	Of which, Smallholders (No.)	860917	1134892	132%
	Additional Milk Procurement (TKgPD)	6410.03	5364.74	84%
	Bulk Milk Coolers (No.)	4327	4209	100%
	AMCU/ DPMCU (No.)	33410	29577	100%

Cumulative Semen Dose Production: 402.21mn till Nov 2019 as against target of 583.04 mn doses till Mar 2019.
Cumulative AI Done: 33.57 Lakh till Nov 2019 as against target till Mar 2019 of 37.76 Lakh.

Annexure-X (Contd.)

Progress under "National Dairy Plan Phase-I"
Milk Producer Company (MPC) EIA wise financial status
NDP-I till June 2019 (as per data available in this Department)

(Rs. in crore)

Sr. No.	State	EIA Name	Activity Brief	PSC Approval Date	Total Grant Assistance	Fund released till 30 June 2019	Fund Utilised till 30 June 2019
1	Andhra Pradesh	ShreejaMahila Milk Producer Company	RBP-PC	01-Apr-15	7.26	7.17	7.04
			Pilot AI Delivery Sevices-PC	01-Apr-15	2.74	2.74	2.74
			VBMPS-PC1	01-Apr-15	20.9	20.82	20.35
			VBMPS-PC2	26-Feb-18	7.18	7.18	3.8
			VBMPS-PC3	07-Sep-18	3.23	3.23	1.19
	Sub Total				41.31	41.14	35.12
2	Bihar	Bapudham Milk Producer Company	VBMPS-PC	21-Jul-17	20.9	19.64	16.21
	Sub Total				20.9	19.64	16.21
3	Gujarat	Maahi Milk Producer Company	VBMPS-PC	06-Dec-13	32.35	31.92	31.5
			RBP-PC1	06-Dec-13	17.58	17.1	16.92
			FD-PC	06-Dec-13	1.93	1.93	1.93
			Pilot AI Delivery Services-PC	06-Dec-13	16.28	15.11	14.92
			RBP-PC 2	20-Jul-15	0.78	0.78	0.78
	Sub Total				68.92	66.84	66.05

(Rs. in crore)

Sr. No.	State	EIA Name	Activity Brief	PSC Approval Date	Total Grant Assistance	Fund released till 30 June 2019	Fund Utilised till 30 June 2019
4	Punjab	Baani Milk Producer Company	RBP-PC	01-Apr-15	9.93	9.68	9.68
			VBMPS-PC1	01-Apr-15	12.86	12.59	12.6
			VBMPS-PC2	26-Feb-18	1.38	1.24	1.22
	Sub Total				24.17	23.51	23.5
5	Rajasthan	Paayas Milk Producer Company	VBMPS-PC1	23-Oct-13	43.64	43.62	43.5
			RBP-PC	23-Oct-13	16.61	16.45	16.45
			FD-PC	23-Oct-13	1.47	1.47	1.47
			Pilot AI Delivery Services-PC	23-Oct-13	26.39	25.79	25.84
	Sub Total				88.11	87.33	87.26
6	Telangana	Karimnagar Milk Producer Company	VBMPS-PC	03-Aug-18	3.64	3.8	2.09
	Sub Total				3.64	3.8	2.09
7	UP	Saahaj Milk Producer Company	RBP-PC	01-Apr-15	24.08	24.08	23.90
			VBMPS-PC1	01-Apr-15	31.61	31.53	31.48
			Pilot AI Delivery Services-PC	01-Apr-15	31.87	31.87	31.76
			VBMPS-PC2	26-Feb-18	3.04	3.00	3.00
	Sub Total				90.6	90.48	90.14
	Total				337.65	332.74	320.37

Annexure-XI

State-wise number of Veterinary Institutions (as on 31.03.2019)

S.No.	States/UTs	Veterinary Hospitals/Poly clinics	Veterinary Dispensaries	Veterinary Aid Centre (Stockmen Centers/ Mobile Dispensaries)	Total
1	Andhra Pradesh	337	1576	1275	3188
2	Arunachal Pradesh	15	180	305	500
3	Assam	21	435	767	1223
4	Bihar	39	1098	1595	2732
5	Chhattisgarh	340	809	403	1552
6	Goa	5	25	49	79
7	Gujarat	34	702	1057	1793
8	Haryana	1029	1817	22	2868
9	Himachal Pradesh	444	1767	1251	3462
10	Jammu & Kashmir	20	503	1301	1824
11	Jharkhand	35	424	433	892
12	Karnataka	695	2135	1382	4212
13	Kerala	278	868	20	1166
14	Madhya Pradesh	1063	1583	65	2711
15	Maharashtra	201	1740	2906	4847
16	Manipur	56	109	34	199
17	Meghalaya	4	114	122	240
18	Mizoram*	5	35	103	143
19	Nagaland	11	55	100	166
20	Odisha	541	3239	314	4094
21	Punjab	1389	1489	20	2898
22	Rajasthan	2530	198	5169	7897
23	Sikkim	18	61	54	133
24	Tamil Nadu	177	2701	831	3709
25	Telangana	108	909	1201	2218
26	Tripura	16	60	458	534
27	Uttarakhand	329	10	778	1117
28	Uttar Pradesh	2208	267	3396	5871
29	West Bengal	112	612	2657	3381
30	A & N Islands	10	13	13	36
31	Chandigarh	5	9	-	14
32	Dadra & Nagar Haveli	1	-	9	10
33	Daman & Diu*	-	2	3	0
34	Delhi	-	-	-	0
35	Lakshadweep	0	9	1	10
36	Puducherry	0	17	74	91
	TOTAL	12076	25571	28168	65815

*'-' Not available/not received * Previous year data used.*
Source: State/UTs Animal Husbandry Department

Annexure-XII

Species wise incidence of livestock diseases in India during 2019
(January to June, 2019)

Sl. No	Disease	Species	January 2019 to June, 2019		
			Outbreak	Attack	Death
1	FMD	BOVINE	42	1879	39
		BUFFALO	-	-	-
		OVINE/CAPRINE	-	-	-
		SWINE	-	-	-
		TOTAL	42	1879	39
2	Haemorrhagic Septicaemia	BOVINE	7	564	53
		BUFFALO	-	-	-
		OVINE/CAPRINE	-	-	-
		TOTAL	7	564	53
3	Black Quarter	BOVINE	-	-	-
			-	-	-
4	Anthrax	BOVINE	5	25	25
		OVINE/CAPRINE	11	159	157
		SWINE	-	-	-
		TOTAL	16	184	182
5	Enteroxaemia	OVINE/CAPRINE	-	-	-
6	Sheep and Goat Pox	OVINE/CAPRINE	5	46	8
7	Blue Tongue	OVINE/CAPRINE	-	-	-

Sl. No	Disease	Species	January 2019 to June, 2019		
			Outbreak	Attack	Death
8	CCPP	OVINE/CAPRINE	-	-	-
9	Swine Fever	SWINE	4	55	15
10	Salmonellosis	AVIAN	-	-	-
11	Coccidiosis	BOVINE	-	-	-
		OVINE/CAPRINE	-	-	-
		AVIAN	-	-	-
		TOTAL			
12	Ranikhet Disease	AVIAN	6	17514	345
13	Fowl Pox	AVIAN	-	-	-
14	Fowl Cholera	AVIAN	-	-	-
15	Marek's Disease	AVIAN	-	-	-
16	I.B.D	AVIAN	3	1494	877
17	Coryza	AVIAN	-	-	-
18	CRD	AVIAN	-	-	-
19	Canine Distemper	CANINE	-	-	-

Sl. No	Disease	Species	January 2019 to June, 2019		
			Outbreak	Attack	Death
20	Rabies	BOVINE	2	56	56
		BUFFALO	4	37	37
		OVINE/CAPRINE	9	56	56
		CANINE	10	47	47
		TOTAL	25	196	196
21	Babesiosis	BOVINE	19	1077	1
		BUFFALO	20	136	-
		TOTAL	39	1213	1
22	Trypanosomosis	BOVINE	21	552	1
		BUFFALO	-	754	8
		CAMEL	-	-	-
		TOTAL	21	1306	9
23	PPR	OVINE/CAPRINE	26	-	-
24	Anaplasmosis	BOVINE	7	182	-
		BUFFALO	8	44	-
		TOTAL	15	226	
25	Brucellosis	BOVINE	6	25	2
		OVINE/CAPRINE	-	-	-
		TOTAL	6	25	2
26	Glanders	EQUINE	4	9	7
27	Theileriosis	BOVINE	33	665	12
		BUFFALO	-	-	-
		TOTAL	33	665	12

ABBREVIATIONS USED

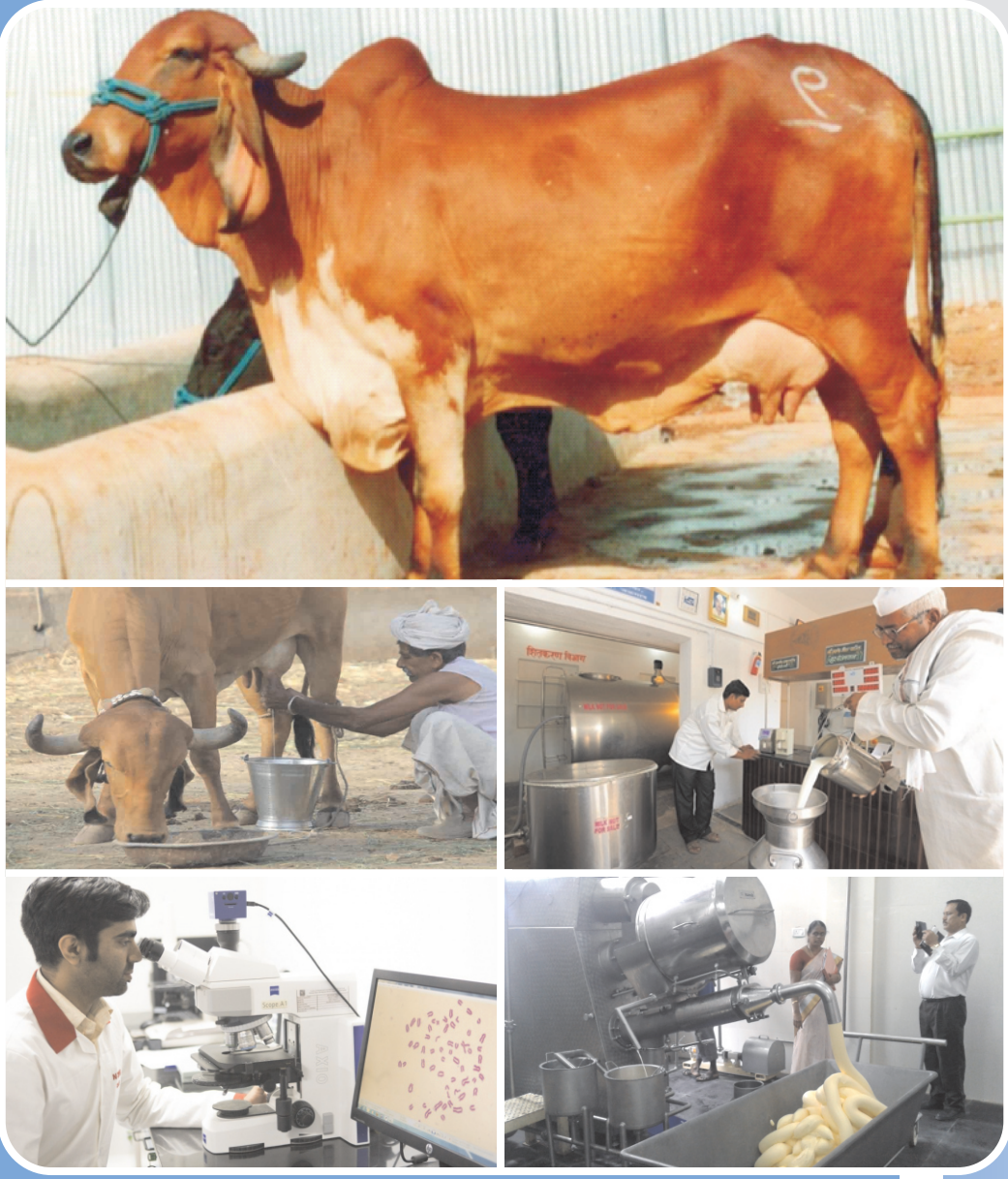
AI	Artificial Insemination
AIC	Artificial Insemination Centre
AMF	Anhydrous Milk Fat
APEDA	Agricultural and Processed Food Products Export Development Authority
APHCA	Animal Production and Health Commission for Asia and Pacific
ASCAD	Assistance to States for control of Animal Diseases
BE	Budget Estimate
BGC	Bovine Genital Campylobacteriosis
CADRAD	The Centre for Animal Disease Research and Diagnosis
CALF	Centre for Analysis and Learning in Livestock and Food
CBPP	Contagious Bovine Pleuro-pneumonia
CCBF	Central Cattle Breeding Farms
CDDL	Central Disease Diagnostic Laboratory
CFF	Campylobacter Fetus Fetus
CFSPTI	Central Frozen Semen Production and Training Institute
CFV	Campylobacter Fetus Venerealis
CHRS	Central Herd Registration Scheme
CMU	Central Monitoring Unit
CPDO	Central Poultry Development Organization
CPIO	Central Public Information Officer
CSBF	Central Sheep Breeding Farm

CSF	Classical Swine Fever
CSO	Central Statistical Office
CSS	Centrally Sponsored Scheme
CVE	Continuing Veterinary Education
DCGI	Drugs Controller General of India
DEDS	Dairy Entrepreneurship Development Scheme
DGFT	Directorate General of Foreign Trade
DMI	Directorate of Marketing and Inspection
DMS	Delhi Milk Scheme
EEZ	Exclusive Economic Zone
ESVHD	Establishment and Strengthening of existing Veterinary Hospitals and Dispensaries
ETT	Embryo Transfer Technology
FAO	Food and Agriculture Organization
FMD	Foot and Mouth Disease
FMD-CP	Foot & Mouth Disease Control Programme
GDP	Gross Domestic Product
GIS	Geographical Information System
GPS	Global Positioning System
HACCP	Hazard Analysis and Critical Control Point
IASRI	Indian Agricultural Statistics Research Institute
IBM	In Board Motor

IBR	Infectious Bovine Rhinotracheitis
IDDP	Intensive Dairy Development Programme
IGFRI	Indian Grassland and Fodder Research Institute
INAPH	Information Network for Animal Productivity and Health
ISO	International Organization for Standardization
ISS	Integrated Sample Survey
IUU	Illegal, Unregulated and Unreported
JD	Johne's Disease
MCS	Monitoring, Control and Surveillance
MIS	Management Information System
MLP	Major Livestock Products
MMSRT	Mobile Satellite Service Reporting Terminals
MSP	Minimum Standard Protocol
NABARD	National Bank for Agriculture and Rural Development
NCVT	National Council for Vocational Training
NDDB	National Dairy Development Board
NDP	National Diary Plan
NDRI	National Dairy Research Institute
NGC	New Generation Cooperatives
NIAH	National Institute of Animal Health
NIC	National Informatics Centre
NLDB	National Livestock Development Board

NLM	National Livestock Mission
NPBB	National Programme for Bovine Breeding
NPBB&DD	National Programme for Bovine Breeding and Dairy Development
NPCBB	National Project for Cattle and Buffalo Breeding
NPRSM	National Project on Rinderpest Surveillance and Monitoring
NSS	National Sample Survey
NSS	National Sample Survey Office
OBM	Out Board Motor
OIE	Office International Des Epizooties
ONBS	Open Nucleus Breeding System
PED	Professional Efficiency Development
PPR	Peste des Petits Ruminants
PRI	Panchayati Raj Institution
PTP	Progeny Testing Programmes
PVCF	Poultry Venture Capital Fund
QR	Quantitative Restriction
RDDL	Regional Disease Diagnostic Laboratory
RE	Revised Estimate
RFD	Result Framework Document
RGM	Rashtriya Gokul Mission
RTI	Right to Information
SHG	Self Help Group

SIA	State Implementing Agency
SIP	Sanitary Import Permit
SIQ&CMP	Strengthening Infrastructure for Quality and Clean Milk Production
SLBTC	State Livestock Breeding and Training Centre
SLCAnGR	State Level Committee on Animal Genetic Resources
SLSMC	State Level Sanctioning and Monitoring Committee
SMP	Skimmed Milk Powder
SOP	Standard Operating Procedure
SSCC	State Semen Collection Centre
SSU	Second Stage unit
TCD	Technical Committee of Direction for Improvement of Animal Husbandry Statistics
TCMPF	Tamil Nadu Co-operative Milk Producers Federations
TRQ	Tariff Rate Quota
TSU	Third stage unit
UBKV	Uttar Banga Krishi Viswa Vidyalaya
VCI	Veterinary Council of India
VKGUY	Vishesh Krishi and Gram Udyog Yojna
VMS	Vessel Monitoring System



सत्यमेव जयते

Department of Animal Husbandry and Dairying
Ministry of Fisheries, Animal Husbandry and Dairying
Government of India