



**ANIMAL HUSBANDRY, DAIRYING
AND FISHERIES DEPARTMENT**

ANIMAL HUSBANDRY

**POLICY NOTE
2017-18**

DEMAND NO.6

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MINISTER FOR ANIMAL HUSBANDRY**

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**Government of Tamil Nadu
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ANIMAL HUSBANDRY DEPARTMENT
POLICY NOTE 2017-18
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ANIMAL HUSBANDRY DEPARTMENT

POLICY NOTE 2017-18

"The Greatness of a nation and its moral progress can be measured by the way in which its animals are treated"

- ***Mahatma Gandhi***

1. INTRODUCTION

Animal Husbandry is the root base of rural economy. It plays an important role in upliftment of the economic status of the rural and urban people. Animal Husbandry sector is providing employment opportunities to unemployed and underemployed rural poor. Apart from creating employment and generating income, it also provides products like milk, meat, egg, wool, bone, skin, hide, offal, manure

(dung) and draught power. The developments in this sector contributed to women empowerment in a big way.

The contribution of livestock sector to the Gross State Domestic Product (GSDP) is 4.34% and that to the Agriculture and allied activities is 36.26%. During 2006-07 the gross value of output of livestock which was Rs.11,535.23 crore in the State has increased to Rs.47,659.71 crore during 2015-16. The estimated milk production, which was 54.74 lakh Metric Tonnes (LMT) during 2005-06 in Tamil Nadu has increased to 75.56 LMT during 2016-17. Likewise, the estimated egg production which was 62,225 lakh numbers during 2005-06 has increased to 1,66,824 lakh numbers during 2016-17.

The per capita availability of milk per day has increased from 231 gm during 2005-06 to

266 gm during 2016-17 and the per capita availability of eggs per annum has increased from 100 numbers during 2005-06 to 214 numbers during 2016-17. Apart from these, the estimated meat production (including poultry meat) which was 1,18,600 MT during 2005-06 has increased to 5,72,939 MT during 2016-17.

2. AIMS OF THE DEPARTMENT

- ❖ Upgradation of local stock of cattle and buffaloes by Artificial Insemination using exotic and cross bred semen for cattle and Murrah semen for buffaloes.
- ❖ Conservation and propagation of indigenous breeds of livestock in their native tracts.
- ❖ Augmenting the production potentialities of livestock and poultry and thus increasing the production of milk, egg and meat.

- ❖ Providing necessary and timely modern veterinary assistance and health cover to the livestock and poultry.
- ❖ Ensuring livestock health by preventing major livestock diseases through vaccination.
- ❖ Implementing various Central and State Government schemes for the upliftment of economic status of rural poor.
- ❖ Protecting human health by detection and control of major zoonotic diseases of animals.
- ❖ Creating awareness among public on modern animal husbandry practices.
- ❖ Conducting training on basic and latest animal husbandry practices to farmers.

3. CHRONOLOGICAL DEVELOPMENT OF THE DEPARTMENT

- 1799** Modern Veterinary aid in India started by East India Company of the British with the deputation of five Veterinary Surgeons from London to improve breeding of horses and camels.
- 1892** Civil Veterinary Department was inaugurated as a separate department manned by Military personnel.
- 1903** Establishment of Madras Veterinary College, Vepery, Chennai.
- 1924** Hosur Cattle Farm was taken over from army and cattle breeding station established.
- 1948** The head of the department was designated as Director of Animal Husbandry. Artificial Insemination using Liquid Semen was introduced in the State.

- 1959** Establishment of Mobile Veterinary Units.
- 1969** Directorate of Veterinary Education and Research was formed separately.
- 1975** Introduction of Artificial Insemination with Frozen Semen.
- 1977** Animal Disease Intelligence Units were established.
- 1985** Establishment of Veterinary College and Research Institute at Namakkal.
- 1989** Establishment of Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).
- 2003** Formation of Tamil Nadu Livestock Development Agency (TNLDA).
- 2005** Improvement of Infrastructure of Veterinary Institutions through National Bank for Agricultural and Rural Development (NABARD) under Rural Infrastructure Development Fund (RIDF) was started.

2006 Livestock Insurance Scheme was introduced.

2011 ❖ Inauguration of Hon'ble Chief Minister's Special Schemes viz., Free distribution of Milch Cows and Free distribution of Goats/ Sheep.

❖ State Fodder Development Scheme (SFDS) launched to promote Fodder Production.

❖ 585 Sub-Centres were upgraded as Rural Veterinary Dispensaries.

❖ The number of Animal Husbandry Divisions was increased from 65 to 76 to match the number of Revenue Divisions.

2012 ❖ Scheme for Poultry Development launched.

❖ Creation of 5 new Joint Director Offices of Animal Husbandry (Kanniyakumari, Perambalur,

Udhagamandalam, Krishnagiri and Pudukottai).

- ❖ 2 new Veterinary College and Research Institutes were established under TANUVAS at Orathanad of Thanjavur district and at Tirunelveli.

2013

- ❖ Directorate of Animal Husbandry and Veterinary Services was awarded with the "Best Practices Award" for improvement of quality delivery system ensuring good governance by the Hon'ble Chief Minister of Tamil Nadu
- ❖ Establishment of 11 new Cattle Breeding and Fodder Development Units (CBFDs) covering all districts except Chennai.

2014

- ❖ Creation of 3 new Assistant Director Offices of Animal

Husbandry at Srirangam, Iluppur and Ambattur.

- 2015**
- ❖ Preliminary works for establishment of Quality Control Laboratory at Institute of Veterinary Preventive Medicine, Ranipet under NABARD Rural Infrastructure Development Fund.
 - ❖ Sanction for construction of 5 storied integrated office complex for the administrative offices of the Directorate of Animal Husbandry and Fisheries Departments at Saidapet, Chennai accorded.
- 2016**
- ❖ Construction of 115 new Veterinary Institutions with NABARD funds.
 - ❖ A MOU was signed between Animal Husbandry Department, NDDB and TANUVAS for construction of GMP compliant Anthrax Spore vaccine

lab, Quality control lab at IVP
Ranipet and construction of new
Poultry Disease Diagnostic lab and
Feed testing lab at Palladam

- 2017**
- ❖ Upgradation of 100 sub-centres into Veterinary Dispensaries.
 - ❖ Establishment of two new Animal Disease Intelligence units at Thiruvallur and Thiruppur.

4. LIVESTOCK WEALTH IN TAMIL NADU

Tamil Nadu has vast resources of livestock and poultry, which play a vital role in improving the socio economic conditions of the rural people.

In Tamil Nadu, native breeds of cattle like Kangayam, Umblachery, Alambadi, Bargur and Pulikulam and Toda buffaloes are reared. Among them, Kangayam cattle are reared in Western districts viz., Dindigul, Namakkal,

Erode, Coimbatore and Karur; Umblachery cattle in Eastern districts viz., Thanjavur, Thiruvarur, and Nagapattinam; Alambadi cattle in Western districts viz., Dharmapuri, Erode and Salem, Pulikulam cattle in Southern districts viz., Sivagangai, Madurai, and Virudhunagar; Bargur cattle in Erode district and Toda buffalo in The Nilgiris district. Likewise native breeds of sheep Mecheri (Salem and Coimbatore districts), Ramnad White (Ramanathapuram district), Madras Red (Chennai, and Kancheepuram districts), Kilakaraisal (Ramanathapuram, Thanjavur, and Madurai districts), Vembur (Thoothukudi district), Tiruchi Black (Tiruchirapalli, Salem, and Dharmapuri districts), Coimbatore (Coimbatore and Madurai districts), Katchaikatty Black (Madurai district), Chevaadu (Tirunelveli district) and Nilgiri (The Nilgiris district) and native goat breeds like Kanni Adu (Thoothukudi and Tirunelveli districts) and

Kodi Adu (Thoothukudi and Ramanathapuram districts) are reared in Tamil Nadu.

Apart from these breeds, high milk yielding crossbreds like Jersey in plains and Holstein Friesian in hills are reared by farmers.

Table 1: Comparison of State Livestock and Poultry Population with National Livestock Population*

Species	Population in India (in lakh Nos.)	Population in Tamil Nadu (in lakh Nos.)	% of population available in Tamil Nadu
Cattle	1,909.04	88.14	4.62
Buffalo	1,087.02	7.81	0.72
Sheep	650.69	47.87	7.36
Goat	1,351.73	81.43	6.02
Pigs	102.94	1.84	1.79
Others (Horses, Ponies and Donkeys)	9.44	0.14	3.74
Total Livestock	5,110.86	227.23	4.44
Total Poultry	7,292.09	1,173.49	16.09

**as per 19th Livestock Census-2012*

Tamil Nadu ranks 1st in respect of Poultry, 4th in Sheep, 7th in Goats, 13th in Cattle and 14th in Buffalo population in the country.

5. ADMINISTRATION

The Animal Husbandry Department is headed by the Director of Animal Husbandry and Veterinary Services, from the cadre of Indian Administrative Service. The Director is assisted by four Additional Directors, two Joint Directors, one Deputy Director and nine Assistant Directors in the Directorate on technical subjects. One Additional Director among the four Additional Directors, one Joint director, one Deputy Director and two Administrative Officers assist the Director in administrative matters. Financial Controller, a Chief Accounts Officer deputed from Finance Department and Accounts Officer deputed from Treasuries and Accounts Department, Assistant Director (Agri) from

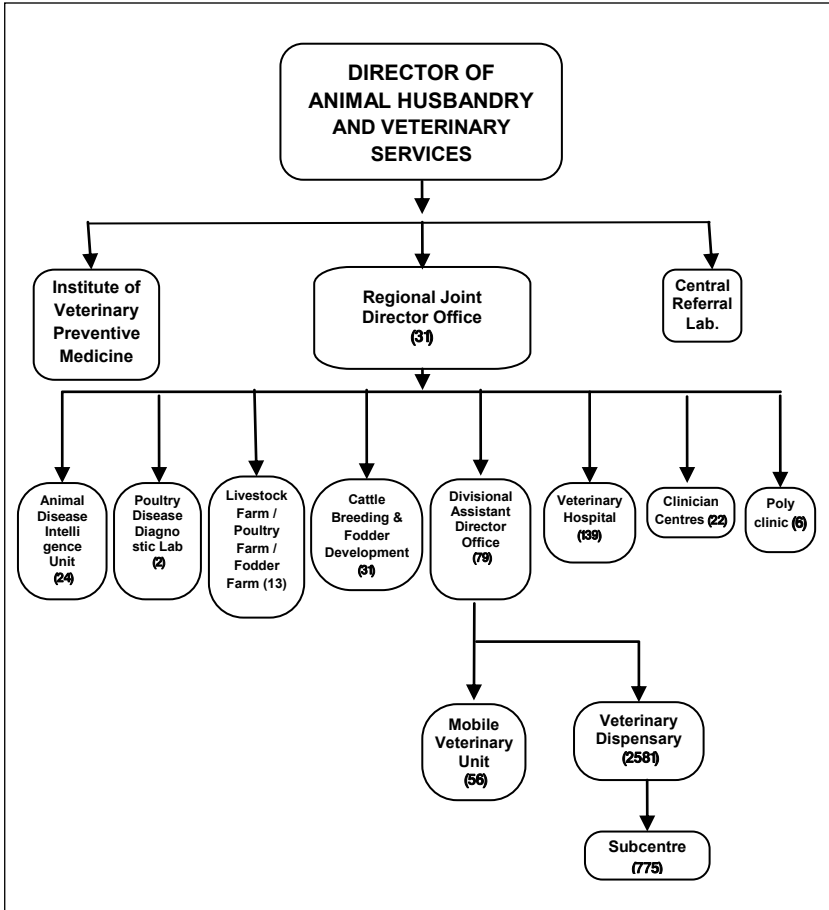
Agriculture department and Deputy Registrar from Co-operative department are working in Directorate.

Regional Joint Directors and Deputy Directors are responsible for the activities of the Department at the District level and Assistant Directors are responsible at the Divisional level.

Institute of Veterinary Preventive Medicine (IVPM) at Ranipet, is headed by a Director in the cadre of Additional Director. The Central Referral Laboratory (CRL), functioning at IVPM, Ranipet coordinates the work of the Animal Disease Intelligence Units (ADIUs) and Poultry Disease Diagnostic Laboratories (PDDLs) located in the Districts.

The Department also maintains eight Livestock Farms, three Sheep Farms, one Poultry Farm and one Fodder Seed Production Farm.

ORGANISATIONAL CHART



6. VETERINARY SERVICES

Animal Husbandry Department provides timely and effective health coverage to the livestock and poultry population of the State to augment their production and productivity. Veterinary services are provided by the Veterinary graduates, minor veterinary services and first aid are provided through para veterinarians across the state.

6.1 VETERINARY INSTITUTIONS

Veterinary Institutions have expanded from a humble beginning of around 120 institutions during 1959-60 to the present 2,804 institutions during 2016-17. Field Veterinary Institutions numbering 2,804, which include 6 Veterinary Polyclinics, 22 Veterinary Clinician Centres, 139 Veterinary Hospitals, 2,581 Veterinary Dispensaries and 56 Mobile

Veterinary Units provide Veterinary health care services to the livestock and poultry of the State.

- ❖ Veterinary Polyclinic functions 24 hours and provides specialized services.
- ❖ Clinician Centres provide specialized services.
- ❖ Veterinary Hospitals and Veterinary Dispensaries provide veterinary services; Implement Government welfare schemes, and doing extension services to the farmers.
- ❖ Mobile Veterinary Dispensary headed by a Veterinary Assistant Surgeon provides veterinary services at the doorsteps of the farmers on a scheduled programme.
- ❖ Veterinary Sub-centre, manned by Livestock Inspector, provides first-aid and minor veterinary services.

Table 2: District wise Veterinary facilities available across the State

Sl. No	District	Polyclinics	Clinician centres	Hospitals	Veterinary Dispensaries	Mobile Units	Sub centres
1	Ariyalur	-	-	2	42	1	3
2	Coimbatore	1	1	12	90	2	23
3	Cuddalore	-	1	5	90	1	52
4	Dharmapuri	-	1	2	72	2	6
5	Dindigul	-	1	5	99	1	65
6	Erode	-	2	6	95	3	23
7	Kancheepuram*	1	2	2	99	3	41
8	Kanniyakumari	-	1	2	49	2	15
9	Karur	-	1	2	65	1	12
10	Krishnagiri	-	1	2	73	1	7
11	Madurai	1	-	4	89	1	58
12	Nagapattinam	-	2	3	70	2	19
13	Namakkal	-	-	4	97	3	5
14	Perambalur	-	-	-	36	-	2
15	Pudukottai	-	1	4	92	2	31
16	Ramanathapuram	-	-	4	55	-	13
17	Salem	1	-	6	139	6	6
18	Sivagangai	-	-	2	76	-	42
19	Thanjavur	-	2	6	101	3	28
20	Theni	-	-	3	52	1	46
21	The Nilgiris	-	1	2	27	3	9
22	Tirunelveli	1	-	7	107	1	32
23	Thiruvallur	-	-	5	83	1	25
24	Tiruvannamalai	-	1	5	120	3	13
25	Thiruvarur	-	1	7	68	1	31

Sl. No	District	Polyclinics	Clinician centres	Hospitals	Veterinary Dispensaries	Mobile Units	Sub centres
26	Thoothukudi	-	1	2	67	1	34
27	Tiruchirapalli	1	-	8	95	2	32
28	Tiruppur	-	-	7	97	1	31
29	Vellore	-	1	8	117	4	24
30	Villupuram	-	1	7	148	4	17
31	Virudhunagar	-	-	5	71	-	30
TOTAL		6	22	139	2,581	56	775

**includes Chennai district also.*

**Table 3 : Veterinary Services Provided
2016-17 (in lakh)**

Species	Cases Treated	Castration	Deworming	Artificial Insemination
Cattle	127.15	1.37	52.15	56.18
Buffalo	9.47	0.04	5.67	2.53
Sheep	48.83	1.14	107.71	-
Goat	102.76	7.17	159.41	-
Dog & Cat	18.30	0.13	7.39	-
Poultry	50.15	-	15.88	-
Others	4.12	0.08	3.33	-
Total	360.78	10.20	351.54	58.72

6.2 Cattle Breeding and Fodder Development Units (CBFD)

Cattle Breeding and Fodder Development Units functioning in districts (except Chennai) are headed by Deputy Directors. These Units supply breeding inputs like liquid Nitrogen and Frozen semen straws to the Artificial Insemination centers and are also responsible for distribution of fodder seeds and monitoring the fodder development activities.

6.3 MEDICINES, EQUIPMENTS AND CHEMICALS

The Department is procuring medicines, equipments and chemicals through Tamil Nadu Medical Services Corporation (TNMSC).

Table 4 : Fund Allocation -2016-17

Sl. No	Name of the Scheme	Amount Allotted (in Rs.)
1	General Medicines	22,38,58,440
2	Intensive Health Cover	1,00,00,000

Sl. No	Name of the Scheme	Amount Allotted (in Rs.)
3	Equipments, Chemicals & Surgicals	3,08,12,820
4.	Mineral mixture	3,38,12,000
5.	Alternate medicine	1,38,64,370
6.	Reserve Fund	1,38,64,370
	TOTAL	32,62,12,000

Distribution of medicines to all veterinary institutions is undertaken based on monetary ceiling provided for the type of Institution.

Table 5 : Institution wise Fund allocation 2016-17

Sl. No	Type of Institution	Fund allocation (in Rs.)
1	Animal Disease Intelligence Unit	30,85,000
	Poultry Disease Diagnostic Laboratory	
	Central Referral Laboratory	
2	Livestock Farms	16,36,000
3	Veterinary Polyclinics	26,20,000
4	Veterinary Clinician Centres	52,75,000
5	Veterinary Hospitals	2,12,96,500
6	Pet Clinic, Adyar	1,24,000
7	Poultry Farm, Kattupakkam	1,03,000

Sl. No	Type of Institution	Fund allocation (in Rs.)
8	Veterinary Dispensaries	26,07,73,000
9	Mobile Veterinary Units	34,26,000
10	Cattle Breeding and Fodder Development units	15,65,500
11	Dog Breeding Unit, Saidapet	31,000
12	Veterinary Sub-Centres	1,59,13,000
13	Poultry Extension Centres	61,500
14	Visiting Sub Centres	3,02,500
15	Intensive Health Care	1,00,00,000
	TOTAL	32,62,12,000

During 2017-18, a sum of Rs.33,23,25,000 has been allotted for medicines in Budget Estimate.

6.4 DISEASE PREVENTION, DIAGNOSIS, CONTROL AND ERADICATION

Various bacterial, viral, protozoal, parasitic diseases affect livestock and poultry causing huge economic loss to the farmers. Control and eradication of livestock diseases is a must, not

only for profitable livestock production but also essential to make our livestock and livestock products globally acceptable.

For this purpose, 24 Animal Disease Intelligence Units (ADIUs), two Poultry Disease Diagnostic Laboratories (PDDLs) and one Central Referral Laboratory (CRL) are functioning in the State.

6.4.1 Animal Disease Intelligence Unit (ADIU)

Animal Disease Intelligence Units play a major role in developing a system of disease monitoring and surveillance of diseases affecting livestock that cause economic losses to the farmers with a view to evolve strategic control measures at District level. They map disease prone areas by collecting epidemiological informations and datas. This, in turn, helps the

field veterinarians to take adequate protective and prophylactic measures well in advance.

In order to protect public health, monitoring of slaughter houses for hygienic meat production, ensuring preparedness with respect to Avian Influenza like keeping vigil on the wet markets of poultry, backyard and commercial farms of Poultry and weekly visits to bird sanctuaries and water bodies for unusual mortality of birds are some important activities undertaken by the units.

Table 6: List of Animal Disease Intelligence Units

S. No	Animal Disease Intelligence Unit	Districts covered
1	Coimbatore	Coimbatore
2	Cuddalore	Cuddalore
3	Dharmapuri	Dharmapuri
4	Dindigul	Dindigul
5	Erode	Erode
6	Kancheepuram	Chennai, Kancheepuram
7	Karur	Karur
8	Krishnagiri	Krishnagiri
9	Madurai	Madurai, Theni

S. No	Animal Disease Intelligence Unit	Districts covered
10	Nagapattinam	Nagapattinam, Thiruvarur
11	Pudukottai	Pudukottai
12	Salem	Salem, Namakkal
13	Sivagangai	Sivagangai, Ramanathapuram
14	Thanjavur	Thanjavur
15	Thirunelveli	Thirunelveli, Kanniyakumari
16	Thiruvannamalai	Thiruvannamalai
17	Thoothukudi	Thoothukudi
18	Tiruchirapalli	Tiruchirapalli, Perambalur, Ariyalur
19	Thiruvallur	Thiruvallur
20	Tiruppur	Tiruppur
21	Udhagamandalam	The Nilgiris
22	Vellore	Vellore
23	Villupuram	Villupuram
24	Virudhunagar	Virudhunagar

Basic and sophisticated instruments like haem analyser, urine analyser, biochemical analyser etc., are available at the Animal Disease Intelligence Units. Walk in coolers and

Ice Lined Refrigerators (ILRs) for storage of biologicals and vaccines are provided.

6.4.2 Poultry Disease Diagnostic Laboratory (PDDL)

To cater to the needs of farmers in areas of high poultry production, Poultry Disease Diagnostic Laboratories (BSL II) are functioning at Andagalurgate, Namakkal District and at Erode. These units are mainly involved in testing of various specimens for accurate diagnosis of Bacterial, Viral and Parasitic infestations. In addition, they offer technical advice to farmers on Bio-Security measures.

These Bio Safety Level II (BSL II) laboratories carry out preliminary screening for Avian Influenza.

6.4.3 Central Referral Laboratory (CRL)

Central Referral Laboratory is the apex laboratory of the State and is functioning at IVPM, Ranipet. It plays a vital role in disease confirmation by approved laboratory techniques, declares disease outbreaks, screening of farm animals and provides technical guidance to the Animal Disease Intelligence Units and Poultry Disease Diagnostic Laboratories regarding control of diseases during outbreaks.

Central Referral Laboratory also deals with issuance of livestock health certificates for export purposes.

6.4.4 Institute of Veterinary Preventive Medicine, Ranipet (IVPM)

Institute of Veterinary Preventive Medicine was initially established at Madras in 1932 and called as "Serum Institute". In 1942, the

Institute was shifted to Coimbatore Agricultural College estate as an emergency measure due to World War II.

In 1948, the Institute was shifted to the present campus of 129.5 acres at Ranipet. This is an Institute of repute and produces vaccines and biologicals for various livestock diseases.

Indian Council of Agricultural Research (ICAR) aided "All India Coordinated Research Project (AICRP) on Foot and Mouth Disease (FMD), functioning from this Institute, undertakes investigation of FMD outbreaks, virus typing and sero-monitoring of vaccinated animals under FMD Control Programme. The Institute was awarded Second Prize for Best Performance by the ICAR for the year 2013.

Under National Agriculture Development Programme (NADP), upgradation of bacterial vaccines facility at IVPM to Good Manufacturing Practice (GMP) standard is undertaken at a total financial out lay of Rs.12.02 crore.

Further, establishment of a new Anthrax Spore Vaccine laboratory with GMP standard at an out lay of Rs.57.98 crore funded by NADP and NABARD, establishment of a new quality control laboratory at an out lay of Rs.19.92 crore funded by NABARD and strengthening of Poultry vaccine production facility with GMP standard at an out lay of Rs.3 crore funded by NADP are under progress. For the above works, the technical guidance is provided by Tamil Nadu Veterinary and Animal Sciences University and the execution is undertaken by National Dairy Development Board.

Further, Works for Construction of Bio security wall at an outlay of Rs.2.07 crore for which funds were sourced under NADP, is nearing completion.

Works for ensuring uninterrupted water supply to the institute in collaboration with TWAD board, at an outlay of Rs.1.02 crore for which funds were sourced from NADP is under progress.

7. LIVESTOCK DEVELOPMENT

7.1 Livestock Farms

The Department of Animal Husbandry maintains 13 Farms, out of which 8 are Livestock Farms, 3 are Sheep Farms, one is a Poultry Farm and one is a Fodder Seed Production Farm. The Livestock Farms act as model units for demonstrating best practices and scientific techniques to the Livestock farmers.

Table 7 : Departmental Farms, Species and Breeds maintained

Sl. No	Name of the Farm	Species	Breeds
1	Exotic Cattle Breeding Farm, Eachenkottai (Thanjavur District)	Cattle	Jersey, Crossbred Jersey, Umblachery
		Buffaloes	Murrah
2	District Livestock Farm, Hosur (Krishnagiri District)	Cattle	Crossbred Jersey, Crossbred Holstein Friesian, Sindhi, Kangayam, Bargur, Pulikulam
		Sheep	Mecheri
		Goats	Tellichery, Kodi Adu, Salem Black
		Pigs	Large White Yorkshire
		Poultry	Aseel
		Horses	Kathiawar and Thoroughbred
3	District Livestock Farm, Abishekapatti (Tirunelveli District)	Cattle	Crossbred Jersey, Sahiwal
		Sheep	Keelakaraisal
		Goat	Kanni
		Pigs	Large White Yorkshire, Landrace
		Poultry	Vanaraja, Giriraja, Aseel
4	District Livestock Farm, Udhamandalam (The Nilgiris District)	Cattle	Jersey, Crossbred Jersey, Holstein Friesian, Crossbred Holstein Friesian

Sl. No	Name of the Farm	Species	Breeds
5	District Livestock Farm, Pudukottai (Pudukottai District)	Cattle	Crossbred Jersey
		Sheep	Ramnad White
		Goats	Jamunapari
		Pigs	Landrace, Large White Yorkshire
6	District Livestock Farm, Naduvur (Thanjavur District)	Cattle	Jersey, Crossbred Jersey, Crossbred Holstein Friesian
		Buffaloe	Murrah
7	District Livestock Farm, Chettinad (Sivagangai District)	Cattle	Crossbred Jersey, Crossbred Holstein Friesian, Tharparkar, Sahiwal
		Sheep	Ramnad White
		Goats	Jamunapari, Tellichery
		Pigs	Large White Yorkshire
		Poultry	Aseel
8	Livestock Farm, Korukkai (Thiruvavur District)	Cattle	Umblachery
9	Sheep Farm, Chinnasalem (Villupuram District)	Sheep	Mecheri, Madras Red
		Goats	Salem Black, Tellichery

Sl. No	Name of the Farm	Species	Breeds
10	Sheep Farm, Mukundarayapuram (Vellore District)	Sheep	Madras Red
11	Sheep Farm, Sathur (Virudhunagar District)	Sheep	Vembur
		Goats	Kanni Adu
12	Poultry Farm, Kattupakkam, (Kancheepuram District)	Fowls	Vanaraja, Giriraja, Aseel, Grama Shree, Nicobari, BV300, HH260
		Japanese Quail	
		Turkey	Broad breasted bronze and Beltsville white
13	Fodder Seed Production Farm, Padappai (Kancheepuram District)		CoFS 29, Desmanthes, Agathi

7.1.1 Benefits that accrued to farmers through farms.

During the year 2016-17, 487 calves, 1,038 lambs, 947 kids and 2,033 piglets were born in the Department Livestock Farms out of which 221 calves, 908 lambs, 532 kids and 1,906 piglets were sold to the livestock farmers for breeding purposes. The rest of the stock was

retained in the farms as replacement stock. The Departmental Farms have produced 5,43,811 litres of milk during 2016-17.

Embryo Transfer Programme is being successfully implemented in order to produce High Genetic Merit Bull calves to be used as Bulls in future for Frozen Semen Production. The programme is being implemented at DLF, Hosur as its hub. So far, 237 calves have born through the programme which include 119 males and 118 females. The male calves are procured from farmers for rearing at farms. The farmers who provided donor cows for the programme have also benefitted as they were allowed to retain the superior quality female calves born to their animals.

While farms will continue to provide quality off-springs, milk, quality fodder seeds and slips to the public, innovative tools like

Embryo Transfer and In Vitro Fertilization will be employed with particular focus on Conservation and Propagation of Indigenous breeds during 2017-18.

7.1.2 Frozen Semen Production

Frozen semen station is the nucleus of the Artificial Insemination Programme. It functions with the main objective of producing quality frozen semen so as to ensure better fertility and conception rate and faster genetic progress among the cattle maintained by the farmers.

Three frozen semen production stations are functioning in Departmental farms at Eachenkottai, Hosur and Udhagamandalam. The Minimum Standard Protocol for Frozen Semen Production as prescribed by Government of India is strictly adhered to. Jersey, Holstein Friesian, Crossbred Jersey, Crossbred Holstein Friesian, Red Sindhi, Kangayam, Umblachery, Bargur,

Pulikulam and Murrah breeding bulls are maintained in these stations.

The Frozen Semen Production Stations under the control of the Department have produced 19.62 lakh exotic, 37.61 lakh crossbred frozen semen, 3.94 lakh indigenous frozen semen and 3.64 lakh buffalo frozen semen during 2016-17. 2.5 lakh Pure Jersey and one lakh Murrah frozen semen straws were sold to Aavin and four lakh buffalo Frozen Semen Straw were sold to Telengana Livestock Development Board.

Table 8 : Frozen Semen Straws Production
(in lakh)

Sl. No	Frozen Semen Station	Breeds	2015-16	2016-17	Target 2017-18
1	Exotic Cattle Breeding Farm, Eachenkottai	Jersey, Jersey cross, Umbalachery, Murrah	42.20	35.73	36.04
2	District Livestock Farm, Hosur	Jersey cross, Sindhi, Kangayam, Pulikulam, Bargur	9.55	10.06	17.80

Sl. No	Frozen Semen Station	Breeds	2015-16	2016-17	Target 2017-18
3	District Livestock Farm, Udhaga mandalam	Jersey, Jersey cross, Holstein Friesian, Holstein Friesian cross	18.37	19.03	23.60
Total			70.12	64.82*	77.44

**The decline in FSS production during the year 2016-17 is due to culling of many bulls from semen production stations in line with "Minimum Standard protocol" of Government of India.*

7.1.3 Fodder Production

Feeding is the major component of cost of livestock production accounting for 55-60 per cent of the total cost of production. Therefore, judicious feeding is the most important component of economical farming. The animals must be fed with a balanced ration incorporating all nutrients in right proportions.

**Table 9:Fodder Production & Distribution in
Departmental farms (2016-17)**

S. No	Name of the Farm	Area under Fodder cultivation (in Acres)	Fodder Production (MT)	Fodder Slips distributed to farmers (nos)	Fodder seed distributed to farmers (kg)	Tree fodder seedlings distributed to farmers (Nos)
1	DLF, Abhishega patti	138.50	1044.68	2,08,900	0	1,00,000
2	DLF, Chettinad	449.32	2417.85	88,04,800	3,567	1,00,000
3	Sheep Farm, Chinnasalem	27.20	427.10	0	0	1,00,000
4	ECBF, Eachenkottai	183.36	2372.47	1,06,50,500	1,250	1,00,000
5	DLF, Hosur	113.75	2022.00	26,750	1,560	1,00,000
6	DLF, Korukkai	50.00	1449.33	320	0	1,00,000
7	DLF, Ooty	64.34	851.69	0	0	0
8	DLF, Naduvur	117.00	984.85	0	0	1,00,000
9	DLF, Pudukottai	50.00	644.25	0	4,400	1,00,000
10	Sheep farm, Sathur	38.44	125.22	3,740	18.50	50,000
11	Sheep Farm, Mukundarayapuram	34.50	306.00	5,86,700	18	50,000
12	Padappai	13.00	3700.00	1,44,700	607.50	1,00,000
	Total	1279.41	16345.43	2,04,26,410	11,421	10,00,000

7.2 Dog Breeding Unit

Tamil Nadu possess excellent native dog breeds like Rajapalayam, Kombai, Chippiparai and Kanni. To conserve and propagate these native breeds, a Dog Breeding Unit was established at Saidapet, Chennai during the year 1980. Puppies are sold to the public based on their registration seniority at the price fixed by the Government.

8. SCHEMES

Animal husbandry provides livelihood to millions of small, marginal farmers and landless poor. Employment generating schemes when implemented properly can ensure higher levels of economic activity leading to sustainable growth in rural economy. Keeping this in mind, the Department is implementing various beneficiary oriented schemes for the economic

upliftment and welfare of the poor and downtrodden.

8.1 SCHEME FOR FREE DISTRIBUTION OF MILCH COWS AND GOATS / SHEEP

The Government of Tamil Nadu announced on 09.07.2011 that in order to usher in another 'White Revolution' in Tamil Nadu, the Government would distribute one Milch Cow to each beneficiary free of cost, totaling to 12,000 beneficiaries every year for a period of 5 years.

The Government of Tamil Nadu also announced the implementation of 'Scheme for Free Distribution of Goats/Sheep' to the poorest of the poor in the State in order to improve their living standards.

For successful implementation of Free Distribution of Milch Cows and Goats / Sheep Schemes, the Hon'ble Chief Minister presented

“The Best Practices Award” to the Directorate of Animal Husbandry and Veterinary Services during the Independence day celebrations held at Fort St. George, on 15.08.2013.

Salient features

A. Scheme for Free Distribution of Milch Cows

- ❖ The Scheme is implemented in Districts where the number of Milk Cooperative societies is less than the number of revenue villages.
- ❖ The distribution of Milch Cows is taken up in those Village Panchayats where there were no Milk Cooperative Societies. Consequent to the distribution of Milch Cows, Milk Cooperative Societies are formed in those Village Panchayats and milk is procured from beneficiaries.

- ❖ Beneficiary should be a woman.
- ❖ Milch Cows are procured from neighbouring states and the beneficiaries themselves select their cows.
- ❖ Insurance of animals is done at Government cost at purchase spot itself.

B. Scheme for Free Distribution of Goats/ Sheep

- ❖ Each beneficiary is provided with 1 male and 3 female goat / sheep which are around 6-8 months of age.
- ❖ Goat / Sheep are purchased from local shandy by beneficiaries themselves.
- ❖ Insurance of animals is done at Government cost at purchase spot itself.

Eligibility criteria

- ❖ For both the Schemes, selection of beneficiaries is done by Village Level Committee (VLC) consisting of Village Panchayat president, Vice-President, Senior most ward member representing SC / ST community, Panchayat level Federation Co-ordinator, Secretary of the Village Poverty Reduction Committee (VPRC) / Self Help Group representative, Veterinary Assistant Surgeon and Zonal Deputy Block Development Officer. The beneficiary list is approved by the Grama Sabha of the panchayat. In case of Milch cow beneficiary selection, the Extension officer or Senior inspector from Office of Deputy Registrar Dairy is included in the Village Level Committee. In the absence of elected members to the offices of the President, Vice president, senior most ward member representing the SC/ST

communities, the Special Officers shall be the member of the selection committee till the elected body comes into existence.

- ❖ Beneficiary should be a woman. Priority will be given to Widows, Destitutes, Physically challenged and Transgenders.
- ❖ Beneficiary should be permanent resident of the concerned Village Panchayat and below 60 years of age. In case of Goat / Sheep scheme, for effective rearing of animals, one of the members of the family must be between 18 and 60 years of age.
- ❖ At least 30% of beneficiaries should necessarily belong to SC / ST Communities.
- ❖ Beneficiary / their close relatives should not be employee of Central / State Government or any Organization / Co-operative or member of any local body.

- ❖ In addition, for Free distribution of Milch Cows Scheme, those who possess less than one acre of land in their own name or family members name can be a beneficiary.
- ❖ Free distribution of Goat / Sheep Scheme, the beneficiary should be landless agricultural labourer.

On account of the severe drought situation in the state, the schemes have been temporarily stopped with effect from December 2016 and will be resumed after receipt of adequate rainfall.

Achievements

Under Free Distribution of Milch Cows and Goats / Sheep Schemes, 63,448 women beneficiaries were provided with 63,448 milch cows and 7,22,152 poorest of the poor women

were provided with 28,88,608 Goat / Sheep. Approximately 2.66 lakh litres of milk is being produced daily through these milch cows and 1,21,636 calves worth Rs.60.81 crore were born. Further, 59.07 lakh kids worth Rs.1,476 crore have been obtained from the goats distributed. The animals distributed through Free Distribution of Milch Cows and Goats / Sheep Scheme have yielded approximately 7 Lakh Metric Tonne of manure worth Rs.112.14 crore. This has led to the economic upliftment of the rural poor women.

These flagship Schemes that have empowered the rural poor women economically, will be continued with 12,000 Milch cows to be distributed to 12,000 beneficiaries and 6,00,000 Goats / Sheep to be distributed to 1,50,000 beneficiaries during 2017-18.

8.2. SCHEME FOR POULTRY DEVELOPMENT (SPD)

Poultry farming has developed on a commercial scale in Western Districts of Tamil Nadu with Namakkal as the hub of development. To replicate this commercial success and to develop poultry industry in non-poultry backward regions, the Government of Tamil Nadu launched the Scheme for Poultry Development during 2012-13 at an outlay of Rs.22.35 crore. With the successful implementation of the Scheme, it has been continued with an allocation of Rs.25 crore each year for development of poultry clusters for the years 2013-14, 2014-15, 2015-16 and 2016-17.

As per the Scheme, at least 33% of the beneficiaries should necessarily belong to SC / ST Communities.

8.2.1 Establishment of Broiler Farm

Broiler Chicken rearing can be undertaken through integration wherein integrators supply day old chicks, health cover and feed required for the birds. The integrators also ensure that the birds are marketed through their own channels. Growing charges for rearing of chicks is paid by integrators to the beneficiaries. A broiler farm upto 5,000 birds can be profitably run using family labour alone and thus negates the requirement of additional man power. A sum of Rs.2,68,750 is being provided to the beneficiary as 25% State Government subsidy under the scheme.

8.2.2 Native Chicken Rearing

Since Native Chicken meat has a better market throughout the State, Native chicken rearing is encouraged under the Scheme wherein a flock size of 250 / 500 birds can be profitably reared and marketed by the farmers

themselves. The beneficiary is encouraged to procure chicks from Native Chicken Breeders / Hatchery units. A sum of Rs.44,850 is being provided to a beneficiary as 25% State Government subsidy for rearing 250 birds. In order to encourage the beneficiaries to continue the avocation, for 2nd and 3rd batch, 50% and 30% of the chick cost is provided respectively as incentive.

Achievements

Under the Scheme, 2,747 Broiler farms, 15,554 Native chicken farms have been established in 25 Districts since 2012-13 at a total cost of Rs.122.35 crore.

The Government have sanctioned a sum of Rs.18.75 crore to establish Broiler units at 12 Districts and Native Chicken Unit at 18 Districts for the year 2017-18.

The District wise targets are as under:

Table 10: District wise targets for Broiler Units

Sl. No.	District	Birds per unit	Target
1	Ariyalur	5000	10
2	Cuddalore	5000	30
3	Perambalur	5000	10
4	Thoothukudi	5000	10
5	Tirunelveli	5000	15
6	Villupuram	5000	40
7	Virudhunagar	5000	10
8	Sivagangai	5000	15
9	Madurai	5000	15
10	Kanchipuram	5000	15
11	Theni	5000	15
12	Vellore	5000	15
Total			200

Table 11: District wise targets for Native Chicken Units

Sl.No.	District	Birds per unit	Target
1	Dharmapuri	250	180
2	Dindigul	250	160
3	Kancheepuram	250	160
4	Karur	250	160

Sl.No.	District	Birds per unit	Target
5	Kanniyakumari	250	100
6	Krishnagiri	250	180
7	Madurai	250	160
8	Nagapattinam	250	150
9	Pudukottai	250	160
10	Sivagangai	250	160
11	Ramanathapuram	250	160
12	Thanjavur	250	160
13	Tiruvarur	250	160
14	Tiruvallur	250	160
15	Tiruchirapalli	250	160
16	Vellore	250	160
17	Thiruvannamalai	250	160
18	Theni	250	165
Total			2,855

8.3 FODDER DEVELOPMENT

Green Fodder is an important factor which determines the productivity of livestock. Giving importance and Provision of green fodder to animals increases productivity and availability of bio-nutrients. Incorporating good quality feed

combined with feeding of green fodder reduces delayed breeding in cattle and buffaloes. This reduces intercalving period resulting in increased milk production and thus increasing the farm income.

8.3.1 STATE FODDER DEVELOPMENT SCHEME (SFDS)

Both quantitatively and qualitatively, there exist a substantial gap between the demand and supply of green fodder. To reduce gap between the demand and supply of feed and fodder through enhancement of production and efficient utilization of available resources, the Government is implementing State Fodder Development Scheme since 2011-12 at a total outlay of Rs.140 crore. It has been ensured that atleast 30% of the beneficiaries selected under each component belong to SC / ST Communities.

The activities taken up under the scheme are as follows

- ❖ About 2.27 Lakh acres of farmers' holdings have been brought under green fodder cultivation across the State thereby producing approximately 164 LMT of green fodder.
- ❖ To effectively utilize the available green fodder, 12,703 Chaff cutters have been distributed to farmers @ 75% subsidy.
- ❖ Farmers were also sensitized on the technology to conserve surplus fodder to overcome scarcity of fodder during lean periods by distribution of silage making bags for ensiling the surplus fodder. Around 40,000 numbers of 250 kg capacity silage bags were distributed free of cost to 10,000 farmers @ 4 bags / farmer.

- ❖ To enhance the productivity of crop by effectively utilizing the available water, 10,483 Rainguns were installed in farmers' fields at 75% subsidy.
- ❖ Azolla is a low cost feed substitute that considerably reduces feed cost. A total of 20,958 Azolla units were established throughout the State free of cost.
- ❖ To enlighten the farmers on feeding tree fodder to the animals, saplings of various tree fodder varieties like Kalyanamurungai, Velvel, Agathi, Subabul, Camelia, Glyricidia etc, were raised in departmental farms and 60 Lakh numbers of seedlings were distributed to farmers.

- ❖ To ensure timely supply of seeds to the farmers, fodder seed production units have been established in seven Department Livestock farms.

Table 12: State fodder development scheme 2016-17

Component	Area brought under cultivation (in acres)	No of farmers benefited	Approximate yield (LMT)
Cultivation of High yielding Fodder crops under Irrigated condition	10,750	16,869	15.05
Cultivation of Fodder Sorghum and Cowpea under rainfed condition	50,000	58,558	7.00
Total Area	60,750	75,427	22.05

The above scheme will be continued in 2017-18 at an administrative sanction of Rs.25 crore.

8.3.2 Drought Mitigation Measures

Tamil Nadu has been declared drought affected state due to failure of North East Monsoon. To avoid distress sale of cattle by farmers due to severe drought situation, a sum of Rs.78 crore was allotted to Animal Husbandry Department for undertaking drought mitigation measures.

For Augmenting Green Fodder Production, a total of 15,000 acres of farmers own lands were brought under drought tolerant short term (55-60 days) fodder sorghum cultivation under irrigated condition for which a subsidy of Rs.2000/acre was provided. A total of 238.40 MT of fodder sorghum seeds and 2.4MT of Oats seeds to be used in The Nilgiris District were distributed to 13,766 farmers.

To address the scarcity of dry fodder, 300 Dry fodder depots were established in 31 districts (except Chennai) for which a sum of Rs.55.71 crore has been allocated. Dry fodder is being procured at cost and sold at subsidized price of Rs.2/kg to the farmers. A maximum of 3 kg of fodder is given per day per animal. An individual family can procure fodder upto 105 kgs totally for 5 animals on weekly basis.

Exotic and cross bred cattle are vulnerable to mineral deficiencies due to inadequate availability of feed and fodder. Mineral deficiencies affect milk production, general health and reproductive health of livestock. Hence for supplementing mineral mixture to the milch cows @30gm/animal/day for a period of two months for which a sum of Rs.12.09 crore is allocated by Government of Tamil Nadu. So far, 254 MT of mineral mixture have been procured and supplied through Aavin.

Table 13: Drought Mitigation 2016-17

Sl. No	District	No of Depots establi-shed	Qty of dry fodder distributed (kg)	No of farmers bene-fitted	No of animals bene-fitted
1	Ariyalur	5	11,97,049	12,763	58,517
2	Coimbatore	10	5,98,969	6,090	32,235
3	Cuddalore	9	5,46,403	10,044	25,031
4	Dharmapuri	12	19,45,242	21,838	94,353
5	Dindigul	9	8,07,229	8,839	39,500
6	Erode	12	9,73,732	9,725	46,369
7	Kanchipuram	10	14,38,104	9,054	50,280
8	Kanyakumari	4	2,41,935	3,613	11,509
9	Karur	6	6,21,120	6,223	29,466
10	Krishnagiri	10	13,03,600	12,481	62,403
11	Madurai	10	10,20,665	54,513	2,36,225
12	Nagapattinam	4	2,46,023	2,343	11,715
13	Namakkal	10	4,13,615	3,940	19,695
14	Nilgiris	4	2,44,990	3,238	11,050
15	Perambalur	4	5,50,781	7,185	30,822
16	Pudukottai	15	8,61,510	41,025	8,206
17	Ramnad	7	7,89,783	8,497	37,265
18	Salem	20	10,45,352	11,076	48,080
19	Sivagangai	8	6,87,010	7,891	32,730
20	Thanjavur	2	1,78,012	7,168	1,450
21	Theni	5	3,45,230	4,297	11,880
22	Thiruvallur	8	11,18,892	8,577	45,665
23	Thiruvarur	2	2,38,006	2,357	11,283

Sl. No	District	No of Depots established	Qty of dry fodder distributed (kg)	No of farmers benefited	No of animals benefited
24	Thoothukudi	8	4,90,065	5,025	23,820
25	Thiruchirapalli	7	13,01,960	13,569	57,676
26	Tirunelveli	15	9,58,875	10,350	68,823
27	Thirupur	10	19,35,053	18,848	94,374
28	Thiruvannamalai	22	13,41,355	16,090	60,767
29	Vellore	17	9,47,295	10,023	41,680
30	Villupuram	26	14,41,905	13,732	68,662
31	Virudhunagar	9	8,61,739	8,328	39,167
Total		300	2,66,91,499	3,58,743	14,10,699

8.4 INFRASTRUCTURE DEVELOPMENT SCHEMES

Improved infrastructure will result in improved veterinary services, with a consequent increase in the overall productivity. With the ultimate aim of rural development, the Department's infrastructure is being developed with assistance from State Government, Government of India and National Bank for

Agriculture and Rural Development (NABARD) under Rural Infrastructure Development Fund (RIDF).

During the period from 2011-12 to 2016-17, 1,744 Veterinary Institution buildings were newly constructed at a total outlay of Rs.506.43 crore through various Schemes.

Table 14 : Infrastructure Development
Total allocation for Construction

S. No	Name of the Scheme	No. of Buildings	Total Allocation (Rs. in crore)
1	State Fund	21	44.92
2	ESVHD	256	25.52
3	NADP	95	16.66
4	NABARD	1,372	419.33
Total		1,744	506.43

During 2017-18, it is proposed to construct 150 new veterinary dispensary buildings.

8.4.1 Strengthening and Renovation of Infrastructure

During the 6 year period from 2011-12 to 2016-17 repair and renovation works were carried out in 1,224 veterinary institutional buildings at an outlay of Rs.80.53 Crore.

8.4.2 Construction of Integrated office complex

During 2015-16 and 2016-17 a sum of Rs.38.92 crore was allotted for construction of 5 storied integrated office complex for ***the administrative offices of the Directorate of Animal Husbandry and Fisheries Departments*** at Saidapet, Chennai. The Construction is nearing completion.

8.5 SCHEMES FOR CONTROL OF LIVESTOCK DISEASES

Animal Health is the backbone of livestock industry. Microbial diseases and parasitic infestation cause severe losses and death, and production loss in livestock. Prevention and eradication of livestock diseases is not only helpful for profitable livestock production, but also essential for acceptance and improving the value of our livestock and livestock products in the global market. By adopting proper disease control measures, disease occurrence gets controlled and subsequently gets eradicated from the livestock population.

8.5.1 FOOT AND MOUTH DISEASE CONTROL PROGRAMME (FMD-CP)

Foot and Mouth disease is a highly contagious, viral, vesicular disease of cloven-footed animals. It results in heavy economic loss

due to reduction in milk production, infertility and high mortality in calves. Its containment demands considerable efforts in vaccination and strict monitoring in animal movements between States. To control this disease, Foot and Mouth Disease Control Programme funded jointly by the State and Central Government is being implemented in all Districts. So far, 12 rounds of FMD vaccination have been carried out in the State. The 11th and 12th rounds of vaccination of cattle and buffaloes were conducted during September 2016 and March 2017 covering 93,83,197 and 93,86,018 nos. respectively. For this programme Government of India released Rs.9.43 crore for the year 2016-17.

The emphasis on Foot and Mouth Disease vaccination will continue in 2017-18 also.

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

The ASCAD Scheme is being implemented with 60% Central and 40% State share. Under ASCAD, vaccination is carried out against the diseases affecting livestock that cause economic losses like Anthrax, Black Quarter, Haemorrhagic Septicaemia and Sheep pox. The Vaccine for the above diseases is produced in the Institute of Veterinary Preventive Medicine (IVPM), Ranipet and vaccination of susceptible livestock is being carried out free of cost.

Table 15: Vaccination details under ASCAD Scheme for 2016-17

S. No	Name of the Disease	No.of Districts	No. of animals (in lakh)
1	Anthrax	19	31.98
2	Black Quarter	10	5.41
3	Haemorrhagic Septicaemia	4	0.328
4	Sheep pox	6	0.433

Disease forecasting is done based on the outbreak of diseases during the preceeding five years. Vaccination is being carried out before the onset of outbreak.

Table 16: Vaccination under ASCAD Scheme during 2017-18

S. No	Name of the Disease	No. of districts	No. of animals to be vaccinated (in lakhs)
1	Anthrax	20	42.58
2	Black Quarter	10	5.42
3	Haemorrhagic Septicaemia	4	0.328
4	Sheep pox	7	0.435

8.5.3 PESTE DES PETITS RUMINANTS - CONTROL PROGRAMME (PPR-CP)

Peste des Petits Ruminants (PPR) also known as 'Goat Plague', is an acute, highly contagious viral disease. It causes heavy loss to the rural economy due to high morbidity and mortality.

Vaccination of 176 lakh sheep and goats was undertaken in all the districts in the State to control this disease under PPR-CP. Goats and Sheeps purchased under "Free Distribution of Goat / Sheep Scheme" announced by Tamil Nadu Government were also vaccinated.

8.5.4 BRUCELLOSIS - CONTROL PROGRAMME (BRUCELLOSIS -CP)

Brucellosis is a bacterial and zoonotic disease characterised by abortion during five to six months of pregnancy in livestock as well as human beings. A National Control Programme for the control of Brucellosis is under implementation. So far, 2.60 lakh of six to eight month old heifer calves have been vaccinated against Brucellosis in 15 districts of the State.

8.5.5 NATIONAL PROJECT ON RINDERPEST SURVEILLANCE AND MONITORING (NPRSM)

The aim of this Scheme is to eradicate Rinderpest disease, which causes great economic loss to the farmers. The State was declared 'Provisionally free from Rinderpest' from March 1998 onwards. Subsequently, the State was declared 'Free from Rinderpest Disease' from May 2002 by the Government of India. Under this scheme, surveillance is being carried out in all villages so as to maintain the "Zero Rinderpest" status in the State.

8.5.6 RANIKHET DISEASE

Ranikhet disease affecting poultry that cause economic loss and heavy mortality in poultry. Vaccination against this disease is carried out at all the veterinary institutions on all Saturdays and also in the camps conducted

under 'Kalnadai Padhukappu Thittam' to protect poultry from this disease. Apart from this, the Department has been conducting a State wide vaccination drive for backyard poultry against Ranikhet disease during the month of February every year (Two weeks camp).

8.6 NATIONAL AGRICULTURE DEVELOPMENT PROGRAMME (NADP)

The Department started implementing NADP from 2007-08 and so far 53 projects at an outlay of Rs 195.60 crore, have been implemented till 2016-17.

During the year 2016-17, the following projects were implemented by the department.

8.6.1 Establishment of Buffalo Dairy Units

In order to create awareness about the advantages of dairy buffalo farming and to harness the production potential of buffaloes among rural entrepreneurs, 120 Dairy Buffalo

Units were established in all Districts (except Chennai & Nilgiris) at an outlay of Rs 3.89 crore. Four beneficiaries in each district were provided with a subsidy of 75% for shed construction, fodder development and for the purchase of 5 buffaloes each.

8.6.2 Establishment of Fodder Seed Production unit at DLF, Chettinad

To ensure adequate supply of quality fodder seeds to farmers to produce quality green fodder for the animals, fodder seed production unit was established in 200 acres at DLF, Chettinad under NADP 2016-17 at an outlay of Rs.2.74 crore. About 20 MT of Sorghum PC 23 certified seeds have been produced for distribution to the farmers for taking up green fodder production in farmers' holdings to ensure availability of green fodder adequately in the State.

8.6.3 Animal Mobile Medical Ambulance for Rural Veterinary Care in Tamil Nadu

The Animal Mobile Medical Ambulance service inaugurated by the Hon'ble Chief Minister during 2015-16 in 5 districts, is proposed to be extended to the rest of the State under assistance from NADP 2016-17 at an outlay of Rs.18.93 crore. Preliminary works are under progress.

The Department proposes to implement projects with main focus to increase the fodder production at the Departmental farms, to increase the production of native chicken, to optimize the production and reproductive potentials of animals reared in the dry lands and to implement FMD Control Programme, under NADP 2017-18 at a broad outlay of Rs. 34.95 crore.

8.7. NATIONAL LIVESTOCK MISSION (NLM)

The Government of India has formulated a National Livestock Mission (NLM) to be implemented from 2014-15 by subsuming and modifying seven Centrally Sponsored Schemes and Seven Central Sector Schemes.

The Government of India, has accorded sanction for implementing 10 projects at a total outlay of Rs.49.10 crore from 2014-15 to 2016-17.

The activities carried out in the scheme during 2016-17 are as follows.

- ❖ 2 lakh animals were insured with subsidy at a total cost of Rs.1108.33 lakh.
- ❖ 3,120 beneficiaries were provided with 4 weeks old 20 birds / beneficiary for backyard Poultry rearing at a cost of Rs.78 lakh.

During Rural Backyard Poultry Development will be implemented for the year 2017-18 at a total cost of Rs.6.47 crore.

8.8 LIVESTOCK PROTECTION SCHEME

Under Kalnadai Padhukappu Thittam, special veterinary health camps are conducted to provide total health cover to livestock and poultry in remote villages where veterinary facilities are inadequate, at farmers door steps.

A total of 5,500 special camps are conducted every year in all the Panchayat Unions at a total outlay of Rs.2.31 crore.

During 2017-18 also the scheme will be continued.

9. LIVESTOCK CENSUS AND INTEGRATED SAMPLE SURVEY

9.1 LIVESTOCK CENSUS

Enumeration for livestock census was started during the year 1919-20. Livestock census is conducted across the country every five years and it encompasses several activities to be carried out within the stipulated time frame. The 19th livestock census was carried out during the year 2012 and the 20th Livestock census is scheduled to be held in the year 2017. Government of India has issued guidelines and plan of action for 20th livestock census. The preparatory works such as nomination of nodal officers and selection of enumerators / supervisors in all districts have started. The period of 20th livestock census is scheduled tentatively from 16th July 2017 to 15th October

2017. This census includes both the species and breed wise population of the state.

9.2 INTEGRATED SAMPLE SURVEY SCHEME

Annual Sample Surveys are being carried out under Central Sector Scheme *viz.*, 'Integrated Sample Survey' from the year 1977-78 onwards with 50% financial assistance from Government of India. Under this scheme, production of Milk, Meat, Egg and Wool are estimated as per the guidelines of Department of Animal Husbandry, Dairying & Fisheries, of Government of India. The survey has been carried out in 3 seasons *viz.*, Summer, Rainy and Winter season for studying the seasonal fluctuations. The survey covers 10-50% of villages in each district from the year 2012-13 as per new guidelines of Government of India.

The results of Integrated Sample Survey are useful in evolving, monitoring and evaluating the developmental schemes implemented for the economic improvement of the livestock farmers over a period of time and helps to assess the impact of its efforts.

Table 17 : Increase of estimated production of milk, egg and meat during previous years

Item	Unit	2015-16	2016-17*	% of increase
Estimated Milk Production	Lakh MT	72.44	75.56	4.31
Estimated Egg Production	Lakh Nos.	1,61,252	1,66,824	3.46
Estimated Meat Production	MT	5,44,500	5,72,939	5.22

**provisional*

10. Extension Services

Extension and propaganda are important tools for imparting skills and knowledge in basic and modern animal husbandry practices, which

in turn can play a vital role in solving many field problems and in containment of diseases that cause economic losses. Moreover, it can make the schemes and programmes implemented by the Department more transparent to the public.

During the year 2016-17, a sum of Rs.13.287 lakh was allocated towards conducting fairs and the department participated in the following fairs:-

Dindigul	Kodaikanal – Kodai Vizha
Vellore	Elagiri Kodai Vizha Trade Fair
Namakkal	Valvil Ori Vizha
Coimbatore	Trade Fair
Madurai	Trade Fair
Thanjavur	Trade Fair
Tirunelveli	Trade Fair
Thiruvannamalai	Trade Fair and Deepam Thiruvizha

Salem	Yercaud Kodai Vizha
Tiruchirapalli	Trade Fair
Kanniyakumari	Trade Fair
Krishnagiri	Mangani Fair

Apart from the fairs, the department participated in the 43rd Trade Fair and Exhibition held during January 2017 to March 2017, at Island Grounds Chennai and also in Republic Day Parade Pageantry at Chennai.

11. ANIMAL WELFARE MEASURES

The Government in coordination with Animal Welfare Board of India is addressing the problems of unethical treatment to animals in three pronged approach such as at the Livestock market, during transport and at slaughter houses to prevent cruelty to animals and to treat them ethically in a humane manner.

11.1 Society for Prevention of Cruelty to Animals (SPCA)

To effectively implement animal welfare measures and rules, Society for Prevention of Cruelty to Animals (SPCA) has been formed in all Districts of Tamil Nadu, as per Section 38 of the Prevention of Cruelty to Animals Act, 1960 and Prevention of Cruelty to Animals Rules (Amendment), 2001.

The main objectives of Society for Prevention of Cruelty to Animals (SPCA) are,

- ❖ to rescue and take care of all animals in the Districts as laid down in the PCA Act, 1960.
- ❖ to register cases of cruelty to animals and produce the offenders before the court for conviction.

11.2 Transport of Animals

The Ministry of Road Transport and Highways has issued notification No.GSR 546 (E), dt.08.07.2015 amending of Central Motor Vehicle Rule 2015, changing the space requirement for animals during transport. As per Rule 125 (E), from 01.01.2016, the motor vehicles used for transportation of livestock by road shall be in accordance with the specifications of Bureau of Indian Standards as provided in IS 14904:2007 or IS 5238:2001 or IS 5236:1982.

12. Jallikattu - the Traditional and cultural identity of Tamil Nadu

Jallikattu is a traditional sporting event of rural people in Tamil Nadu which is conducted during Pongal Festival. The sport has a 5000 year old tradition and a history associated with the Socio cultural ethos of rural Tamil Nadu. The

conduct of Jallikattu was under judicial scrutiny since 2006. Though the Government of Tamil Nadu argued the case that Jallikattu has a long, traditional, cultural, religious and historical background and the event would in no way inflict any unnecessary pain or torture to the participating animals the Supreme Court in its Judgement dated 07.05.2014 banned the conduct of Jallikattu in the State of Tamil Nadu and also held that bulls cannot be used as performing animals either for Jallikattu events or for bullock cart races in the States of Tamil Nadu, Maharashtra or elsewhere in the country.

Since the subject of prevention of cruelty to animals is in the concurrent list, the Government of Tamil Nadu decided to amend the Prevention of Cruelty to Animals Act, 1960. Consequently, the consent of His Excellency President of India was given on 20.1.2017 and based on this the Prevention of Cruelty to

Animals (Tamil Nadu Amendment) Ordinance, 2017 was promulgated on 21.01.2017 by the Hon'ble Governor of Tamil Nadu.

A special sitting of the State Legislative Assembly was convened on the afternoon of 23.1.17 in which the draft bill for conducting Jallikattu was introduced, debated and passed unanimously.

The Prevention of cruelty to animals (Tamil Nadu Amendment) Bill, 2017, passed by the Tamil Nadu Assembly was sent to the Government of India and the assent of His Excellency the President of India was obtained on 31.1.2017 and the same was published in the Tamil Nadu Government gazette on the same day.

On 31.01.2017 the Jallikattu case was heard by the Hon'ble Supreme Court of India. Hon'ble Supreme Court refused to stay the Ordinance /Act passed by Government of Tamil Nadu for conduct of Jallikattu.

Consequent to the publication of the Prevention of Cruelty to animals (Tamil Nadu Amendment) Act 2017 in the Tamil Nadu Government Gazette, So far Jallikattu has been conducted in 181 places in 14 Districts that were notified in Tamil Nadu Government Gazette.

13. TAMIL NADU LIVESTOCK DEVELOPMENT AGENCY

Tamil Nadu Livestock Development Agency (TNLDA) was established as an autonomous Agency for implementing the National Project for Cattle and Buffalo Breeding (NPCBB) and is functioning since 9.1.2003.

Bringing all the breedable female cattle and buffaloes under defined breeding programme through Artificial Insemination (AI) and natural service and to increase milk and animal productivity are the objectives of the Agency.

13.1 Schemes implemented by Tamil Nadu Livestock Development Agency

1. National Programme for Bovine Breeding(NPBB)
2. Rashtriya Gokul Mission(RGM)

3. Risk Management Component under National Livestock Mission (NLM)-Livestock Insurance
4. National Dairy Plan-I (NDP-I) Strengthening of Semen station at District Livestock Farm (DLF), Udthagamandalam.

Table 18: Funds received under the schemes for the year 2016-17

S. No	Name of the Scheme	Amount received (Rs. in Lakh)
1	National Programme for Bovine Breeding(NPBB)	100.00
2	Rashtriya Gokul Mission(RGM)	750.00
3	National Dairy Plan-I (NDP-I)	19.00
4	National Livestock Mission (NLM)-Livestock Insurance	1108.33

13.1.1 National Programme for Bovine Breeding (NPBB) / Rashtriya Gokul Mission(RGM)

The scheme is being implemented from the year 2014-15 with a sanction of a sum of Rs.7007.00 lakh for a period of five years.

The components of the scheme include

- Extension of Field Artificial Insemination Net work by Multipurpose Artificial Insemination Technician for Rural India (MAITRI) through training and equipping rural youths, facilitating Veterinarians and para-veterinarians to take up Artificial Insemination work and Strengthening existing Artificial Insemination centres by the replacement of worn out cryocontainers & Artificial Insemination kits

- Monitoring of Artificial Insemination programme by Identifying females covered through Artificial Insemination and Artificial Insemination born calves using tags and computerising data by using Information Network For Animal Health and Productivity (INAPH) software.
- Development and conservation of indigenous breeds
- Carry out Extension activities by organising fertility camps, oestrus synchronisation and farmers orientation programme
- Manpower development by establishing / strengthening training centres, organising trainers training programmes , training for professionals, refresher training of Artificial Insemination technicians and organising seminars & workshops

- Strengthening bulk Liquid nitrogen(LN) transport storage & distribution system upto Artificial Insemination centres
- Procurement of high genetic merit male calves for frozen semen production
- Establishment of national facility for molecular screening of cattle for inherited disorders and parentage testing.
- Field Performance Recording Programme (FPRP) in Crossbred Jersey.
- Strengthening of Tharparkar herd and Sahiwal herd.
- Strengthening of Nucleus Jersey and Stud Farm at Udthagamandalam Tamil Nadu Cooperative Milk Producers' Federation Limited (TCMPF).

13.1.1(A) National Programme for Bovine Breeding (NPBB)

For the year 2016-17 a sum of Rs. 100.00 lakhs was released to impart 125 MAITRIs training and equipping 125 rural youths has been taken up. During the year 2017-18 it is planned to train 200 rural youth.

13.1.2 Rashtriya Gokul Mission

For the year 2016-17, a sum of Rs. 750.00 lakh was released and the following activities are taken up.

1. Development and Conservation of Indigenous Breeds

i. Bargur

Establishment of Bargur Cattle Research stations

Establishment of Bargur Cattle Research station in Erode District has been taken up

through Tamil Nadu Veterinary and Animal Sciences University,(TANUVAS) at an estimate of Rs.131.00 lakh during the year 2016-17 and is in progress.

Field Performance recording in Bargur

Field performance recording of Bargur cows through TANUVAS is taken up at a cost of Rs.14.27 lakh in the district of Erode. In the programme, 200 Bargur cows would be identified and 20 bull calves would be produced from high milk yielding cows and it is planned to be maintained at DLF, Hosur for frozen semen production.

ii. Kangeyam

Field Performance Recording of Kangeyam cows

This programme is implemented through Tamil Nadu Cooperative Milk Producers' Federation Limited at a cost of Rs.10.00 lakh. It

is implemented through the Erode, Tiruppur, Karur and Tiruchirapalli milk unions. Under the programme 200 cows would be identified and milk recorded and 20 bull calves from the high milk yielding cows would be selected for maintenance at DLF, Hosur for frozen semen production.

iii. Pulikulum

Field Performance recording of Pulikulum cows

To implement the programme through the Tirunelveli Veterianry College and Research Institute of TANUVAS in the districts of Madurai Sivagangai and Virudhunagar a sum of Rs.39.22 lakh has been released and works are in progress. Under the programme 100 Pulikulum cows would be identified and milk recorded and 10 bull calves born to high yielding cows are planned to be maintained at DLF, Hosur for frozen semen production.

iv. Others

For the conservation of Indigenous breeds Kangayam, Bargur and Pulikulum bulls are maintained at District Livestock Farm at Hosur in Krishnagiri District and Umbalachery bulls are maintained at Exotic Cattle Breeding Farm, Eachenkottai and semen produced are supplied to Artificial Insemination centers as per requirement.

2. Oestrus Synchronisation

Oestrus synchronisation and Artificial Insemination was done in 1535 cattle and 390 Buffaloes in 15 districts through this department at a cost of Rs.10.00 lakh.

During the year 2017-18 it is proposed to implement oestrus synchronisation and Artificial Insemination in 3000 cattle and buffaloes at an estimated cost of Rs.20.00 lakh

3. Fertility camps

A total of 700 fertility camps have been organised for cattle and buffaloes through the Department of Animal Husbandry and TCMPPF Limited at a cost of Rs.70.00 lakh.

During the year 2017-18 it is proposed to organise 700 fertility camps.

4. Strengthening of training center

The strengthening of DLF Hosur training center has been taken up at a cost of Rs.10.00 lakh.

5. Workshop for Artificial Insemination technicians

A workshop for 500 Artificial Insemination technicians was organised at Salem at a cost of Rs.2.00 lakh.

During the year 2017-18, it is planned to organise 4 workshops and seminars at an estimated cost of Rs.4.00 lakh

6. Establishment of national facility for molecular screening of cattle for inherited disorders and parentage testing

Establishment of National facility for molecular screening of cattle for inherited disorders and parentage testing has been taken up at the Madras Veterinary College under Tamilnadu veterinary and animal sciences university for screening of Cattle and Buffalo for genetically inherited disorders with a sanction of Rs.200.00 lakh and a sum of Rs.100.00 lakh was released so far and the programme is in progress.

7. Field Performance Recording of Crossbred

Jersey cows

Field Performance Recording of 300 Crossbred Jersey cows through (TCMPF) is

taken up at cost of Rs.8.00 lakh in the milk unions of Coimbatore, Dharmapuri, Dindigul, Erode, Madurai, Trichy, Salem, Tirunelveli, Vellore and Tiruvannamalai for the production of 60 bull calves from the high milk yielding cows. This would be procured for the semen production stations of the state.

8. Strengthening of the Tharparkar herd

Strengthening of the Tharparkar herd at the District Livestock Farm, Chettinad by procuring 50 Tharparkar cows and repairs to the cowshed is taken up at a cost of Rs.50.00 lakh.

9. Strengthening of Bull mother Farm

The Bull mother farm of TCMPF at Nucleus Jersey and Stud Farm, Udthagamandalam is strengthened at a cost of Rs. 52.00 lakh.

13.1.3 LIVESTOCK INSURANCE SCHEME

Under National Livestock Mission the Livestock Insurance Scheme is carried out in all districts of Tamil Nadu. A sum of Rs.797.83 lakh has been released during the year 2015-16 with the target to cover 2.70 lakh cattle units and 271060 cattle have been insured. The scheme was implemented by the department and Tamil Nadu Cooperative Milk Producers' Federation Limited.

2016-17 a sum of Rs.1108.33 lakh has been released to cover 2.00 lakh cattle units.

During the year 2017-18 also the livestock insurance policy will be continued.

13.1.4 NATIONAL DAIRY PLAN- PHASE I

Strengthening of Semen Production Station at District Livestock Farm, Udhagamandalam

To meet the State's requirement of frozen semen and to contribute to the national target the strengthening of the frozen semen

production station at District Livestock Farm, Udthagamandalam has been taken up at a total cost of Rs.6.46 crore during the period from 2012-13 to 2017-18, with an objective of increasing the semen production from 13.34 lakh doses in 2011-12, to 30 lakh frozen semen doses by 2017-18. The activities have been taken up and completed.

13.2 2017-18- New Programme

National Mission for Bovine Productivity

Proposal has been submitted to Government for the implementation of implementation of National Mission For Bovine Productivity Programme for identification of cattle and buffaloes by tagging issuing Animal Health Card, capturing information in Information Network for Animal Production and Health (INAPH) using tablets at a cost of Rs. 1058.166 lakh.

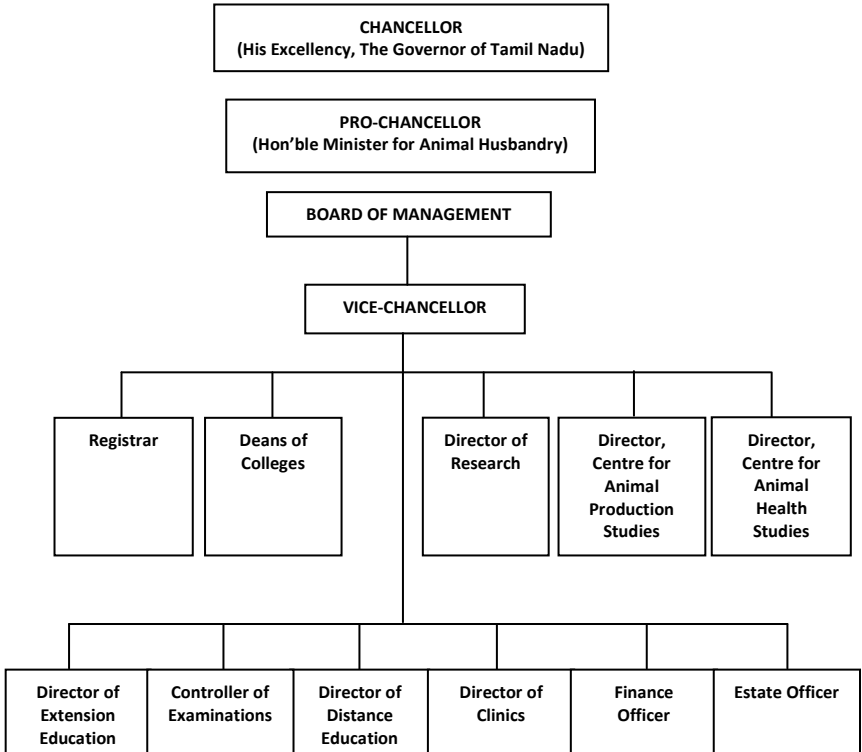
14. TAMIL NADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY

14.1 OBJECTIVES OF TANUVAS

Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) was established in 1989 with the following objectives:

- ❖ To impart quality education to undergraduate, post-graduate and doctoral students in different fields of Veterinary and Animal Sciences and Food Sciences
- ❖ To carry out research in livestock and poultry production, protection and value addition of products
- ❖ To disseminate knowledge on important technologies to line departments and farming community for the sustenance and growth of livestock and poultry in the State through extension programmes

14.2 ORGANOGRAM OF TANUVAS



14.3 UNITS OF TANUVAS

❖ COLLEGES

1. Madras Veterinary College, Vepery, Chennai
2. Veterinary College and Research Institute, Namakkal

3. Veterinary College and Research Institute,
Orathanadu, Thanjavur
4. Veterinary College and Research Institute,
Tirunelveli
5. College of Food and Dairy Technology,
Koduvalli, Chennai
6. College of Poultry Production and
Management, Hosur

❖ **CENTRES OF ADVANCED STUDIES
(CAS)**

1. Veterinary Clinical Medicine, Madras
Veterinary College, Chennai
2. Poultry Science, Veterinary College and
Research Institute, Namakkal

❖ **RESEARCH STATIONS**

1. Instructional Livestock Farm Complex,
Madhavaram Milk Colony, Chennai

2. Post Graduate Research Institute in Animal Sciences, Kattupakkam, Kancheepuram District
3. Poultry Research Station, Madhavaram Milk Colony, Chennai
4. Mecheri Sheep Research Station, Pottaneri
5. Sheep Breeding Research Station, Sandynallah, The Nilgiris District
6. TANUVAS Regional Research and Training Centre, Pudukottai
7. Bargur Cattle Research Station, Bargur, Erode
8. Institute of Animal Nutrition, Kattupakkam, Kancheepuram District

❖ **LABORATORIES**

1. Central University Laboratory, Madhavaram Milk Colony, Chennai
2. Animal Feed Analytical and Quality Assurance Laboratory, Namakkal

3. Poultry Disease Diagnosis and Surveillance Laboratory, Namakkal
4. Pharmacovigilance Laboratory for Animal Feed and Food Safety, Chennai
5. Zoonoses Research Laboratory, Madhavaram Milk Colony, Chennai
6. Bacterial Vaccine Research Centre, Madhavaram Milk Colony, Chennai
7. Viral Vaccine Research Centre, Madhavaram Milk Colony, Chennai
8. Avian Disease Laboratory, Thalaivasal
9. Centralized Instrumentation Laboratory, MVC, Chennai
10. Centralized Clinical Laboratory, MVC, Chennai
11. Veterinary University Training and Diagnostic Centre, Madurai
12. Central Feed Technology Unit, Kattupakkam

❖ **VETERINARY UNIVERSITY TRAINING
AND RESEARCH CENTRES**

- | | |
|------------------|---------------------|
| 1. Coimbatore | 2. Erode |
| 3. Dindigul | 4. Nagercoil |
| 5. Karur | 6. Rajapalayam |
| 7. Melmaruvathur | 8. Thanjavur |
| 9. Cuddalore | 10. Vellore |
| 11. Salem | 12. Thiruvannamalai |
| 13. Tiruppur | 14. Villupuram |
| 15. Tiruchy | 16. Krishnagiri |
| 17. Dharmapuri | 18. Nagapattinam |
| 19. Perambalur | 20. Ramanathapuram |

❖ **FARMERS TRAINING CENTRES**

1. Kancheepuram 2. Theni 3. Thiruvarur

❖ **KRISHI VIGYAN KENDRAS**

1. Kattupakkam 2. Kundrakudi 3. Namakkal

14.4 Education

Details of students admitted during 2016-2017 at TANUVAS are furnished below.

Table No 19: Students admission strength

B.V.Sc. & AH (Inclusive of NRI-9; Foreign Nationals-5 and Kashmiri migrants-2)	:	336
B.Tech. (Food Processing Technology)	:	20
B.Tech. (Poultry Production Technology)	:	20
B.Tech. (Dairy Technology)	:	20
M.V.Sc (inclusive of Foreign Nationals)	:	119
M.Tech (Food Technology)	:	10
M.Sc. (Bioinformatics)	:	10
M.Sc.(Biostatistics)	:	3
M.Sc. (Biotechnology)	:	10
M.Phil in Biotechnology	:	8
PG Diploma (Animal Sciences)	:	12
Ph.D. (Veterinary)	:	96

Ph.D. (Biotechnology)	:	5
Ph.D. (Food Technology)	:	5
MBA (Food and Livestock Business Management)	:	10

14.5 Awards / Recognition

- ❖ TANUVAS bagged 38th rank in the National Institutional Ranking Framework (NIRF) released by Ministry of Human Resource and Development (MHRD), Govt. of India.
- ❖ Among the 14 Indian Veterinary Universities TANUVAS ranked No. 1
- ❖ TANUVAS received ICAR award for securing the most number of Junior Research Fellowship (20 Nos.) on 14.02.2017.
- ❖ Indian Council of Agricultural Research, New Delhi has granted accreditation to

College of Food and Dairy Technology, Koduvalli, a constituent college of TANUVAS for five years up to 2020.

14.6 Achievements

Animal Mobile Medical Ambulance for Rural Veterinary Care in Tamil Nadu

For the first time in India, ten animal mobile medical ambulances at a cost of Rs. 633.96 lakhs with financial assistance from Government was implemented by TANUVAS in five districts (Tiruchirapalli, Thanjavur, Namakkal, Madurai and Kancheepuram). The Animal Mobile Medical Ambulance (AMMA) service (No. 1962) is in operation to cater to the Veterinary emergency services at the door steps and also serves for transferring the critical ill animals to veterinary hospitals for advanced treatment. So far, 892 animals have been treated out of this programme.

During 2017-18 the services will be continued.

GLP – Clean Room Laboratory

- ❖ A new GLP – Clean Room Laboratory having ISO class 7/8 standards with cleanliness of the order of one cubic foot containing only 10,000 particles commissioned under the Department of Biotechnology (DBT) - TANUVAS partnership programme on "Translational Research Platform for Veterinary Biologicals (TRPVB)" a 'first-of-its-kind' unique facility among academic institutions of India was inaugurated on 13.01.2016.

Animal Breed Registration Certificate

- ❖ Kodi Adu goat and Chevadu sheep of Tamil Nadu were registered as Breeds by Indian Council of Agricultural Research

(ICAR)- National Bureau of Animal Genetic Resources (NBAGR).

Ethno Veterinary Herbal Product Research and Development Centre, Thanjavur

- ❖ During 2016-17, under Tamil Nadu Innovative Initiatives (TANII), the State Planning Commission has sanctioned a sum of Rs.13.72 crore towards “Establishment of Ethno Veterinary Herbal Product Research and Development Centre, Thanjavur” and released a sum of Rs.8.21 crore for the year 2016-17. The objectives of this centre encompasses ex-situ conservation of Ethnoveterinary herbal resources; documentation of ethnoveterinary practices; research and development of ethnoveterinary herbal products; propagation of the traditional

herbal knowledge state-wide for livestock primary health care.

Products and technologies developed

- i. Nano Heal and Nano Dermal Cream for treatment of wounds and dermatitis
- ii. Surgical Scrub Kit
- iii. Mastiguard-Teat Protect and Somatic Cell Count kit to prevent common bacterial mastitis
- iv. Progesterone impregnated intravaginal sponges for synchronizing estrus in cattle and buffalo
- v. Improved meat type Japanese quail
- vi. Ethno veterinary medicine using Aloe vera gel for the treatment of early stage of mastitis in cow

14.7 Important events of TANUVAS during 2016-17

- ❖ 'Farmers Mela' was organized with the funding from NABARD and United India Insurance at Central University Laboratory (CUL) building on 13.01.2016. The catalogue manual entitled "New Technologies for livestock farmers - introduction and Release" comprising of 33 new equipments / devices designed by TANUVAS researchers at University Innovation and Instrumentation Centre (UIIC), was released and sold to the livestock farmers. About 150 farmers from all over Tamil Nadu participated.
- ❖ Veterinary College and Research Institute, Tirunelveli in association with the Pudhu Vaazhvu Project, Tirunelveli District has organized a one-day training programme

on “Dairy management and fodder cultivation” for the caretakers of mentally retarded beneficiaries of Pudhu Vaazhvu Project in three batches on 25.05.2016, 26.05.2016 and 27.05.2016. The number of beneficiaries was 68.

- ❖ The 8th Clinical Case Conference on “Farm and companion animal practice for veterinary students’ was organized by the Directorate of Clinics at MVC on 12.08.2016 and 13.08.2016. Hon’ble Minister for Animal Husbandry, Government of Tamil Nadu inaugurated the conference, released the compendium.
- ❖ Tamil Nadu Veterinary and Animal Sciences University celebrated its Foundation Day 2016 and Livestock and Poultry Farmers Day by organizing an Exhibition cum Farmers Technical

Workshop on the theme “Popularizing of novel low cost technological interventions for profitable livestock and poultry farming” Erode on 18.09.2016 and 19.09.2016. Hon’ble Minister for Environment, Government of Tamil Nadu presided over the function, released the Goat Pox Vaccine, transferred the vaccine technology for large scale production, distributed inputs to the needy farmers. Hon’ble Minister for Animal Husbandry, Govt. of Tamil Nadu released the Farmers’ Technical manual. More than 7,000 farmers visited the exhibition and about 3,000 farmers and 500 school students have registered for the knowledge sharing sessions.

- ❖ The Translational Research Platform for Veterinary Biologicals (TRPVB), TANUVAS developed an immune sorbent assay

(ELISA) kit, titled 'BruAlert Kit' for the diagnosis of Brucellosis in man and animals. The Hon'ble Minister of State for Science and Technology and Earth Sciences, Govt. of India and Hon'ble Minister of State for Agriculture and Farmer's Welfare, Government of India released the kit during the inauguration of Brucellosis 2016 International Research Conference held at New Delhi on 17.11.2016.

- ❖ TANUVAS started a new certificate course on Veterinary Nursing Assistant on 26.12.2016 at TANUVAS Regional Research and Training Centre, Pudukkottai. A total of 50 candidates are currently pursuing the course.

14.8 DETAILED ACTIVITIES OF TANUVAS DURING 2016-17

The activities of TANUVAS in the areas of Education, Research, Clinical services and Extension are outlined below:

14.8.1 Clinical Services

TANUVAS is offering clinical services to the pet and livestock owners round the clock. A total of 1,96,666 animals were treated as out-patient cases during the year 2016. A total of 3,830 large animals and 1,053 small animals were also treated as in-patient cases. A separate quarantine unit to house animals suspected for rabies is functioning in all the institutions. The hospitals are equipped with infrastructure facilities like Haemodialyser; Endoscopic image documenting system; colour Doppler ultrasonogram; Electrocardiogram; Vital Sign Monitor.

14.8.2 Laboratory services

❖ Pharmacovigilance Laboratory for Animal Feed and Food Safety, Madhavaram Milk Colony, Chennai

This laboratory is involved in analysis of mycotoxins, pesticides and drug residues in animal feed and food. During 2016-17, 2220 samples were analysed for mycotoxins and pesticide residues. The results were communicated to the entrepreneurs / farmers so as to enable them to formulate their animal/poultry feed free from toxic residues.

❖ Animal Feed Analytical and Quality Assurance Laboratory, Namakkal

A total of 25805 samples were received and 59122 tests for proximate, mineral, adulterants, contaminants and mycotoxins in feed, feed ingredients and vitamin concentration were carried out at this laboratory.

❖ **Zoonoses Research Laboratory,
Madhavaram Milk Colony, Chennai**

A total of 2,207 human and 1,216 animal serum samples from suspected cases were screened by Microscopic Agglutination Test (MAT) for detection of leptospiral antibodies.

14.8.3 Extension Activities

The activities undertaken by TANUVAS are furnished below.

- ❖ A total of 1184 on-campus and 932 off campus training programmes were conducted on 23 different topics including dairy farming, sheep and goat farming, poultry farming, pig farming, milk and milk products and feed and fodder cultivation. A total of 59751 farmers including 13,954 SC/STs were imparted training.

- ❖ A total of 65 training programmes were organized for the benefit of 3781 beneficiaries of various schemes of Government of Tamil Nadu *viz.*, Fodder development, Pudhu Vazhvu and Poultry development.
- ❖ A total of 45,869 beneficiaries of Tamil Nadu Government scheme “Priceless Distribution of Milch Cows and Goat / Sheep”, have been trained by the centres of TANUVAS.

14.8.4 Skill Development programmes

During the year 2016-17, this Directorate has offered 22 PG diploma courses for the field veterinarians to update their knowledge and skills on latest technologies in animal husbandry and veterinary sciences. Apart from this, 15 skill development courses and 10 self-employment courses in animal husbandry sector are being offered by this Directorate to boost livestock and

poultry production thereby enhancing the rural income. During 2016-17, 41, 45 and 315 candidates enrolled in the PG diploma, Skill development and Self-employment courses respectively.

14.9 NATIONAL AND INTERNATIONAL COLLABORATION

TANUVAS signed MoUs on 07.04.2016 with Central Council for Research in Siddha (CCRS), Ministry of AYUSH, Government of India to come out with a documentation on "Use of plants in animal practice" and conduct workshop on Siddha medicines in animal diseases and also with Genome Life Sciences to further research on livestock genomes by sharing the state of the art technologies, facilities and expertise available in both institutes, with an ultimately aim to develop genomic approach in the treatment of livestock diseases specifically, mastitis.

14.10 PRIORITIES FOR 2017-2018

- ❖ Conservation of native animal genetic resources of Tamil Nadu.
- ❖ Establishment of animal and poultry waste management centres.
- ❖ Introduction of innovativeness to develop food novelties by suitable enrichment / fortification.

15. BUDGET FOR 2017-18

A sum of Rs.1,161.1801 crore has been provided in the budget for 2017-18. Out of this, projected revenue expenditure is Rs.1,129.8543 crore, capital expenditure is Rs.31.0758 crore and loan amount is Rs.0.2500 crore.

16. CONCLUSION

Tamil Nadu's Animal Husbandry Sector has had a Golden period in the last 6 years. The

Schemes of Free distribution of Milch Cows, Goats and Sheep have made a major socio-economic impact on the rural poor. The Scheme for Poultry Development is bringing in Poultry Farms in the non-poultry regions of the State. The Schemes for Fodder Development are ensuring a higher availability of green fodder for the cattle. The huge Infrastructure Development allocation has enabled the Veterinary Institutions get modernised buildings and latest technology equipments. The continuous importance given to the animal husbandry sector by the Government of Tamil Nadu will enable the farmers of the State to achieve more and more of prosperity in the coming years.

P. BALAKRISHNA REDDY
Minister for Animal Husbandry



Broiler Farm Established under Scheme for Poultry Development



Native Chicken Farm Established under Scheme for Poultry Development



Veterinary Dispensary at P.Agraharam, Dharmapuri district constructed under NABARD RIDF XXI



Improved infrastructure facilities in a Veterinary Dispensary



Frozen Semen Bank, Cattle Breeding and Fodder Development, Thanjavur.



Azolla Cultivation-An Alternate Feed Substitute To Livestock rich in Protein



Examination of a dog through Ultrasound Scanner



Animal Mobile Medical Ambulance for Rural
Veterinary care



TANUVAS celebrated its Foundation Day and Livestock and Poultry Farmers Day at Erode (19.09.2016)



TANUVAS received ICAR award for securing the most number of Junior Research Fellowship (14.02.2017)