



ANIMAL HUSBANDRY, DAIRYING,  
FISHERIES AND FISHERMEN WELFARE  
DEPARTMENT

POLICY NOTE  
2021 - 2022

DEMAND No. 6

Thiru. ANITHA R. RADHAKRISHNAN  
**Minister for Fisheries – Fishermen Welfare  
and Animal Husbandry**

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**Government of Tamil Nadu  
2021**

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

– **Mahatma Gandhi**

"All creatures are our relatives. Our people have always admired the wealth of cattle as the greatest wealth in their lives. How compassionately we appreciate the cows that nurture our children and provide milk elixir next to our mother".

– **Greeting message from**

**Dr.Kalaingar Hon'ble Former Chief  
Minister**

on the occasion of the establishment of  
the Tamil Nadu Veterinary and  
Animal Sciences University

on 16.9.1989.

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# **ANIMAL HUSBANDRY DEPARTMENT**

## **POLICY NOTE 2021-22**

### **1. INTRODUCTION**

Animal Husbandry sector plays a vital role in sustaining rural livelihoods and improving the economy of rural population. Livestock sector provides productive employment, especially self-employment and guaranteed supplementary household income to a majority of rural households, particularly small and marginal farmers, besides providing nutritious food products like milk, meat and eggs. Livestock has always been an easily convertible asset to the poor during any emergency. Livestock has remained an integral part of the socio-economic fabric of rural people since time immemorial, not only as a source of livelihood but also as a provider of draught energy, manure and fuel.

Increased population, urbanisation and sustained rise in income are now fuelling rapid growth in the demand for animal food products. Livestock production has grown 45.62 percent faster than the total agriculture growth over the past thirty years, making it a major contributor to agricultural growth and a key factor in reducing poverty among the rural population.

The rural poor have little access to agriculture land, thereby limiting their opportunities in crop production. Compared to land, livestock wealth is equitably distributed, and generates opportunities to recover from poverty through livestock production.

Comprehensive veterinary services and health cover are provided to all livestock and poultry in the State through a vast network of veterinary institutions and sub-centres. Even animals in remote villages are provided veterinary services through Mobile Veterinary

Units. Veterinary diagnostic services are provided by a network of laboratories at district level through Animal Disease Intelligence Units (ADIUs), at State level through the Central Referral Laboratory (CRL) and Poultry Disease Diagnostic Laboratories (PDDLs) in poultry intensive districts.

The State is undertaking upgradation of local stock of cattle and buffaloes by Artificial Insemination using exotic and cross breeding bulls through Artificial Insemination Centres.

The development of livestock and poultry is crucial to the agricultural development of developing countries. India is the largest milk producer in the world with a share of 20.17 per cent of the total milk production. India accounts for about 5.65 per cent of global egg production and 3 per cent for meat production. (Agricultural and Processed Food Products Export Development Authority –APEDA, 2018).

In the State, the share of livestock in the Gross State Domestic Product (GSDP) has increased from 3.78 per cent in 2011-12 to 5.21 per cent in 2019-20, while its contribution to the State agriculture and allied activities has increased from 29.86 per cent to 41.58 percent.

Majority of farmers depend on animal husbandry activities for their livelihood. With increase in production of livestock products, livestock rearing is also considered as an important avocation with high export potential. The distribution of livestock wealth is more egalitarian compared to land. From the equity and livelihood perspective, it is considered as an important component in poverty alleviation programmes.

The GVA (Gross Value Added) of livestock sector has increased from Rs.26,179.44 crore during 2011-12 to Rs.87,538.79 crore during 2019-20.



Owing to the concerted efforts of the Department, the estimated milk production in Tamil Nadu is increased from 87.58 lakh metric tonnes to 97.90 lakh metric tonnes. The estimated egg production is 1,90,696 lakh numbers and estimated meat production is 6.47 lakh MT (2020-21 provisional). The per capita availability in the State is 323 gms of milk per day and 230 number of eggs per year.

Thus, the efforts of the Department have resulted in the overall increase in production of milk, meat and eggs in the State which consequently has provided additional income to farmers in villages, thereby improving rural economy.

## **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
- ❖ Organising animal husbandry practices on scientific lines for increasing production and productivity of livestock
- ❖ 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, surveillance and monitoring
- ❖ Implementing various Union 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 and entrepreneurs
- ❖ Development of Entrepreneurship

### **3.CHRONOLOGICAL DEVELOPMENT OF THE DEPARTMENT**

1799	Veterinary aid in India started when East India Company of the British brought five Veterinary Surgeons from London to improve the breeding of horses and camels in India.
1892	Civil Veterinary Department was inaugurated as a separate department manned by Military personnel.
1924	Hosur Cattle Farm was taken over from army and cattle breeding station was 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	Mobile Veterinary Units established.
1969	Directorate of Veterinary Education and Research was formed separately.
1970	The Department was reorganized.
1975	Introduction of Artificial Insemination with Frozen Semen.
1977	Animal Disease Intelligence Units were established.
1981	Establishment of Poultry Disease Diagnostic Laboratory at Erode.
1999	Formation of Directorate of Veterinary Services.
2003	Formation of Tamil Nadu Livestock Development Agency (TNLDA) under the National Project on Cattle and Buffalo Breeding (NPCBB).
2005-2006	Improvement of Infrastructure of Veterinary Institutions through National Bank for

	Agricultural and Rural Development (NABARD) Rural Infrastructure Development Fund (RIDF) X.
2006-2007	Livestock Insurance Scheme was introduced in 5 districts.
2007-2008	Tamil Nadu Veterinary Infrastructure Improvement Project (TANVIIP) was launched with funds sourced from NABARD RIDF XI.
2008-2009	Livestock Insurance scheme extended to 5 more districts.
2009-2010	Livestock Insurance scheme extended to 5 more districts, thus Insurance Scheme is implemented in 15 districts.
2011-2012	<ul style="list-style-type: none"> <li>➤ Inauguration of Hon'ble Chief Minister's Special Schemes viz., Free distribution of Milch Cows and Free distribution of Goats/ Sheep with priority given to women headed poor families.</li> <li>➤ State Fodder Development Scheme (SFDS) launched to promote Fodder Production.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ 585 Sub-Centres were upgraded as Rural Veterinary Dispensaries.</li> <li>➤ The number of Animal Husbandry Divisions was increased from 65 to 76 to match the number of Revenue Divisions.</li> <li>➤ Infrastructure improvement in 360 Veterinary Institutions and 12 Livestock Farms through NABARD RIDF XVII.</li> <li>➤ Upgradation of Bacterial Vaccines Laboratory to Good Manufacturing Practices (GMP) standards at the Institute of Veterinary Preventive Medicine (IVPM) was sanctioned under NADP.</li> </ul>
2012-2013	<ul style="list-style-type: none"> <li>➤ Launching of Scheme for Poultry Development.</li> <li>➤ Creation of 5 new Joint Director offices of Animal Husbandry to match the number of Districts (except Chennai).</li> <li>➤ Introduction of Embryo Transfer Technology (ETT) at District Livestock Farm (DLF), Hosur and at field level in 8 Districts successfully.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Conduct of 19<sup>th</sup> Quinquennial Livestock Census.</li> </ul>
	<ul style="list-style-type: none"> <li>➤ 2 new Veterinary College and Research Institutes were established under TANUVAS at Orathanad of Thanjavur district and at Tirunelveli.</li> </ul>
2013-2014	<ul style="list-style-type: none"> <li>➤ Directorate of Animal Husbandry and Veterinary Services was awarded with the "<b>Best Practices Award</b>" for improvement of quality Delivery System ensuring Good Governance" by the Hon'ble Chief Minister on Independence Day.</li> <li>➤ Upgradation of 100 Sub-Centres to Veterinary Dispensaries.</li> <li>➤ Establishment of 11 Cattle Breeding and Fodder Development Units (CBFDs).</li> <li>➤ Provision of 53 Ultra Sound scanning equipment to Clinician Centres, Livestock Farms and Cattle Breeding and Fodder Development Units (CBFDs).</li> </ul>

	<ul style="list-style-type: none"><li>➤ Provision of 5 portable Ultrasound scanning equipment to 5 Veterinary Polyclinics.</li><li>➤ Steps initiated for conservation of indigenous breeds of livestock such as Kangayam, Umblachery and Bargur by conducting exhibitions and workshops.</li><li>➤ Introduction of Slatted Floor for rearing Goats through five Departmental Livestock Farms with funding under "Integrated Development of Small Ruminants and Rabbits" (IDSRR) Scheme.</li><li>➤ A very severe outbreak of Foot and Mouth disease was effectively controlled through measures taken on a war footing.</li><li>➤ Expansion of Rural Backyard Poultry Scheme to cover all Districts except Chennai.</li><li>➤ Infrastructure improvement to Dog Breeding Unit at Saidapet.</li><li>➤ Construction of 450 Veterinary Institutions through NABARD RIDF XIX.</li></ul>
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	<ul style="list-style-type: none"> <li>➤ Establishment of "Stem Cell Research Centre for Animals", the first of its kind in the country, on 19.06.2013 at TANUVAS, Chennai.</li> <li>➤ Silver Jubilee celebration of TANUVAS.</li> </ul>
2014-2015	<ul style="list-style-type: none"> <li>➤ Creation of 3 new Assistant Director offices of Animal Husbandry at Srirangam, Iluppur and Ambattur. Thus, the number of Animal Husbandry divisions increased from 76 to 79, to match the number of Revenue Divisions.</li> <li>➤ Establishment of 2 Animal Disease Intelligence Units (ADIUs) at Pudukottai and Thiruvannamalai.</li> <li>➤ Upgradation of 100 Sub-Centres into Veterinary Dispensaries.</li> <li>➤ Establishment of 50 new Sub-Centres.</li> <li>➤ Effective control measures taken on a war footing to prevent the spread of Avian Influenza from Kerala into Tamil Nadu.</li> <li>➤ Orders issued for provision of computerized X-ray machines to 15</li> </ul>

	<p>Veterinary Institutions.</p> <ul style="list-style-type: none"> <li>➤ Training on artificial insemination and provision of inputs to 500 Rural Youth to establish 500 new Artificial Insemination Centres.</li> <li>➤ Expansion of Cattle Insurance Scheme to cover all the districts in the State under National Livestock Mission.</li> <li>➤ Construction of 226 Veterinary Institution buildings through NABARD RIDF XX.</li> </ul>
2015-2016	<ul style="list-style-type: none"> <li>➤ Animal Mobile Medical Ambulance Scheme was introduced in 5 districts.</li> <li>➤ Establishment of 100 new Veterinary Sub-Centres.</li> <li>➤ Upgradation of Chief Executive Officer's post of TNLDA to Additional Director cadre.</li> </ul>
2016-2017	<ul style="list-style-type: none"> <li>➤ Establishment of Feed and Water Analytical Laboratory at Palladam, Tiruppur District.</li> <li>➤ Construction of new office building for the Regional Joint Director and Assistant</li> </ul>

	<p>Director at Kancheepuram.</p> <ul style="list-style-type: none"> <li>➤ Establishment of 2 Animal Disease Intelligence Units (ADIUs) at Tiruppur and Tiruvallur.</li> <li>➤ Establishment of a Veterinary Epidemiology Centre at Saidapet, Chennai.</li> </ul>
2017-2018	<ul style="list-style-type: none"> <li>➤ Establishment of 100 new Veterinary Sub-Centres.</li> <li>➤ Establishment of 2 Animal Disease Intelligence Units (ADIUs) at Perambalur and Theni.</li> <li>➤ Creation of 16 new Administrative Officer posts at Regional Joint Director offices.</li> <li>➤ Establishment of Pulikulam Breed Research Station at Sivagangai.</li> <li>➤ Establishment of Kangayam Breed Research Station at Erode.</li> </ul>
2018-2019	<ul style="list-style-type: none"> <li>➤ Establishment of Livestock and Poultry Feed Technology Centre at Tirunelveli.</li> <li>➤ Establishment of Alambadi Breed Research Station at Dharmapuri.</li> </ul>

2019-2020	<ul style="list-style-type: none"> <li>➤ Establishment of Integrated Livestock Park at Chinnasalem.</li> <li>➤ Construction of new buildings for Animal Disease Intelligence Units (ADIUs) at Tiruvarur and Namakkal.</li> <li>➤ Establishment of 3 Animal Disease Intelligence Units (ADIUs) at Ariyalur, Kanniyakumari and Namakkal.</li> <li>➤ Construction of new building for Veterinary Polyclinic at Tiruppur.</li> <li>➤ Construction of new office building for Regional Joint Director at Thanjavur.</li> </ul>
2020-2021	<ul style="list-style-type: none"> <li>➤ Establishment of Goat Research Station at Tenkasi.</li> <li>➤ Establishment of Trichy Black Sheep Research Station at Dharmapuri.</li> <li>➤ Establishment of new Veterinary University Training and Research Centre at Thoothukudi.</li> </ul>

#### **4. LIVESTOCK WEALTH IN TAMIL NADU**

Livestock has remained an integral part of one's life since time immemorial. People consider animals as mobile assets as well as human companions. Products that are obtained through Livestock are useful for the economic upliftment of the people.

In Tamil Nadu, native breeds of cattle such as Kangayam, Umblachery, Alambadi, Bargur and Pulikulam and Toda buffaloes are being reared. Among these, Kangayam cattle are being reared in the Western districts viz., Tiruppur, Erode, Coimbatore and Karur, Umblachery cattle in the Eastern districts viz., Thanjavur, Tiruvarur, Nagapattinam and Cuddalore, Alambadi cattle in the Western districts viz., Dharmapuri, Erode and Salem, Pulikulam cattle in the Southern districts viz., Sivagangai, Madurai, Dindigul and Theni, Bargur cattle in Erode and Toda buffalo in The Nilgiris.

Likewise, native breeds of sheep Mecheri (Salem and Erode districts), Ramnad White (Thoothukudi and Ramanathapuram districts), Madras Red (Chennai, Kancheepuram and Tiruvallur districts), Kilakaraisal (Ramanathapuram, Virudhunagr, Madurai and Dindigul districts), Vembur (Thoothukudi district), Tiruchy Black (Perambalur, Ariyalur, Tiruchirappalli and Villupuram districts), Coimbatore (Coimbatore and Tiruppur districts) and Nilgiri (The Nilgiris district) and native goat breeds like Kanni Adu (Virudhunagar, Thoothukudi and Tirunelveli districts), Kodi Adu (Thoothukudi and Tirunelveli districts) and Salem Black (Salem, Dharmapuri and Krishnagiri districts) are being reared in Tamil Nadu.

Apart from these native breeds, crossbred high milk yielding breeds such as Jersey in plains and Holstein Friesian in hills are being reared by farmers.

**Table 1: Livestock and Poultry Population as per the 20<sup>th</sup> Livestock Census in State**

<b>Species</b>	<b>Population (in lakh Nos.)</b>
Cattle	95.19
Buffalo	5.19
Sheep	45.00
Goat	98.88
Pigs	0.67
Others(Horses,Ponies,Mules, Donkeysand Camel)	0.07
<b>Total Livestock</b>	<b>245.00</b>
Fowls and other birds (Farm)	995.16
Fowls and other birds (backyard poultry)	212.64
<b>Total Poultry</b>	<b>1,207.80</b>

Tamil Nadu ranks 2<sup>nd</sup> in respect of Poultry, 4<sup>th</sup> in Sheep, 7<sup>th</sup> in Goats, 13<sup>th</sup> in Cattle and 14<sup>th</sup> in Buffalo population in the country.

## **5. ADMINISTRATIVE SET UP**

The Animal Husbandry Department is headed by the Director of Animal Husbandry and Veterinary Services, in the cadre of Indian Administrative Service.

The Director is assisted on technical subjects by four Additional Directors, two Joint Directors, one Deputy Director and nine Assistant Directors in the Directorate. On the administrative side, one Joint Director (Admin.), one Deputy Director (Personnel) and two Administrative Officers assist the Director.

A Financial Controller, a Chief Accounts Officer deputed from Finance Department and Accounts Officer, Assistant Accounts Officer deputed from Treasuries and Accounts Department, Assistant Director (Agri.) from Agriculture Department and Deputy Registrar from Co-operative Department provide assistance to the Director on concerned issues.

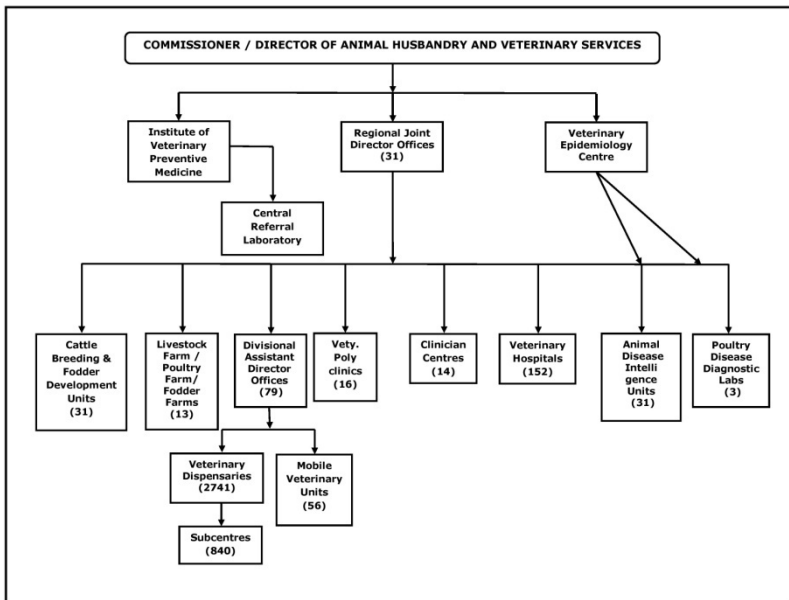
Regional Joint Directors and Deputy Directors are responsible for the activities of the Department at the District level and Assistant Directors are responsible at the Divisional level.



Institute of Veterinary Preventive Medicine (IVPM) at Ranipet, which manufactures Vaccines and Veterinary Biologicals, is headed by a Director in the cadre of Additional Director.

The Veterinary Epidemiological Centre (VEC), headed by a Joint Director, functioning from Veterinary Polyclinic campus, Saidapet, Chennai coordinates and monitoring the work of the Animal Disease Intelligence Units (ADIUs) and Poultry Disease Diagnostic Laboratories.

## DEPARTMENT 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. In the 1950-60's, the number of Veterinary Institutions were only 120. By 2020-21, their numbers have increased to 2,979. This includes 16 Veterinary Polyclinics, 14 Clinician Centres, 152 Veterinary Hospitals, 2,741 Veterinary Dispensaries and 56 Mobile Veterinary Units. They provide various veterinary services to the livestock and poultry in the State including medical treatment, surgical treatment, gynaecological treatment, infertility treatment and immunization.

- ❖ Veterinary Polyclinics, headed by a Clinician, who is assisted by Veterinary

Assistant Surgeons, function round the clock, provide specialised services.

- ❖ Clinician Centres, headed by a Clinician, who is assisted by a Senior Veterinary Livestock Supervisor provide specialized services.
- ❖ Veterinary Hospitals, headed by a Veterinary Surgeon, who is assisted by a Senior Veterinary Livestock Supervisor, provide veterinary services to the farmers.
- ❖ Veterinary Dispensaries, headed by a Veterinary Assistant Surgeon provide veterinary services, Government welfare schemes and Extension services to the farmers.
- ❖ Mobile Veterinary Dispensaries, headed by a Veterinary Assistant Surgeon provide veterinary services at the doorsteps of the farmers on a scheduled programme.

- ❖ Veterinary Sub Centres, manned by a Livestock Inspector, provide first-aid and minor veterinary services.

The species-wise work done in the above Veterinary Institutions during 2020-21 is as follows:

**Table 2: Work done in the Veterinary Institutions during 2020-21**

<b>ACTIVITIES (2020-21)</b>		<b>(In Lakh No.s)</b>
1	Cases treated (inc. first aid)	371.10
2	Artificial Insemination	52.80
3	Vaccination	534.00
4	Castration	8.99
5	Deworming	356.36
7	Calves Born	23.43

**Table 3: District wise Veterinary Institutions and Sub Centre details**

Sl. No.	District	VPC	CC	VH	VD	Sub Centres	MVD
1	Ariyalur	0	0	2	44	9	1
2	Chennai	1	0	1	0	0	1
3	Coimbatore	1	1	15	98	26	2
4	Cuddalore	0	1	5	92	56	1
5	Dharmapuri	0	1	3	80	10	2
6	Dindigul	1	0	5	106	63	1
7	Erode	2	0	6	106	24	3
8	Kancheepuram	0	1	0	45	14	1
9	Chengalpattu	0	1	1	61	24	1
10	Kanyakumari	1	0	2	49	15	2
11	Karur	0	1	2	72	12	1
12	Krishnagiri	1	0	2	79	14	1
13	Madurai	1	0	4	96	53	1
14	Nagapattinam	0	0	3	34	14	1
15	Mayiladuthurai	0	2	1	38	7	1
16	Namakkal	0	0	5	105	8	3
17	Perambalur	0	0	0	37	5	0
18	Pudukottai	0	1	4	101	32	2
19	Ramnad	0	0	4	55	14	0
20	Salem	1	0	7	149	9	6
21	Sivagangai	0	0	2	79	47	0
22	Thanjavur	1	1	7	105	28	3
23	Theni	0	0	3	53	46	1
24	The Nilgiris	0	1	2	29	7	3
25	Tiruppur	2	0	7	102	39	1
26	Tiruvallur	0	0	5	88	26	1
27	Tiruvannamalai	0	1	5	124	21	3
28	Tiruvarur	0	1	10	72	30	1
29	Thoothukudi	1	0	2	70	41	1
30	Tiruchirappalli	1	0	8	103	34	2

Sl. No.	District	VPC	CC	VH	VD	Sub Centres	MVD
31	Tirunelveli	1	0	5	51	16	1
32	Tenkasi	0	0	3	61	19	0
33	Vellore	1	0	4	38	7	1
34	Tirupathur	0	0	2	37	9	2
35	Ranipet	0	0	2	46	10	1
36	Villupuram	0	0	5	101	6	2
37	Kallakurichi	0	1	2	53	18	2
38	Virudhunagar	0	0	6	82	27	0
<b>TOTAL</b>		<b>16</b>	<b>14</b>	<b>152</b>	<b>2741</b>	<b>840</b>	<b>56</b>

## **7.MEDICINES, EQUIPMENTS AND CHEMICALS**

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

**Table 4: Fund Allocation -2021-22**

Sl. No	Items	Fund Allotted (Rs.in Lakh)
1	Medicine	2,582.08
2	Equipment and surgical suture	321.17
3	Intensive health plan	105.00
4	Mineral mixture	496.77
5	Alternative medicine	160.59
6	Reserve fund	209.29
	<b>TOTAL</b>	<b>3,874.90</b>

Distribution of medicines to all the Veterinary Institutions are undertaken based on the monetary ceiling provided for each type of Institution.

## **8. Disease Preventive Institutions**

### **8.1 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.

The bacterial vaccine production laboratory is already Good Manufacturing Practices (GMP) compliant and vaccine production is already underway from the upgraded laboratory.

**Table 5: Biological Production details  
2020-21**

<b>Sl. No</b>	<b>Biological produced</b>	<b>Doses</b>
<b>A.</b>	<b>Bacterial Vaccines (doses in lakh)</b>	
1	Anthrax spore vaccine	31.499
2	Black quarter vaccine	5.337
3	Enterotoxaemia	0.593
4	Haemorrhagic septicaemia	0.593
<b>B.</b>	<b>Viral Vaccines (doses in lakh)</b>	
1	Sheep Pox vaccine	2.12



<b>Sl. No</b>	<b>Biological produced</b>	<b>Doses</b>
2	Duck Plague vaccine	86.71
3	Ranikhet disease vaccine 'F'	20.01
4	Ranikhet disease vaccine 'K'	361.874
5	Ranikhet disease vaccine ' <i>Lasota</i> '	15.305
<b>C.</b>	<b>Diagnosics (in ml)</b>	
1	CMT Antigen	1000
2	Brucella abortus Coloured Antigen	4600
3	SPC Antigen	710
<b>D.</b>	<b>Diluents (in litres)</b>	
1	Phosphate Buffer Saline	2928

The institute is in the process of being upgraded to 'Good Manufacturing Practices' standards in collaboration with National Dairy Development Board (NDDB) and Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).

The work of construction of the Quality Control / Quality Assurance lab and Anthrax Spore Vaccine Production lab with GMP standards, Small Animals Testing facilities with

Good Laboratory Practices (GLP) standards is presently underway at IVPM Ranipet.

## **8.2 DISEASE PREVENTION, DIAGNOSIS, CONTROL AND ERADICATION**

Various bacterial, viral, protozoal, parasitic diseases affect livestock and poultry cause 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, 31 Animal Disease Intelligence Units (ADIUs), three Poultry Disease Diagnostic Laboratories (PDDLs) and one Veterinary Epidemiology Centre and one Central Referral Laboratory (CRL) are functioning in the State.

### **8.2.1 Animal Disease Intelligence Units (ADIU)**

These units play a major role in disease forecasting, attending outbreaks, conducting awareness camps, distribution of vaccines and monitoring vaccination programmes, collection of serum samples for sero monitoring for various diseases, especially Foot and Mouth Disease (FMD), Pestedes Petits Ruminants (PPR), Brucellosis, etc.

These units are also responsible for monitoring the efficiency of vaccination, assessing immune status of vaccinated animals, collection and testing of samples for surveillance of various diseases from simple parasitic infestations to serious zoonotic diseases such as Brucellosis, Tuberculosis, Para-Tuberculosis, Avian Influenza, Bovine Spongiform Encephalopathy, etc.

Sophisticated instruments such as haematology analyser, urine analyser, biochemical analyser, etc., are available at the ADIUs. Walk-in Coolers and Ice-lined Refrigerators (ILRs) for storage of biologicals and vaccines are also provided in these units for maintaining cold chain for vaccines.

Animal Disease Intelligence Units have been established in 31 districts (except Tenkasi, Kallakurichi, Tirupathur, Ranipet, Chengalpattu, Chennai and Mayiladuthurai). These districts are covered by the ADIUs of Tirunelveli, Villupuram, Vellore, Kancheepuram and Nagapattinam respectively.

### **8.2.2 Poultry Disease Diagnostic Laboratory (PDDL)**

To cater to the needs of farmers in areas of high poultry production, Poultry Disease Diagnostic Laboratories are functioning at

Andagalur Gate, Namakkal and Erode District. They are involved in diagnosis of poultry diseases by conducting post mortem, testing of droppings, blood samples and other specimens for viral diseases such as Ranikhet Disease, Infectious Bursal Disease, Infectious Bronchitis, Avian Leucosis Complex, common bacterial diseases like Salmonella, E. coli and parasitic infestations.

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

Another PDDL with laboratory facilities for water and feed testing has been constructed in collaboration with National Dairy Development Board (NDDB) and TANUVAS at Palladam, Tiruppur district for catering to the needs of numerous broiler farmers.

### **8.2.3 Veterinary Epidemiology Centre (VEC)**

The Veterinary Epidemiology Centre was established on September 2017 at Saidapet, Chennai-35. It is carrying out the surveillance, monitoring and forecast of livestock and poultry diseases in Tamil Nadu.

The centre is headed by the Chief Epidemiology Officer in the cadre of Joint Director of Animal Husbandry.

The VEC periodically monitors the activities of ADIUs and PDDLs at District level and offers suitable instruction regarding diseases Outbreak and Vaccination.

Since inception, the VEC has attended 108 disease outbreaks related inspection in the State besides carrying out the monitoring of FMD-CP vaccination work.

#### **8.2.4 Central Referral Laboratory (CRL)**

Central Referral Laboratory, the apex laboratory of the State for diagnosis of livestock diseases, is located at IVP, Ranipet.

This laboratory plays a major role in disease confirmation by *Office International des Epizooties* (OIE) approved laboratory techniques and provides technical guidance to the Animal Disease Intelligence Units (ADIUs) / Poultry Disease Diagnostic Laboratories (PDDLs) to control livestock and poultry diseases during outbreaks.

### **8.3 Disease Preventive Services**

The vaccinations are done at or near the farmers' door steps by the field veterinarians. Every year, disease forecasting is done based on the outbreak of diseases during the preceding 5 years. Vaccination is being carried out before the expected onset of monsoon.

PPR vaccine have been procured under Government of India schemes (PPR-CP). Vaccines against economically important livestock diseases such as Anthrax, Black Quarter, Haemorrhagic Septicaemia and Sheep Pox are produced in the Institute of Veterinary Preventive Medicine (IVPM), Ranipet.

The funds for the same are sourced from the Government of India sponsored "Assistance to States for the Control of Animal Diseases (ASCAD)" scheme. All the vaccinations are carried out free of cost.

**Table 6: Vaccination carried out during 2020-21**

Name of the Disease	Type of animals Vaccinated	No. of animals vaccinated (nos. in lakh)
Anthrax	Cattle, Buffalo, Sheep and Goat	37.68
Black Quarter	Cattle	4.73
Enterotoxaemia	Sheep	0.08
Foot and Mouth Disease	Cattle, Buffalo	87.03
Fowl Pox	Poultry	0.38



Name of the Disease	Type of animals Vaccinated	No. of animals vaccinated (nos. in lakh)
Haemorrhagic Septicemia	Cattle and Buffalo	0.55
Peste des Petits Ruminants	Goats	78.00
Ranikhet Disease	Poultry	323.27
Rabies	Pet animals	1.88
Sheep Pox	Sheep	0.40
<b>Total</b>		<b>534.00</b>

Besides the vaccines mentioned above, the Institute of Veterinary Preventive Medicine (IVPM) manufactures Ranikhet Disease vaccine, Fowl Pox vaccine and Duck Plague vaccines also.

Foot and Mouth disease, a highly contagious, viral, vesicular disease of cloven-footed animals, that causes heavy economic loss, is controlled by implementing Foot and Mouth Disease Control Programme (FMDCP) funded jointly by the State and Union Government.

So far, 17 rounds of FMD vaccination have been carried out in the State under the FMDCP.

### **8.3.1 National Animal Disease Control Programme - Foot and Mouth Disease and Brucellosis (NADCP)**

Vaccination against Foot and Mouth Disease and Brucellosis is carried out for entire bovine population in the State twice a year through NADCP, fully sponsored by GoI. Under the scheme, 87 lakh bovines were vaccinated during the first round.

## **9. LIVESTOCK DEVELOPMENT**

### **9.1 Departmental Farms**

The Department maintains 8 Livestock Farms, 3 Sheep Farms, one Poultry Farm and one Fodder Seed Production Farm. These Livestock Farms act as model units for demonstrating best practices and scientific techniques to the Livestock rearers. Fodder slips, fodder seeds and good quality germplasm

are supplied to the farmer at nominal rates fixed by the Government.

**Table 7: Location of Departmental Farms and the animals 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	Tellicherry, Kodi Adu, Salem Black
		Pigs	Large White Yorkshire
		Poultry	Aseel, Giriraja
		Horses	Kathiawar and Thoroughbred
3	District Livestock Farm, Abishekapatti (Tirunelveli District)	Cattle	Crossbred Jersey, Sahiwal
		Sheep	Kilakaraisal
		Goat	Kanni Adu
		Pigs	Large White Yorkshire, Landrace
Poultry	Vanaraja, Giriraja, Aseel		
4	District Livestock Farm, Udhagamandalam (The Nilgiris District)	Cattle	Jersey, Crossbred Jersey, Holstein Friesian, Crossbred Holstein Friesian
5	District Livestock Farm, Pudukottai (Pudukottai District)	Cattle	Crossbred Jersey, Crossbred Holstein Friesian
		Sheep	Ramnad White
		Goats	Jamnapari

Sl. No	Name of the Farm	Species	Breeds
		Pigs	Landrace, LargeWhite Yorkshire
6	District Livestock Farm, Naduvur (Thanjavur District)	Cattle	Jersey
		Buffalo	Murrah
7	District Livestock Farm, Chettinad (Sivagangai District)	Cattle	Crossbred Jersey, Holstein Friesian, Crossbred Holstein Friesian, Tharparkar, Sahiwal
		Sheep	Ramnad White
		Goats	Jamnapari, Tellicherry
		Pigs	Large White Yorkshire
		Poultry	Aseel
8	Livestock Farm, Korukkai (Tiruvarur District)	Cattle	Umblachery
9	Sheep Farm, Chinnasalem (Kallakurichi District)	Sheep	Mecheri, Madras Red
		Goats	Salem Black, Tellicherry
10	Sheep Farm, Mukundarayapuram (Vellore District)	Sheep	Madras Red
11	Sheep Farm, Sathur (Virudhunagar District)	Sheep	Vembur
		Goats	Kanni Adu
12	Poultry Farm, Kattupakkam, (Chengalpattu District)	Fowls	Vanaraja, Giriraja, Nicobari, Kadaknath, White Leghorn, Aseel, Rhode Island Red, Guinea Fowl.
		Turkey	Beltsville white
		Quail	Japanese Quail
13	Fodder Seed Production Farm, Padappai (Kancheepuram District)		Fodder sorghum CoFS-31, Cumbu Napier Co-4, Co-5, Desmanthus, Agathi

## **9.2 Frozen Semen Production**

In order to increase the milk quality in cattle and to ensure the availability of high genetic merit and quality of frozen semen straw, there are 3 Frozen Semen Production Stations operating in the Exotic Cattle Breeding Farm, Eachenkottai and District Livestock Farms at Hosur and Udhagamandalam. In these Frozen Semen Production Stations, the minimum standardization guidelines laid down by the Government of India, with a view to produce quality frozen semen are fully followed. In addition, I.S.O certification has been issued by the Bureau of Indian Standards for Eachenkottai and Udhagamandalam Frozen Semen Station. These stations produce suitable frozen semen straws to ensure better fertility, conception rate and rapid genetic improvement in the livestock maintained by the farmers.

There are 31 Cattle Breeding and Fodder Development Units in operation to distribute the frozen semen straws to all Veterinary Institutions and Veterinary Sub Centres.

These units are also involved in augmenting fodder development through distribution of fodder seeds, fodder slips and tree fodder seedlings to the needy farmers.

**Table 8: Frozen Semen Production  
(In lakh doses)**

<b>Sl. No</b>	<b>Frozen Semen Station</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>
1	Exotic Cattle Breeding Farm, Eachenkottai	38.17	29.33	38.42	49.13
2	District Livestock Farm, Hosur	9.21	11.05	16.05	14.84
3	District Livestock Farm, Udthagamandalam	20.12	18.43	10.34	11.74
<b>Total</b>		<b>67.50</b>	<b>58.81</b>	<b>64.81</b>	<b>75.73</b>

## **10. SCHEMES**

Animal Husbandry provides livelihood opportunities to millions of small / marginal farmers and landless poor. Employment generation schemes, when implemented properly, can ensure higher levels of economic activity, leading to sustainable growth in rural areas. Keeping this in mind, the Department is implementing various beneficiary-oriented schemes for the economic upliftment and welfare of the poor and downtrodden.

### **10.1 KALNADAI PADHUKAPPU THITTAM**

'Kalnadai Padukappu Thittam' is a novel scheme inaugurated on 18.01.2000 by the Hon'ble Chief Minister, Dr. Kalaingar M. Karunanudhi at Thirukazhukundram in Kancheepuram District (now in Chengalpattu district). This flagship programme is under continuous implementation ever since its

inception. Special veterinary health camps are conducted for taking the veterinary services to remote inaccessible villages. All the necessary services such as treatment of ailing animals, deworming, vaccination, castration, artificial insemination, pregnancy diagnosis and infertility treatment are provided at these camps.

Every year, 5,500 camps were conducted in all village panchayats at a total cost of Rs. 2.31 crore.

Due to Covid-19 pandemic during the year 2020-21, only 2,750 special camps could be conducted at a total cost of Rs.1.13 crore benefitting, 40.86 lakh livestock and poultry.

## **10.2 Fodder Development**

Green fodder plays an important role in the profitability of the livestock production. The objective of the increased milk production can be met only by ensuring the availability of good quality fodder in a balanced ratio. The demand



for both green and dry fodder is increasing day by day.

Livestock production is more efficient from cultivated fodder than from the fodder obtained from degraded grazing lands. Shrinkage of cultivable land under fodder is observed due to pressure on agricultural land for food and cash crops.

The seasonal nature of availability of green fodder and a number of by-products necessitate preservation of fodder to feed the animals throughout the year. It is therefore essential that every dairy farm must preserve the surplus fodder either in the form of silage or hay.

The Department is focusing on augmenting fodder production, conservation and management of available fodder resources to overcome fodder scarcity, particularly during the lean period and natural calamities including droughts / floods by implementing various State and Union shared schemes viz., State Fodder

Development Scheme (SFDS), National Livestock Mission (NLM), Additional Fodder Development Programme (AFDP) under National Agriculture Development Programme (NADP) etc.

### **10.2.1 Fodder production in Departmental farms**

To ensure timely supply of seeds to the farmers, fodder seed production units have been established in the department's livestock farms. These farms produce and supply green fodder, certified seeds, fodder slips, fodder tree saplings and vermicompost to farmers.

Further, a Baler unit was procured at a cost of Rs. 9.50 Lakh under SFDS 2019-20 for District Livestock Farm, Chettinad and green fodder produced during cropping season was harvested, baled and utilized during the lean period.

**Table9: Details of Fodder Production & Distribution in Departmental Farms (2020-21)**

S. No	Name of the Farm	Area of Farm Extent (in Acres)	Area under Fodder cultivation (in Acres)	Fodder Production (MT)	Fodder Slips distributed to farmers ( nos.)	Fodder seed distributed to farmers (KG)
1	DLF, Abishekapatti	1283.64	68	885.27	0	0
2	DLF, Chettinad	1560.32	228	3878.07	355575	4330
3	Sheep Farm, Chinnasalem	1866.28	18	978.83	22500	0
4	ECBF, Eachenkottai	513.86	114	3214.00	373500	0
5	DLF, Hosur	1561.41	98	3025.00	0	0
6	LF, Korukkai	490.68	70	1859.51	49500	0
7	DLF, Udhagamandalam	129.38	46	784.99	0	0
8	DLF, Naduvur	700.00	30	1752.45	0	656
9	DLF, Pudukottai	694.08	42	1465.00	333950	0
10	Sheep farm, Sathur	151.00	13	265.20	127500	10.15
11	Sheep Farm, Mukundarayapuram	479.65	11	210.00	750	9
12	Fodder Farm, Padappai	17.00	11	16.05	480182	44
	<b>Total</b>	<b>9447.30</b>	<b>749</b>	<b>18334.37</b>	<b>1743457</b>	<b>5049.15</b>

### **10.2.2. Steps taken by the Department for sustainable fodder production**

Government of Tamil Nadu is steadfast in implementing the State Fodder Development Scheme since 2011-12. A sum of Rs.238.00 crore has been allocated so far to take up the following initiatives by the department:

- About 4.78 lakh acres of farmers holdings across the State have been brought under high bio mass yielding perennial fodder crops, with a production of approximately 273 LMT of green fodder. The inputs like fodder seeds / planting material are provided at 100% subsidy to the farmers.
- The department is promoting mechanisation in fodder cultivation by distribution of Grass Cutters and Chaff Cutters to farmers with a view to reduce wastage of fodder as well as to improve its digestibility. So far, 14,703 Nos. of chaff cutters and 2,500 Nos. of

Grass Cutters have been distributed to farmers @ 75% subsidy and 50 % subsidy respectively.

- 10,483 rain guns were installed in farmers' fields at 75% subsidy for effective utilization of available water.

### **10.2.3 Alternate fodder production techniques:**

- The department is also promoting alternate fodder sources that require locally available low-cost inputs like Azolla. A total of 30,958 Azolla units have been established throughout the State for which inputs were provided free of cost.
- To overcome water scarcity, the department is promoting Hydroponic fodder cultivation technique among farmers. A total of 3,600 such units have been established in the State for which 75% subsidy was provided.

- To enlighten the farmers on feeding of tree fodder to the animals, saplings of various tree fodder varieties like Kalyanamurungai, Velvel, Agathi, Subabul, Glyricidia, etc. were raised in departmental farms and 72.50 lakh numbers of seedlings have been distributed to farmers.
- A total of 40,000 silage bags of 50 Kg capacity were distributed to 1,000 farmers, free of cost (@ 4 bags / Farmer) for ensiling surplus fodder that can be utilized during the lean period.
- In order to encourage farmers in commercial fodder production and preservation techniques, 170 MT of green fodder produced in 50 acres farmers field in Dharmapuri and Krishnagiri districts was procured at the rate of Rs. 3.50/Kg and are baled and stored in District Livestock Farm, Hosur for use during exigencies. Similarly, steps have been taken to procure the

fodder in another 100 acres in the farmers' fields in Salem, Namakkal, Virudhunagar, Erode and Tiruppur districts.

#### **10.2.4 Rejuvenation of Meikkal Land:**

Approximately 1.07 Lakh Hectare of Meikkal land is available (source: Department of Economics and Statistics) in the State which accounts to 0.8 per cent of the total geographical area. In order to increase the pasture productivity and improve the forage quality, 1,000 acres of common grazing/Meikkal land suitable for fodder cultivation across the State is being rejuvenated on a pilot mode.

#### **10.2.5 Strategies to increase fodder production**

- Distribution of quality and high yielding seed variety to the farmers through Departmental Farms

- Encouraging the usage of certified seeds by the farmers for fodder production.
- Adoption of Water conservation techniques like sprinkler and rain guns.
- Adoption of Farm Mechanization techniques
- Encouraging entrepreneurial activity in fodder production.
- Management of post-harvest losses by specific fodder conservation techniques.
- Intensifying crop diversification for balanced nutrition and encouraging the practice of inter cropping / bund cropping in all agricultural crops to increase fodder production.
- Rejuvenation of common grazing land and establishment of common fodder banks to ensure green fodder availability at the village level.

Implementation of above strategies aims to bring down the gap between availability and demand for fodder in the State.



### **10.3 Scheme for Free Distribution of Milch Cows**

In order to usher in a radiant second white revolution with a view to improve rural economy and to increase the crossbred cattle population in the State, the Government of Tamil Nadu introduced the Free Distribution of Milch Cows Scheme with particular focus on empowering rural women.

This scheme also ushered the shift in focus of the Department towards "Production management approach". The scheme gave importance to a cluster approach in which 50 beneficiaries from a single village were provided income generating assets.

The post purchase follow-up of the animals while ensuring the individual animal health also ensured that the other cattle in these beneficiary villages were provided management inputs and thus the entire cattle population in these villages

were benefited. Skill development of the beneficiaries resulted in a multiplier effect with other farmers also benefiting from the improved management practices adopted by the beneficiaries of the scheme.

Under Free Distribution of Milch Cows Scheme, every year, 12,000 women beneficiaries were provided with 12,000 milch cows. Approximately 2.32 lakh calves were born. This has led to the economic upliftment of the rural poor women.

#### **10.4 Scheme for Free Distribution of Goat/ Sheep**

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

Under this scheme, 1,50,000 women beneficiaries were provided with 6,00,000

Goats / Sheep every year. So far,86.99 lakh kids were born.

## **10.5 Poultry Development**

### **10.5.1 Scheme for distribution of free Aseel birds**

As there is a growing demand for native egg and meat, native poultry rearing is becoming an important avocation in Tamil Nadu. In order to encourage native poultry rearing in rural areas under the Scheme for Poultry Development, the Department supplied 50 Aseel birds along with night shelters, free of cost to 77,000 women beneficiaries in the village panchayats in all districts of Tamil Nadu (except Chennai) at a total cost of Rs.50 crore during 2018-19.

During 2019-20, 60 lakh 4-week old Aseel birds were distributed to 2.40 lakh women beneficiaries at a cost of Rs. 50 crore in Town

Panchayats as well as in Village Panchayats in all districts(except Chennai).

Further, during 2020-21 38.40 lakh 4-week old Aseel birds were distributed to 1,53,600 women beneficiaries at a cost of Rs.31.189 crore.

### **10.5.2 Innovative Poultry Productivity project for Low Input Technology birds and broilers**

The Department is also encouraging rearing of Low Input Technology dual purpose birds (Giriraja, Vanaraja, Gramapriya, etc.) that are capable of producing both egg and meat with minimum investment and maintenance cost. This scheme is being implemented under the “National Livestock Mission” with financial assistance of 60% from Government of India and 40% from State Government in Dharmapuri and Ramanathapuram Districts at a total outlay of Rs. 140 lakh during 2018-19 and 2019-20

and in Pudukottai and Virudhunagar Districts at an outlay of Rs. 100 lakh during 2020-21.

Under this scheme, 200 beneficiaries were selected from each district and provided funds for procurement of 200 dual purpose (meat and egg) birds each along with night shelter in the first year and after a gap of 72 weeks of production period, a second batch of 200 birds will be provided to the same beneficiary so as to ensure the sustainability of the farm and for the economic upliftment of farmers. The second set of 200 birds per beneficiary is being provided in Dharmapuri and Ramanathapuram Districts and the selection of beneficiaries is under progress in Pudukottai and Virudhunagar Districts.

Besides this, an Innovative Poultry Productivity Project for broilers was implemented in Tiruvannamalai district during 2018-19, wherein 200 beneficiaries were provided funds for purchase of 600 numbers of

day old chicks in four batches of 150 chicks each. A total fund of Rs. 225 lakh was provided for construction of sheds, procurement of feed, feeder, waterer and to purchase 1,20,000 chicks. The scheme was implemented in Villupuram district during 2019-20 and in Theni district during 2020-21 covering a total of 400 beneficiaries at a total cost of Rs.450 lakh.

### **10.5.3 Entrepreneurship Development through Native Chicken Rearing**

Under the National Agricultural Development Programme, in order to improve the socio-economic status, to encourage poultry entrepreneurs in rural areas and to popularize native chicken rearing, 1,925 poultry farmers in 385 blocks are being provided 50% subsidy to procure each 1,000 native chicks, one-month feed and an incubator at a total cost of Rs. 14.73 crore. This scheme has resulted in

better livelihood and nutritional security to the rural farmers.

#### **10.5.4 Poultry Units in Departmental Farms**

The Department maintains poultry units in 4 farms. These farms act as model units for demonstrating best practices and scientific techniques to the poultry farmers.

**Table 10: Poultry Breeds maintained in Departmental Farms**

<b>Sl. No</b>	<b>Name of the Farm</b>	<b>Breeds</b>
1	District Livestock Farm, Hosur (Krishnagiri District)	Aseel
2	District Livestock Farm, Abishekapatti (Tirunelveli District)	Vanaraja, Giriraja
3	District Livestock Farm, Chettinad (Sivagangai District)	Aseel
4	Poultry Farm, Kattupakkam, (Kancheepuram District)	Vanaraja, Giriraja, Gramapriya, Aseel, Nicobari, Kadaknath, White Leghorn, Rhode Island Red, Guinea fowl, Beltsville White, Japanese Quail

#### **10.5.4.1 Native Chicken Breeding Complex at District Livestock Farm, Hosur**

In order to cater the increasing demand for native chicken in the State, a Native Chicken Breeding Complex comprising grower, layer houses and hatchery complex is being established in the District Livestock Farm, Hosur, Krishnagiri District, at a total outlay of Rs.6.74 crore, under National Agriculture Development Programme to produce and supply approximately 10 to 12 lakh chicks annually.

#### **10.5.4.2 Dog Breeding Unit, Saidapet**

Tamil Nadu possesses excellent native dog breeds such as Rajapalayam, Chippiparai, Kombai and Kanni. To conserve and propagate these native breeds, a Dog Breeding Unit is functioning at Saidapet, Chennai since 1980. So far 440 Puppies were sold to the public based on



their registration seniority at the price fixed by the Government.

## **10.6 Livestock Fairs and Exhibitions**

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 2020-21, a sum of Rs.7.87 lakh was allocated for participating in Republic Day parade and fairs conducted in various Districts. The Department participated in the Republic Day Parade Pageantry on 26.01.2021 at Chennai. Due to the Covid -19 situation in the State, various fairs could not be conducted.

## **10.7 World Bank Assisted Tamil Nadu Irrigated Agriculture Modernisation Project (TN IAMP)**

Animal Husbandry Department is one of the line departments involved in implementation of World Bank Assisted Tamil Nadu Irrigated Agriculture Modernisation Project. Animal Husbandry activities are to be implemented in 66 sub-basins covering 34 districts at a total outlay of Rs. 38 crore over a period of 6 years. The main Animal Husbandry activities implemented are formation of Dairy Interest Groups (DIG), performing artificial insemination at farmers' door step (Conventional frozen semen, sex-sorted semen and Genomic semen), Calf Management, Mastitis Management, Infertility Management and Fodder Development.

During 2021-22, the above activities are to be carried out in 43 sub basins of a total outlay of Rs. 9.15 crore.

## **10.8 Establishment of Advanced Institute for Integrated Research on Livestock and Animal Sciences (AIIRLIVAS)**

An Advanced Institute for Integrated Research on Livestock and Animal Sciences (AIIRLIVAS) is being established in 1,102.25 acres of land available with the Sheep Farm, Animal Husbandry Department at Thalaivasal, Salem District adjoining the National Highway 79. This Institute is being established at a cost of Rs.564.44 Crore.

### **10.8.1 Objectives**

1. To establish livestock and poultry farms on proven scientific technologies, which could be adopted by the farmers. Superior genetic merit off-springs shall be given to farmers to improve their livestock /poultry wealth.
2. To carry out location specific and advanced research in the field of veterinary and

animal sciences, dairy technology, poultry technology and food technology.

3. To utilise the advanced facilities in the AIIRLIVAS to impart Post Graduate courses and Doctoral Programmes in food technology, dairy technology, poultry production technology, veterinary and animal sciences.
4. To create a window of opportunities to students and researchers to learn about the actual field demands, undertake research and find suitable remedial measures.
5. To upgrade skills among farmers and field veterinarians to organize need based training programmes in the field of livestock and poultry so as to meet the skilled manpower requirement of livestock and allied sectors.

6.To create a platform to nurture entrepreneurs/startups, technology holders, innovators and facilitate necessary forward and backward linkages for livestock enterprises.

AIIRLIVAS is planned to be an Institute of eminence, one of its kind in Asia, having academic, research, production & processing , extension and business incubation units pertaining to livestock sector, all under one roof.

Various interrelated activities will be clustered into ten major complexes as follows:

**1.Livestock Farm Complex** comprising indigenous cattle unit, sheep and goat unit, piggery unit, native dogs unit, animal quarantine and isolation facilities, farm veterinary hospital, clinical lab and poultry units.

- 2. Dairy Processing and Product Manufacturing Complex** comprising cross bred dairy cattle unit, dairy processing and product manufacturing facility, cattle feed & mineral mixture manufacturing units.
- 3. Fisheries Demonstration Complex** comprising intensive fish seed rearing with aeration facility, modern fish kiosk, aquaponics unit and ornamental fisheries unit.
- 4. Post Graduate Education Complex** comprising administrative block, academic block, laboratories, faculty rooms, hostels and staff quarters, instruments and equipment.
- 5. Extension and Skill Development Complex** comprising skill development and training centre, instrumentation and fabrication centre, model livestock units,

integrated farming systems and hostels for students and farmers.

**6. Research Complex** comprising livestock breeding and technology unit and research units.

**7. Business Incubation and Seamless Integration Complex** comprising business incubation centre and centre for seamless integration.

**8. Meat Production and Processing Complex** comprising separate slaughter and processing facilities for sheep and goat, poultry and pigs.

**9. Forage Research Zone** with demarcated areas for irrigated fodder, dry fodder, silage, silvipasture and fodder seed production.

**10. Public Interaction Zone** comprising children's park, amphitheatre, interpretation centre with AR/VR facilities, car park, marketing facilities for livestock products, farm inputs, fodder inputs and farm equipment, food court and rest rooms, bank branch and ATM.

Construction of Skill Development Complex, Research Complex, Business Incubation and Seamless Integration Complex, Meat Production and Processing Complex, PG Education Complex and Poultry units of Livestock Farm Complex and iconic structures such as Administrative Building, VIP guest house and entrance arch are taken up by the Public Works Department and works are under progress.

Construction of Public Interaction Zone will also be taken up by the Public Works Department.



Construction of Indigenous Cattle unit, Sheep and Goat unit, Native dog breeding unit, Animal Quarantine facility, Isolation facility, Farm veterinary hospital, Clinical laboratory, piggery unit, poultry units (Hatchery & Feed mill) of Livestock Farm Complex and Construction of Instrumentation & Fabrication centre, Integrated livestock farms, Model livestock units of Skill Development Centre are taken up the Tamil Nadu Veterinary Animal Sciences University and works are under various stages of progress.

In Fisheries Demonstration Complex, establishment of Intensive fish seed rearing unit with aeration and flow through system is taken up by the Department of Fisheries whereas establishment of Aquaponics unit and ornamental fishery unit are taken up the Tamil Nadu Dr.J.Jayalalithaa Fisheries University.

Establishment of dairy processing & product manufacturing complex is taken up by the Tamil Nadu Cooperative Milk Producers Federation Ltd.

TWAD, TANGEDCO, Highways Department and Agriculture Engineering Department are also involved in the execution of various components of the project.

### **10.8.2 Outcome:**

The project will benefit various stake holders as detailed below:

#### **10.8.2.1. Training of Farmers, availability of genetically superior germplasm, providing market information**

The farmers will be benefited by the availability of good genetic merit young-ones of livestock at affordable rates. Horizontal up-gradation of the genetic composition of the livestock will ensure increased per animal productivity.

Access to demonstrative models of innovative technologies will improve the

profitability. Farmer producers will realise better prices for their produces through the facilities and will be provided facilitation for processing and products preparation.

The risk of dwindling population of native livestock breeds will be addressed through conservation efforts. Farmers will also be trained on the best practices in livestock rearing.

#### **10.8.2.2. Training of Entrepreneurs, Skill Development and providing Market Intelligence**

Incubation facilities will enable translation of innovative ideas of budding entrepreneurs into commercially viable ventures in the livestock sector. Exposure to the innovative techniques of preservation, processing and value addition of the livestock products will open up newer vistas of business opportunities in the livestock value chain.

Demonstration of viable models of multi-tropic integrated farming systems will attract potential entrepreneurs to foray into livestock sector.

Market intelligence will be available for entrepreneurs regarding the prices of various commodities in the markets within / outside the State. Export facilitation shall also be provided to entrepreneurs.

#### **10.8.2.3. Providing world class facilities for learning to Students and Researchers**

Research and Development in cutting edge technology areas will open up opportunities for students and researchers to work in reputed national and international institutes and organizations.

Skill upgradation in advanced technology areas will help student community to acquire

advanced skills leading to better employment and entrepreneurial opportunities.

Further, the students will get opportunities for collaborative research with reputed national and international institutes and organizations.

#### **10.8.2.4. Consumers**

The consumers will have access to hygienic and prime quality livestock products at reasonable rates. The marketing facilities will enable supply of a wide variety of fresh and processed livestock products including products from indigenous breeds.

In addition to this, a Veterinary College will also be established abutting AIIRLIVAS campus, at a financial outlay of Rs.196.36 Crore.

A project of such magnitude requires copious and uninterrupted water supply for smooth functioning. In order to meet the water requirement of around 10 Million Litres per day,

Government of Tamil Nadu has sanctioned a special water supply project. The TWAD Board is executing the special water project to carry water through pipelines spanning 155 kms. The works are progressing at a rapid pace to complete the special water project by September, 2021.

## **11. VETERINARY INFRASTRUCTURE**

The Department provides veterinary services like health cover, disease prevention, clinical services, disease eradication and breeding support through an array of veterinary institutions like Polyclinics, Clinician Centres, Veterinary Hospitals, Veterinary Dispensaries, Animal Disease Intelligence Units, Poultry Disease Diagnostic Laboratories and Veterinary Epidemiology Centre. There are 13 farms, including 8 livestock farms, 3 sheep and goat farms, one exclusive poultry breeding farm and one fodder farm.

The veterinary institutions have transformed themselves from being a facility for providing treatment for ailing livestock to being a Knowledge Resource centre and Extension centre. Farmers can access any veterinary institution within their vicinity for availing any of the services. Hence it is imperative that all the institutions are provided with appropriate infrastructure. 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 NABARD Rural Infrastructure Development Fund(RIDF), National Agriculture Development Programme (NADP), Establishment and Strengthening of Veterinary Hospitals and Dispensaries (ESVHD) and State funds.

Under these Schemes, 2,037 Veterinary Institution buildings were newly constructed at a total cost of Rs.614.57 crore. Further, construction is under process in 114 Veterinary Institutions at a cost of Rs.57.47 crore.

Construction of water trough for 1,658 Veterinary Dispensaries is also under process at a cost of Rs.3.95 crore for providing drinking water facility to animals.

The vaccine production laboratory in the Institute of Veterinary Preventive Medicine, Ranipet is being upgraded into a world class Good Manufacturing Practice (GMP) compliant laboratory. The works are being undertaken in collaboration with Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) and the National Dairy Development Board (NDDB).



**Table 11: Scheme-wise fund allocation for  
Infrastructure Development**

<b>S. No</b>	<b>Name of the Scheme</b>	<b>No. of Buildings</b>	<b>Total Allocation (Rs. in crore)</b>
1	State Fund	34	60.67
2	ESVHD	256	25.51
3	NADP	95	16.66
4	NABARD	1,766	569.20
<b>Total</b>		<b>2,151</b>	<b>672.04</b>

So far, repair and renovation works were carried out in 1,572 Veterinary Institution buildings at an outlay of Rs.89.50crore.

## **12. LIVESTOCK CENSUS AND INTEGRATED SAMPLE SURVEY**

### **12.1 Livestock Census**

Enumeration of livestock for livestock census was first 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 recent census namely 20<sup>th</sup> Quinquennial enumeration of the Livestock Census was conducted during the year 2019 as per the guidelines provided by the Governments of India using tablet computers. The Livestock Census is 100% funded by the Union Government.

The Government of India released the All India data with Tamil Nadu as follows:

**Table 12: Species wise share of 20<sup>th</sup> Livestock and Poultry Population Tamil Nadu with All India**

S. No	Species	20 <sup>th</sup> Livestock census of All India	20 <sup>th</sup> Livestock census of Tamil Nadu	%
1	Exotic/Crossbred Cattle	51356405	7724719	15.04
	Indigenous/Non-descript Cattle	142106466	1793941	1.26
	<b>Total Cattle</b>	<b>193462871</b>	<b>9518660</b>	<b>4.92</b>
2	Buffaloes	109851678	518795	0.47
3	Mithuns	386305	0	0.00
4	Yaks	57570	0	0.00

S. No	Species	20 <sup>th</sup> Livestock census of All India	20 <sup>th</sup> Livestock census of Tamil Nadu	%
	<b>Total Bovine</b>	<b>303758424</b>	<b>10037455</b>	<b>3.30</b>
5	Exotic/Crossbred Sheep	4088133	277650	6.79
	Indigenous sheep	70172482	4222841	6.02
	<b>Total Sheep</b>	<b>74260615</b>	<b>4500491</b>	<b>6.06</b>
6	Goats	148884786	9888746	6.64
7	Horses and Ponies	342226	5417	1.58
8	Donkeys	123587	1428	1.16
9	Mules	84261	305	0.36
10	Camels	251956	7	0.00
11	Exotic/Crossbred Pigs	1896944	17106	0.90
	Indigenous Pigs	7158544	49666	0.69
	<b>Total Pig</b>	<b>9055488</b>	<b>66772</b>	<b>0.74</b>
12	<b>Total livestock</b>	<b>536761343</b>	<b>24500621</b>	<b>4.56</b>
13	Dogs	9434039	1296655	<b>13.74</b>
14	Rabbits	549941	26513	<b>4.82</b>
15	Total Poultry Birds in Backyard Poultry	317073357	21264570	6.71
	Farm Poultry	534736574	99516530	18.61
	<b>Total Poultry</b>	<b>851809931</b>	<b>120781100</b>	<b>14.18</b>

## **12.2 Integrated Sample Survey Scheme**

Annual sample surveys are being carried out under 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 and Fisheries, Government of India.

The survey is carried out in 3 seasons *viz.*, summer, rainy and winter season for studying the seasonal fluctuations in production. The survey covers 15% of villages in each district as per the 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.

### **13. JALLIKATTU - The traditional and cultural identity of Tamil Nadu**

Jallikattu, a traditional event of rural people in Tamil Nadu, which is conducted during Pongal festival, has a 5,000-year-old tradition and a history associated with the socio-cultural ethos of Tamil Nadu.

Jallikattu events are to be conducted only in those places that are notified in the State Gazette. The conduct of each Jallikattu event is subject to the Tamil Nadu Prevention of Cruelty to Animals (Conduct of Jallikattu) Rules, 2017.

The Department ensures compliance to the Prevention of Cruelty to Animals (Tamil Nadu amendment) Act, 2017 through adequate precautionary measures. While preserving the cultural sentiments of Tamil Nadu, it is ensured

that the bulls are not subjected to unnecessary pain and suffering during the events.

The organisers and other stake holders are sensitised by the District Collectors regarding the procedures to be adopted for conducting Jallikattu. Banners spelling out the responsibilities of the bull owners / participants / organisers, including dos and don'ts, are displayed at strategic places as well as the venues of Jallikattu events.

A checklist specifying the steps to be taken before, during and after the conduct of Jallikattu is followed meticulously. All these measures have ensured that no untoward incident occurs during the conduct of Jallikattu events in the State.

Every year, Jallikattu events are notified in the State Gazette from January till May as per

the PCA (Tamil Nadu Amendment) Act 2017. Jallikattu events conducted in places which are not notified in the State Gazette are considered illegal events.

During 2021, 227 Jallikattu events were conducted. First Information Reports (FIRs) were filed and necessary action were taken by the concerned District Administration against the defaulters during Jallikattu events as per the Prevention of Cruelty to Animals Act (Conduct of Jallikattu) Rules 2017.

## **14. ANIMAL WELFARE MEASURES**

### **14.1 Activities of Tamil Nadu Animal Welfare Board (TNAWB)**

Scientific discoveries led to the revelation that animals are sentient beings i.e., they are beings with the capacity to feel and hence their basic needs must be respected and met. The Constitution of India, in Article 51(A)(g), directs

to ensure that the animals are treated with compassion and in a humane manner- "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures". In reverence to the Constitution, the Government of Tamil Nadu constituted the Animal Welfare Board of Tamil Nadu vide G.O.(Ms) No. 208, AHD&F Dept. dated 24.10.2018 to monitor and address the animal welfare issues in the State.

The Animal Welfare Board of India, a statutory body of the Ministry of Fisheries, Animal Husbandry & Dairying, is vested with the responsibility of fulfilling the principles of the Prevention of the Cruelty to Animals Act 1960 through the State Animal Welfare Boards in the respective States.

The Tamil Nadu Animal Welfare Board is headed by the Hon'ble Chief Minister as the



Chairman, while the Hon'ble Minister of Fisheries-Fishermen Welfare and Animal Husbandry is the Vice-Chairman. The other members include the Chief Secretary, Principle Secretaries of concerned departments, Directors, Registrars and honorary members of the SPCA. The Board has three committees—the General, Executive and Standing committee.

All issues related to animal welfare, dealt under the Prevention of Cruelty to Animals Act, 1960 like Transportation of Livestock Act, 1978 Regulation of Livestock Markets Rules 2016, Dog Breeding and Marketing Rules 2016, Pet Shop Rules 2018, Animal Birth Control 2001, Establishment and Regulation of Societies for Prevention of Cruelty to Animals (SPCA) are administered and monitored by the Board.

## **14.2 Society for Prevention of Cruelty to Animals**

The establishment and regulation of SPCA in all districts is notified by the Ministry of Social Justice and Empowerment No. S.O.271(E) dated 26.03.2001 in the Gazette of India, under section 38, sub-section 1 of PCA Act 1960 (59 of 1960).

The function of the district SPCA is to aid the Government in enforcing the provisions of the PCA ACT 1960 and to make by-laws and guidelines for efficient discharge of duties, setting up and monitoring of infirmaries, animal shelters.

All Pinjrapoles, cattle pounds, etc. owned & run by local authorities shall be managed by such local authority jointly with the Society or Animal welfare organisations.

The role of the TNAWB is to give directions to any SPCA to ensure smooth and efficient functioning. The State Government may, in consultation with the Board, confer additional powers to any society for exercising the powers and discharging the functions assigned to it.

### **14.3 Animal Birth Control Programme**

This programme is being implemented to prevent the indiscriminate breeding of stray dogs and reduce incidences of Rabies. The Government of India has formulated the Animal Birth Control (Dogs) 2001 Rules, to control the stray dog population by the Municipalities and local bodies.

Under this programme, stray dogs are caught in a humane manner, sterilized, vaccinated against rabies and relocated to the same place from where they were caught.

The scheme is under implementation in all Corporations and Municipalities involving Municipal Administration Department, Animal Husbandry Department and Animal Welfare Board of Tamil Nadu.

#### **14.4 Pet Shop Registration**

The Pet shops that are functioning across the State were trading without any regulations. All pet shops in the State are regulated by the State Animal Welfare Board with the involvement of the District administration as per Pet Shop Registration Rules 2018, under notification G.S.R.844(E) dated 06.09.2018 of the Ministry of Environment, Forest and Climate Change, Government of India.

The Rules mandate that the pet shops must register with the State Animal Welfare Board, by paying a non-refundable sum of Rs.5,000 along

with an application and affidavit after fulfilling all the conditions laid down in the rules.

The pet shop will then be inspected by the authorised Government Veterinarian and based upon his report, the registration will continue or be cancelled after giving notice to the owner. License shall be issued only after registration by the Board.

Tamil Nadu Animal Welfare Board (TNAWB) has issued notice instructing all pet shop owners to register with the Board.

## **15. Response of the Department of Animal Husbandry and Veterinary Services during COVID - 19**

### **15.1 Ensuring Veterinary Services**

With the aim of enabling continuous income generation to the farmers even during the COVID-19 pandemic, the Animal Husbandry

Department is providing the entire gamut of services at the door steps of the farmers. Breeding services by Veterinarians, Para Veterinarians and Maitri workers are provided at the farmer's door steps. Ensuring udder and reproductive health of cattle, gynaecological interventions, attending to medical emergencies, arranging green fodder for cattle, besides ensuring the general health of the livestock are being undertaken regularly through institutions as well as through mobile units at or near the farmer's premises. The horses and temple elephants have also been brought under the Department's care and they are attended to at their premises. Mobile services are also organised in the villages. Veterinary Assistant Surgeons undertake tour in their area of operation and work along with the required supporting staff while ensuring the social distancing norms laid down by the Government.

The Animal Mobile Medical Ambulances available in all the Districts ensure that emergencies in remote areas are attended to swiftly. A toll-free number “1962” provides the connectivity to the ambulance service. The work done by the Veterinary Institutions during the lockdown period reveals that the Department had continuously provided the essential services to the livestock farmers.

### **15.2 Ensuring availability of Feed and Raw Material**

The State permitted the production and movement of raw materials for poultry feed during the lockdown. All the District Collectors were instructed by the Government to ensure unhindered movement of raw materials required for manufacturing livestock and poultry feed besides the movement of eggs and chicks, eventhough problems in inter-State movement affected feed production initially for a month.

Periodical checks were conducted by departmental officials to ensure that adequate quantities of livestock and poultry feed are available in the Districts and also to keep a vigil on price rise.

### **15.3 Ensuring movement of Raw Material for Feed Manufacture**

The poultry farmers in Tamil Nadu depend on Andhra Pradesh, Karnataka, Maharashtra and Madhya Pradesh for meeting the requirement of Soya and Maize. Due to the country wide lockdown, the availability of feed raw material was difficult. The Department addressed the issue by coordinating with the concerned authorities in West Central Railways and Central Railways to arrange sufficient wagons for transportation of the raw materials for poultry feed to Tamil Nadu.



## **15.4 Awareness creation and propaganda**

During the lockdown, Government encountered rumours in the media that COVID-19 virus spreads through eggs and poultry meat, which lead to a drastic reduction in the wholesale price of eggs and poultry meat triggered due to reduced consumption. In order to allay the fears of the public, an extensive and aggressive campaign was undertaken by the Department highlighting that the corona virus is not transmitted through consumption of chicken meat and eggs and it is safe to consume both chicken meat and egg after proper cooking. Further, awareness about the fact that chicken and eggs are the cheapest and good quality protein sources available to the public which help to build immunity was also created through the print media. Due to the above measures taken by the Government, the situation started

improving and the consumption of chicken meat and eggs has since increased among the public.

### **15.5 Animal Welfare initiatives undertaken during the lockdown period**

The outbreak of Covid-19 and the subsequent safety measures undertaken by the Government of Tamil Nadu has resulted in an extraordinary situation for the community / domestic animals including homeless dogs, cats and cattle that were surviving on the largesse of the society. Keeping the welfare of these animals in mind and the need to protect them as they are a part of the ecosystem, 2,700 kg of dry food for homeless dogs, 100 kg of biscuits for dogs, 200 kg of cat food, 1,250 kg of rice, 625 kg of milk powder and 11,152 kg of horse feed were provided till August, 2021.

Further, the Department of Animal Husbandry and Veterinary Services has created two toll free numbers – 18004255880 and 1962

to coordinate with animal lovers, philanthropists and animal welfare organisations to continue feeding community / stray animals during the lockdown period. The District level officials of the Department of Animal Husbandry and Veterinary Services are continuously arranging food for homeless dogs, cattle and horses.

## **16. Sustainable Development Goals & Plan of Action**

The Sustainable Development Goals (SDGs) are a collection of 17 Global Goals set by the United Nations General Assembly in 2015 for the year 2030. Animal Husbandry Department contributes towards achieving Goal 1: No Poverty, Goal 2: Zero Hunger, Goal 3: Good Health and Well-Being, Goal 5: Gender Equality and Goal 12: Responsible Consumption and Production under SDGs through various welfare schemes implemented by the Department.

The Department is committed towards a holistic approach in achieving Sustainable Development Goal 1: No Poverty, Goal 2: Zero Hunger, Goal 3: Good Health and Well-Being, Goal 5: Gender Equality, Goal 12: Responsible Consumption and Production by implementation of various programmes for bringing more farmers under Animal Husbandry. The Department addresses Goals 1, 2, 3 and 5 of SDG by providing sustainable livelihood opportunities and income generation through distribution of income generating assets under various schemes. To contribute towards Goal -12: Responsible Consumption and Production, the Department is providing veterinary services, breeding support and fodder development through 2,923 Veterinary Institutions, disease monitoring, prevention and control through 35 Disease Monitoring Units, thereby augmenting the quality and quantity of milk, egg and meat production.

By these actions, the Department has contributed to improving the State's index score of Goal 1 from 72 in 2019 to 86 in 2020 and maintaining the first position in the country. Likewise, the State's index score of Goal 12 which was 63 in 2019 has moved to 78 in 2020.

State-wise, district-wise and division-wise Sustainable Development Goals (SDGs) Cells have been established in the Department to coordinate the activities related to Sustainable Development Goals.

### **17. Reduction of Regulatory Compliance Burden on ease of doing business**

In the Animal Husbandry Department Steps are being taken to facilitate Veterinary services and implementation of schemes and to reduce the burden on its regulatory provisions. Following this, arrangements are being made to electronically register all the pet shops with the Tamil Nadu Animal Welfare Board, and to issue

the permits and certificates online. This will save time and improve the ease of registration.

Efforts are being made to develop a digital management system for veterinary care and to bring the veterinary services, scheme activities of the Department in to a single window system and to improve, integrate and provide better veterinary services. This will ensure that the information about veterinary treatment management, veterinary surgeons, field staff, office staff availability, stock position and availability of medicines at veterinary institutions, treatment of animals at farmer's doorstep, details of scheme activities of State and Union Governments, veterinary health camps, various vaccination camps, GPS Location notification and other tasks such as date and time forecasts are easily accessible to the farmers.

It is also recommended to remove the following outdated laws in order to facilitate operations in the Department.

1. Acts recommended for Repeal which comes under the Prevention and control of infectious and contagious disease in animals (PCICD) Act,2009 (Central Act of 27 of 2009) and came into force in the State from 24.4.2009.

- Tamil Nadu Cattle Disease Act, 1866 (Tamil Nadu Act ,XI 1866)
- Tamil Nadu Rinderpest Act, 1940(Tamil Nadu Act ,XIX 1940)
- Tamil Nadu Cattle Disease (Amendment Act) Act, 1963 (Tamil Nadu Act ,29 of 1963)
- Tamil Nadu Rinderpest (Amendment Act) Act, 1963(Tamil Nadu Act ,14 of 1964)
- The Glanders and Farcy Act,1899, Central Act 13 of 1899

- The Glanders and Farcy (Tamil Nadu Amendment Act) Act,1965, (Tamil Nadu Amendment Act 36 of 1965)
2. State Law Commission has recommended to repeal the following Acts
    - Tamil Nadu Registration of Veterinary Practitioners Act,1957 (Tamil Nadu Act ,XXI of 1957)
    - Tamil Nadu Registration of Veterinary Practitioners Amendment Act,1993
    - Action will be taken by the Government to repeal the above Acts.
  3. Tamil Nadu Livestock Improvement Act,1940 will be subsumed with Bovine Breeding Act,2019.



## **18. TAMIL NADU LIVESTOCK DEVELOPMENT AGENCY**

Livestock Development consists of bovine breeding - an essential activity, which plays, a major role in improving production and productivity. Bovine breeding activities require diligence and dedicated institutions. Thus, the Tamil Nadu Livestock Development Agency (TNLDA), established during 2002-03 to implement the programme of bovine breeding, is implementing cattle and buffalo breeding programmes since 9.1.2003.

### **1. Objectives of the Agency**

The primary objective of the agency is to cater to improvement in milk production and per-animal productivity by bringing all the breedable age cattle and buffaloes under defined breeding programme.

## **2. Activities**

To achieve the objective, the following measures are undertaken:

- ❖ Extension of Artificial Insemination network
- ❖ Strengthening of Artificial Insemination centres
- ❖ Strengthening of the facilities for distribution of frozen semen and liquid nitrogen
- ❖ Improving the skill of Artificial Insemination workers through skill development programmes
- ❖ Facilitation of the supply of high genetic merit bulls for the frozen semen production stations
- ❖ Implementing Embryo Transfer Technology to produce genetically superior calves and increasing the rate of genetic improvement, for animal identification
- ❖ Conservation of indigenous breeds

- ❖ Facilitating the molecular screening of bulls
- ❖ Upgradation of non-descript indigenous cattle with High Yielding Indigenous Breed Semen and Artificial Insemination Programme at the doorsteps of the farmers
- ❖ Increase coverage of animals under Artificial Insemination and Livestock Insurance for risk management.

## **2.1 Strengthening of Artificial Insemination Centres**

Ensuring the quality of the inputs at the point of delivery is essential for achieving the objective of increasing production. In line with this objective, 1,600 Artificial Insemination Centres have been provided with frozen semen containers of 0.5 Litre, 3-4Litre, and 30-35Litre capacity. Worn-out Artificial Insemination kits have been replaced with new kits at a cost of Rs.4.00 crore.

## **2.2 Strengthening of semen banks and distribution network**

The strengthening of liquid nitrogen and frozen semen storage and distribution network was taken up by making available 120 frozen semen containers of 47 litre capacity, 800 numbers of 50 litre liquid nitrogen storage containers and other miscellaneous items to ensure hassle free storage and distribution of frozen semen doses and other inputs for artificial insemination.

## **2.3 Facilitation of the supply of High Genetic Merit Bulls for the frozen semen production stations**

A total of 3 imported Holstein Friesian bulls were made available to the District Livestock Farm, Udthagamandalam, 6 Murrah High Genetic Merit buffalo bulls were made available to Exotic Cattle Breeding Farm, Eachenkottai, Thanjavur and one High Genetic Merit Sahiwal bull was

made available to District Livestock Farm, Hosur.

## **2.4 Strengthening of Semen Stations**

Semen Stations at the Exotic Cattle Breeding Farm, Eachenkottai, District Livestock Farm, Hosur and District Livestock Farm, Udthagamandalam have been strengthened by supply of photometer, cold handling cabinet, straw filling and sealing machines at a total cost of Rs.1.61crore.

## **2.5 Embryo Transfer Technology**

Embryo Transfer and In-vitro Fertilisation Technology enables production of more number of calves from animals of high genetic quality. Hence, a programme has been initiated at the District Livestock Farm, Hosur at a total cost of Rs. 4.55 crore for the production of 84 High Genetic Merit bulls (Red Sindhi-34, Kangeyam-20, Umbalachery-10, Pulikulam-10, and

Bargur-10) and 85 bull mothers (RedSindhi-35, Kangeyam-20, Umbalachery-10, Pulikulam-10, and Bargur-10) over a period of three years. An invitro fertilisation laboratory is being established at the farm. For embryo transfer work, 13 Kangayam Milk recorded cows, 1 Bargur milk recorded cows and 2 Pulikulam milk recorded cows were selected and purchased. A total of 23 donor (7 Red Sindhi, 13 Kangayam, 2 Pulikulam and 1 Bargur) cows have been flushed, 402 embryos (369 Red Sindhi, 24 Kangayam, 8 Pulikulam and 1 Bargur) have been collected, 227 embryos (194 Red Sindhi, 24 Kangayam, 1 Bargur and 8 Pulikulam) have been transferred and 175 embryos have been stored. A total of 14 calf births (12 Red Sindhi, 1 Pulikulam and 1 Kangayam).

An embryo transfer programme for the production of 105 Kangayam and 55 Bargur cattle is being implemented through the Veterinary College and Research Institute,

Namakkal, Tamil Nadu Veterinary and Animal Sciences University at a total cost of Rs.2.51 crore. In the programme, 18 donors (12 Kangayam and 6 Bargur) are maintained, 155 embryos (124 Kangeyam and 31 Bargur) have been produced, 68 embryos (50 Kangayam and 18 Bargur) were transferred and 30 embryos have been stored. One Kangayam calf birth has been reported.

## **2.6 Conservation of Indigenous Breeds**

A programme for the establishment of Cattle Research Station for Bargur cattle at Anthiyur, Erode district for conservation and development of the indigenous Bargur breed over a period of 5 years has been taken up through the Tamil Nadu Veterinary and Animal Sciences University at a total cost of Rs. 5.17 crore towards purchase of Bargur heifers, fencing, land reclamation, installing micro irrigation facility and purchase of equipment.

An Administrative cum Livestock Farm campus at Thurusanampalayam, Fodder Cultivation campus at Sankarapalayam and Thattakarai village in Bargur have been established. A total of 126 Bargur animals are being raised in the centres (113 cows/heifers and 13 bulls/young bulls).

## **2.7 Genetic upgradation programme through use of High Yielding Bull Semen for quality Artificial Insemination delivery at farmers' doorstep**

A programme for free doorstep Artificial Insemination of bovine with semen from High Yielding bulls was implemented from 15.09.2019 to 31.05.2020 in 300 villages each in the districts of Chennai, Cuddalore, Kancheepuram, Nagapattinam, Pudukottai, Ramanathapuram, Sivagangai, Salem, The Nilgiris, Tiruvallur,



Thiruvannamalai, Virudhunagar and Villupuram to cover a total of 2,44,990 (20,000 each in 12 districts 4,990 in Chennai) cattle and buffaloes with a total fund release of Rs.5.36 crore under the National Artificial Insemination Programme Phase I. Under the programme, 3.39 lakh animals have been covered and 1.44 lakh calf births have been reported.

The second phase of the programme has been implemented in the same 13 districts to cover 6.50 lakh animals over the period 1.8.2020 to 31.05.2021 with a fund release of Rs.11.68 crore. Under the programme a total of 6.23 lakh animals have been covered so far.

### **3. National Livestock Mission**

#### **Risk Mitigation and Risk Management**

Under the National Livestock Mission, Livestock Insurance is being implemented in all the districts of Tamil Nadu through the Department of Animal Husbandry and Tamil

Nadu Co-operative Milk Producers' Federation. It was proposed to insure 2.7 lakh cattle units (including cattle, buffalo, sheep, goat and pigs) in all the districts of Tamil Nadu with a total outlay of Rs.14.31 crore and 2.8 lakh cattle units have been insured.

#### **4. Procurement of inputs**

##### **4.1 Fodder Development**

Under the National Livestock Mission, the programme for the procurement and supply of 1,000 Nos. of Chaff Cutters at a total outlay of Rs.1.50 crore is being implemented.

Under the State Fodder Development Scheme 2020-21, the programme for the procurement and supply of 2,500 Nos. of Grass Cutters at a total outlay of Rs.4.69 crore is being implemented.

##### **4.2 Establishment of Operation Theatre in Veterinary Institutions of 32 Districts**

Under the Announcements made in the State Assembly, Purchase of Instruments,

Surgical and Equipment for the Establishment of Operation Theatre in Veterinary Institutions of 32 Districts of Tamil Nadu at a total outlay of Rs.3.02 crore is being undertaken.

#### **4.3 Ensuring supply of quality breeding inputs under the World Bank aided Tamil Nadu Irrigated Agriculture Modernisation Project.**

Procurement of 1.5 litre, 3 litre and 33 litre capacity frozen semen containers, semen from genomically evaluated bulls, semen doses for Artificial Insemination in the river sub basins, Sex Sorted semen doses, gloves for Artificial Insemination, frozen semen thawing kits, and Artificial Insemination guns have been taken up under the World Bank aided Tamil Nadu Irrigated Agriculture Modernisation Project being implemented by the Department of Animal Husbandry.

## **19. TAMIL NADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY (TANUVAS)**

Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) was established in 1989 as Asia's first Veterinary University 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

## 19.1 Units of TANUVAS

### 19.1.1 Constituent colleges of TANUVAS

<b>Sl. No.</b>	<b>Colleges</b>	<b>Admission Strength</b>
1.	Madras Veterinary College, Chennai	120
2.	Veterinary College and Research Institute, Namakkal	80
3.	Veterinary College and Research Institute, Orathanadu	80
4.	Veterinary College and Research Institute, Tirunelveli	80
5.	Veterinary College and Research Institute, Salem	40
6.	Veterinary College and Research Institute, Theni	40
7.	Veterinary College and Research Institute, Udumalpet, Tiruppur	40
8.	College of Food and Dairy Technology, Koduveli, Tiruvallur	60
9.	College of Poultry Production and Management, Hosur	40
	<b>Total</b>	<b>580</b>

### **19.1.2 New Veterinary College at Theni and Udumalpet**

At Veerapandi village in Theni District, a new Veterinary College and Research Institute which is the sixth Veterinary College and Research Institute in Tamil Nadu, was established at an extent of 253.64 acres of land. The College started functioning from the academic year 2020-21 with 40 students in the first year.

Likewise, a total area of 42.89 acres at Pannaikinaru Village, Udumalpet Taluk, Tiruppur district has been allocated for establishing the seventh Veterinary College and Research Institute in Tamil Nadu. An academic strength of 40 students from the year 2020-21 was also sanctioned to the Veterinary College and Research Institutes at Salem (already sanctioned in 2019-20) and Udumalpet raising the overall admission strength for B.V.Sc & A.H. programme from 360 to 480 in the University.

**19.1.3 Peripheral Research Stations, Laboratories and Centres of TANUVAS**

<b>Sl. No.</b>	<b>District</b>	<b>Research Stations / Laboratories / Centres</b>
1.	Chennai	<ul style="list-style-type: none"> <li>• Poultry Research Station, Madhavaram</li> <li>• Livestock Farm Complex, Madhavaram</li> <li>• Central University Laboratory, Madhavaram</li> <li>• Viral Vaccine Research Centre, Madhavaram</li> <li>• Bacterial Vaccine Research Centre, Madhavaram</li> <li>• Zoonoses Research Laboratory, Madhavaram</li> <li>• Laboratory Animal Medicine, Madhavaram</li> <li>• Pharmacovigilance Laboratory for Animal Feed and Food Safety, Madhavaram</li> <li>• Translational Research Platform for Veterinary Biologicals, Madhavaram</li> </ul>

<b>Sl. No.</b>	<b>District</b>	<b>Research Stations / Laboratories / Centres</b>
		<ul style="list-style-type: none"> <li>• Biosafety Level III Laboratory, Madhavaram</li> <li>• Centralised Clinical Laboratory, Vepery</li> <li>• Centre for Stem Cell Research and Regenerative Medicine, Vepery</li> </ul>
2.	Chengalpattu	<ul style="list-style-type: none"> <li>• Post graduate Research Institute in Animal Sciences. Kattupakkam</li> <li>• Institute of Animal Nutrition, Kattupakkam</li> <li>• Central Feed Technology Unit, Kattupakkam</li> <li>• Krishi Vigyan Kendra, Kattupakkam</li> </ul>
3.	Kancheepuram	<ul style="list-style-type: none"> <li>• Farmers Training Centre</li> </ul>
4.	Dharmapuri	<ul style="list-style-type: none"> <li>• Alambadi Cattle Research Station</li> <li>• Veterinary University Training and Research Centre</li> </ul>
5.	Villupuram	<ul style="list-style-type: none"> <li>• Veterinary University Training and Research Centre</li> <li>• Krishi Vigyan Kendra</li> </ul>

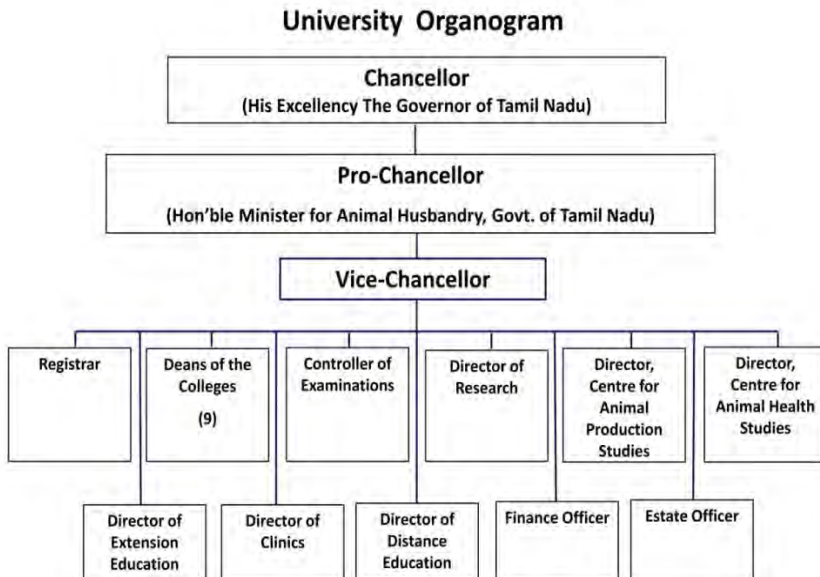


<b>Sl. No.</b>	<b>District</b>	<b>Research Stations / Laboratories / Centres</b>
6.	Salem	<ul style="list-style-type: none"> <li>• Mecheri Sheep Research Station, Pottaneri</li> <li>• Veterinary University Training and Research Centre</li> <li>• Avian Disease Laboratory, Thalaivasal</li> </ul>
7.	Erode	<ul style="list-style-type: none"> <li>• Bargur Cattle Research Station, Bargur</li> <li>• Kangayam Cattle Research Station, Erode</li> <li>• Veterinary University Training and Research Centre</li> </ul>
8.	Nilgiris	<ul style="list-style-type: none"> <li>• Sheep Breeding Research Station, Sandynallah</li> </ul>
9.	Namakkal	<ul style="list-style-type: none"> <li>• Poultry Disease Diagnostic and Surveillance Laboratory</li> <li>• Animal Feed Analytical and Quality Assurance Laboratory</li> <li>• Ethnoveterinary Herbal Research Centre for Poultry</li> <li>• Krishi Vigyan Kendra</li> </ul>

<b>Sl. No.</b>	<b>District</b>	<b>Research Stations / Laboratories / Centres</b>
10.	Sivagangai	<ul style="list-style-type: none"> <li>• Pulikulam Cattle Research Station, Manamadurai</li> <li>• Krishi Vigyan Kendra, Kundrakudi</li> </ul>
11.	Pudukottai	<ul style="list-style-type: none"> <li>• Regional Research and Education Centre</li> </ul>
12.	Madurai	<ul style="list-style-type: none"> <li>• Veterinary University Training and Diagnostic Centre</li> </ul>
13.	Theni	<ul style="list-style-type: none"> <li>• Farmers Training Centre</li> </ul>
14.	Tiruvarur	
15.	Ramanathapuram	<ul style="list-style-type: none"> <li>• Veterinary University Training and Research Centres</li> </ul>
16.	Kanyakumari	
17.	Chengalpattu	
18.	Vellore	
19.	Thiruvannamalai	
20.	Krishnagiri	
21.	Cuddalore	
22.	Perambalur	
23.	Tiruppur	
24.	Coimbatore	

<b>Sl. No.</b>	<b>District</b>	<b>Research Stations / Laboratories / Centres</b>
25.	Karur	
26.	Thanjavur	
27.	Nagapattinam	
28.	Dindigul	
29.	Tiruchirappalli	
30.	Virudhunagar	

### 19.1.4 Organogram



## 19.2 Education

The various degree and diploma courses offered by the University with their respective admission strengths are detailed below:

<b>Degree and diploma Courses</b>	<b>Student Admission strength</b>
Bachelor degree in Veterinary Science and Animal Husbandry	480
Bachelor degree in Technology (Food Technology)	40
Bachelor degree in Technology (Poultry Technology)	40
Bachelor degree in Technology (Dairy Technology)	20
Master degree in Veterinary Science (22 disciplines)	166
Master degree in Technology (4 disciplines)	22
Master in Science (Biotechnology)	10
Doctorate in Philosophy (Veterinary – 21 disciplines)	100
Doctorate in Philosophy (Biotechnology)	5
Doctorate in Philosophy (Food Technology)	5

<b>Degree and diploma Courses</b>	<b>Student Admission strength</b>
Post Graduate Diploma – Regular mode (6 disciplines)	42
Post Graduate Diploma – Distance mode (17 courses)	170

### **19.3 Research**

The University has a strong research base. There are 12 research stations and 15 research laboratories carrying out research in specific areas like animal health, animal production, veterinary biologicals, zoonosis, livestock feed analysis, disease diagnosis and surveillance, ethnoveterinary medicine, pharmaco-vigilance etc. During 2020-21, a total of 29 research projects to the tune of Rs.3,445.28 lakhs have been sanctioned by various national and international funding agencies to carry out research activities at TANUVAS.

### **19.3.1 Schemes in progress**

The Govt. of India is giving impetus to the conservation of native breeds and in concurrence with this, the Govt. of Tamil Nadu has sanctioned three projects in collaborative funding with NADP (National Agriculture Development Program) during the year 2020-21. The scheme on "Madras Red Sheep Input Centre" with a budget of Rs.285.25 lakhs to popularize the Madras Red Sheep among the farmers and to reduce the gap between the demand and availability of elite germplasm is being established at the Post Graduate Research Institute in Animal Sciences at Kattupakkam, Chengalpattu. The scheme on "Establishment of Salem Black goat farm" with a budget outlay of Rs.148.50 lakhs is being established at Veterinary College and Research Institute, Namakkal for conservation, genetic improvement and for popularization among farmers to improve their livelihood. The scheme

on "Establishment of Goat Research Centre" with a budget outlay of Rs.270 lakhs is being established at Tenkasi to conserve and popularise the native goat breeds of Tamil Nadu.

To provide state of art diagnostic facility for the diagnosis of zoonotic diseases like leptospirosis, brucellosis and rabies, the Government of Tamil Nadu has sanctioned a project "Zoonotic Diseases Diagnostic Laboratory in the Cauvery Delta region of Tamil Nadu", under NADP (National Agriculture Development Program) with a budget outlay of Rs.254.50 lakhs and TANUVAS is in the process of establishing this diagnostic laboratory at Veterinary College and Research Institute, Orathanadu to cater the needs of human and livestock farming community of the region.

To keep in phase with Government of India's Policy on doubling the farmers' income by 2022, the Government of Tamil Nadu has sanctioned a project on "Revitalizing dairy cattle

through TANUVAS GRAND supplement to enhance the productivity and profitability” with a budget outlay of Rs.200 lakhs under NADP to enhance the productive performance of lactating cattle and to empower the economic status of dairy farmers. Under this scheme, TANUVAS has initiated work to produce TANUVAS GRAND supplements for distributing them to 21,000 lactating cattle of the unorganized farm sector in seven Agro-climatic zones of Tamil Nadu.

#### **19.4 Technologies**

TANUVAS is developing technologies to improve the livestock and poultry health, production and other value-added meat / dairy products. The technologies of TANUVAS ready for commercialization are : Vaccines and kits - Canine Parvovirus-like particle-based vaccine, Canine Parvovirus low passage high titre C2b vaccine strain, PCR based diagnosis panel for important haemoparasites of dogs, inactivated classical swine fever virus vaccine; Rat



coronavirus ELISA kit, Kilham rat virus ELISA kit, minute virus of mice ELISA kit, mouse hepatitis virus ELISA kit; Value added milk and meat products - Paneer cookies, Turkey gizzard pickle, Turkey meat cutlet, Ready to eat meat pellets and Sweet paneer nuggets; Farm accessories - cattle body weight measuring tape, rapid intravenous fluid administration set, oral infusion pump for cattle, pet bird cage, small backyard poultry cage, milk replacer for early weaned piglet, combined cream separator cum butter churn and TANUVAS Mobile App. for sheep/ goat farmers.

#### **19.4.1 Initiatives to Combat Covid-19 pandemic**

- TANUVAS has developed a hand sanitizer “VIROCLEAN™” for use during the COVID-19 pandemic. License has also been secured from the Director of Drugs Control, Chennai to manufacture and sell the product.

- TANUVAS has produced a 3D printed reusable face shield of medical grade to be worn over the mask for better protection, especially for clinicians.
- TANUVAS has developed hands-free sanitizer dispenser that can deliver sanitizer fluid using a foot-pedal.
- COVID-19 RT-PCR kit and Virus Transport Media (VTM) used for collection and transport of samples for COVID-19 diagnosis has been developed by VIF (Veterinary Incubation Foundation) at TANUVAS using the facilities at TANUVAS. Test license for the products have been obtained from Central Drugs Standard Control Organization (CDSCO) and the product is approved by Indian Council of Medical Research and manufactured at the cGMP (current Good Manufacturing Practices) facility of TANUVAS.

## **19.5 Capacity building programmes**

TANUVAS initiated various capacity building programmes for students as well as for the faculty members to update their knowledge on the advancements in the field of Veterinary, Animal and Food Sciences.

### **19.5.1 Initiatives for Students**

- Veterinary Incubation Foundation (VIF) at TANUVAS organized a webinar on “Vetpreneurship” benefitting 130 students.
- Veterinary College and Research Institute, Orathanadu conducted a webinar on “Stress Management for Students during Covid-19 Pandemic”. A total of 250 students and faculties attended the webinar.
- An online symposium entitled “Veterinary Entrepreneurship and emerging role of Veterinarians in current scenario” was organized for 114 undergraduate students of Madras Veterinary College, Chennai.

- Webinars on “Career opportunities for vets” for the final year B.V.Sc.& A.H. students was conducted at Veterinary College and Research Institutes at Tirunelveli and Orathanadu.
- An international virtual symposium on “Digital scholarship” was conducted at Madras Veterinary College, Chennai. A total of 662 students from India and foreign countries participated in the programme.
- A national e-conference on “Clinical anatomy of bovines and canines for effective veterinary practice” was conducted at Veterinary College and Research Institute, Orathanadu benefitting 743 participants. As part of the e-Conference, an All-India e-Quiz was conducted for undergraduate students in the field of “Applied Clinical Anatomy” in which 171 UG students from various states of India participated.

- TANUVAS conducted Global Buiatric Medicine Webinar Series-2020 on “Diagnostic ultrasonography in cattle and diagnosis and management of diseases of cattle” at Veterinary College and Research Institute, Tirunelveli.
- A webinar on “Career opportunities for veterinarians in Indian Army” through virtual mode was organized at Veterinary College and Research Institute, Tirunelveli for the veterinary students of TANUVAS.

### **19.5.2 Initiatives for Faculty members**

TANUVAS has organized 19 International and 15 National webinars at its constituent colleges during this Covid pandemic period to enrich faculty on the recent advancements in the field of veterinary education, clinical and animal husbandry practices. A total of 17,044 faculty members, scientists and veterinarians from various parts of India and abroad participated

and benefitted from this knowledge sharing webinars.

### **19.6 Clinical services**

The University has an excellent network of hospitals and is offering clinical services to the livestock and companion animals. A total of 1,94,464 animals were treated as out-patient cases and 2,014 animals as in-patient cases during the year 2020-21. Referral facilities with ultrasonography, endoscopy, electrocardiography, orthopaedics, haemodialysis, ophthalmology, dermatology, canine blood bank, etc., are also available. CT scan facility is also available in Madras Veterinary College and Veterinary College and Research Institute, Namakkal.

### **19.7 Extension Activities**

The University outreach activities are focused on empowering farmers, farm women, rural youth, school dropouts and self-help groups with scientific livestock and poultry farm

practices for their livelihood through capacity building programmes, frontline demonstrations and on-farm trials. Dissemination of the livestock and poultry technologies developed by TANUVAS was also promulgated through print media, electronic media and e-Extension initiatives.

During 2020-21, a total of 1,172 trainings benefitting 44,052 farmers, 118 exposure visits for 4,393 farmers and 1,25,757 advisory services were given to farmers by this University through its various outreach units in the districts besides offering inputs for livestock farm activities. During this Covid pandemic period, a total of eight webinars on scientific rearing of livestock and poultry farming were organized for the farming community benefitting 2,319 farmers.

### **19.7.1 Distance Education courses**

The Directorate of Distance Education is offering 17 PG diploma courses for the veterinarians to upgrade their knowledge and skills on latest technologies in animal husbandry and veterinary sciences. In addition, 15 skill development and 10 self-employment courses are being offered to the farmers and unemployed youth to boost livestock and poultry production thereby enhancing the rural economy. During the year 2020-21, 60 veterinarians and 772 farmers/youths were benefitted from PG diploma courses and skill development/self-employment courses of the university respectively.

### **19.8 Awards / recognitions**

- Poultry Disease Diagnostic and Surveillance Laboratory, Namakkal – a constituent unit of TANUVAS has been permitted to test and issue results of poultry samples for Avian Influenza as per exporter's requirement for



issuing veterinary health certificates during the covid-19 pandemic using RT-PCR method.

- Patents have been obtained for the six technologies developed by the faculty members of TANUVAS namely Mobile scalding tank for scalding birds; ABT mini encapsulator; rapid field test kit for chicken anaemia virus antibody detection; *in-vitro* molecular method for identifying gender in Emu; Nano-Biomarker coupled Newcastle disease vaccine and a novel method to diagnose small ruminants with potential resistance to blue tongue during the year 2020-21.

### **19.9 Infrastructure created at TANUVAS**

- Newly established Native Chicken Brooder cum Grower House and Native Chicken Breeder House at PGRIAS, Kattupakkam was inaugurated.

- The “Retrofit Digital Radiography Unit” for the radio-imaging of small and large animal diseases at Madras Veterinary College was inaugurated.
- First floor in the Girls Hostel at the College of Poultry Production and Management, Hosur; Ethno Veterinary Herbal Product Research and Development Centre at Veterinary College and Research Institute, Orathanadu and the Inpatient ward for large animals at Veterinary College and Research Institutes, Tirunelveli and Orathanadu were opened.
- A modular laboratory constructed at Zoonoses Research Laboratory, Madhavaram with the assistance from TANII (Tamil Nadu Innovation Initiatives) was inaugurated.
- Foundation stone was laid at Veerapandi Village, Theni for the construction of new Veterinary College and Research Institute.

- The new buildings of Veterinary College and Research Institute at Salem was inaugurated.
- The Rural poultry inputs and skill development centre established at Poultry Research Station, Chennai under NADP (National Agriculture Development Program) was inaugurated.

### **19.10 Sustainable Development Goals - TANUVAS**

The following are the strategies of TANUVAS towards achieving the Sustainable Development Goals:

- Establishment of Tiruchy Black Sheep Research Centre at Dharmapuri District
- Establishment of Resource Centre for indigenous Siruvidai chicken of Tamil Nadu at Madhavaram
- Establishment of Resource Centre for Pattanam sheep at Veterinary College and Research Institute, Orathanadu

- Fodder Seed Production Unit for Sustainable Livestock Production under North Western Zone of Tamil Nadu at Veterinary College and Research Institute, Namakkal

### **19.11 Start-ups in Livestock sector**

To nurture Start-ups and entrepreneurship in the area of veterinary, animal sciences and allied sectors, TANUVAS has established Veterinary Incubation Foundation (VIF) with the financial support of Entrepreneurship Development and Innovation Institute (EDII), Chennai, a Govt. of Tamil Nadu undertaking. The salient activities of VIF are:

- Five start-ups incubated at VIF@TANUVAS to develop novel veterinary products/services.
- The 'Quadmastest Basic', a hand-held conductivity meter developed by M/s. Chimertech Innovations LLP, an incubatee of VIF@TANUVAS was released. The Quadmastest

Basic helps in detection of subclinical mastitis in dairy cows based on the measurement of variations in electrical conductivity of milk.

- COVID-19 RT-PCR kit and Virus Transport Media (VTM) are being developed by M/s. TranScience Innovative Technologies, an incubatee of VIF@TANUVAS, using the facilities of TANUVAS, following WHO guidelines.

### **19.12 Industry-Institute Linkage**

To ensure research and academic collaboration, TANUVAS have executed the Memorandum of Understanding with the following industries/Institutes;

- SRM Institute of Science and Technology (SRMIST), Kattankulathur, Chengalpattu
- Indian College of Laboratory Animal Medicine, Salem
- Mecton Organic Farms Pvt. Ltd., Chennai
- Thai Thirunaal Agro Foods Pvt. Ltd., Coimbatore

- Laboratory Animal Scientist Association
- **A tripartite MoU has been executed between TANUVAS-BSA Crescent Institute of Science and Technology- Crescent Innovation and Incubation Council**

### **19.13 International Collaboration**

Memorandum of Understanding has been signed by TANUVAS with Bangladesh Agricultural University, Mymensingh, Bangladesh for clinical internship programme, students/staff exchange, research, organizing seminars and academic meetings between two Institutes.

### **19.14 Priorities for 2021-22**

- Enhancement of livestock productivity through nutritional supplement / TANUVAS GRAND
- To conserve the native breeds of livestock and poultry of Tamil Nadu and to supply elite germplasm to the needy farmers

- Establishment of fodder banks and promotion of seasonal/perennial fodder cultivation among farmers
- Promulgate farm accessories to ease the farm activities and move towards to mechanized farming system
- International tie-ups in the area of Academic and Research cooperation
- Skill development training on animal husbandry activities to unemployed youth and rural women
- Strengthening of e-governance initiatives through development of management systems and user apps
- Capacity building of Veterinary Professionals
- To establish industry-university collaborative research consortium to facilitate industry driven research and to promote start-ups
- Developing climatic amelioration strategies and mitigation techniques for enhancing livestock production

### **19.15 Conclusion**

The Tamil Nadu Veterinary and Animal Sciences University will pave way for advancement of learning in veterinary and animal sciences besides undertaking research and extension services for the betterment of livestock, poultry and food sector in the state.

### **20. REVISED BUDGET ESTIMATE FOR THE YEAR 2021-2022**

A sum of Rs.1,647.9193 crore has been provided in the budget for 2021-2022. Out of this, projected revenue expenditure is Rs.1,177.3455 crore, capital expenditure is Rs.470.3238 crore and loan amount is Rs.0.25 crore.

### **21. CONCLUSION**

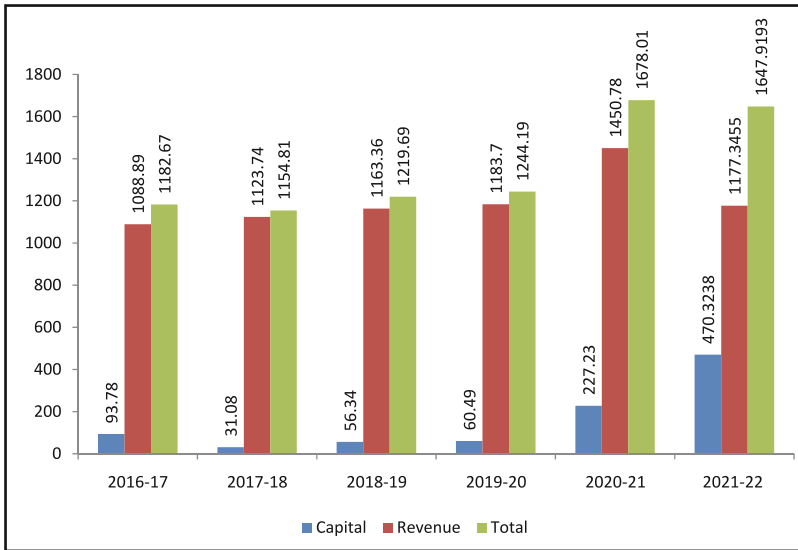
Rural economic improvement through initiatives in Animal Husbandry sector has been given special impetus by the Government of



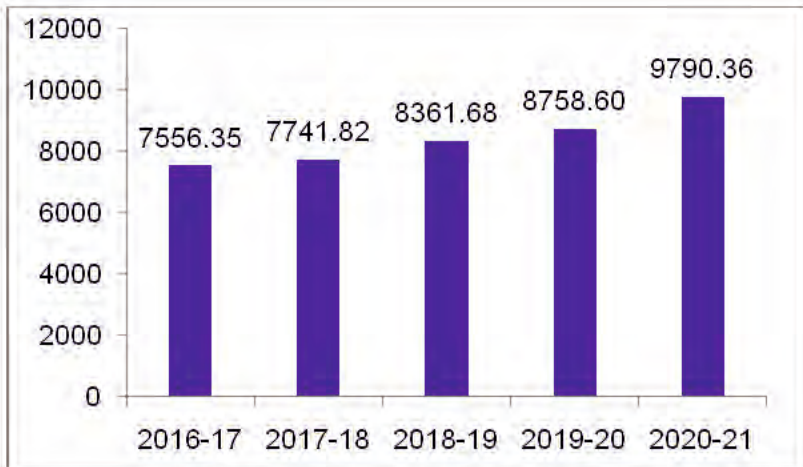
Tamil Nadu. Livestock Policy through appropriate programmes and investments helped in achieving substantially higher growth rate for milk, meat and egg products. This has ensured the ready availability of the required quantity of much needed animal protein to the rural poor. Further, the sector has tremendous potential to generate employment, provide nutritional security, enhance household income through increased productivity and thus help in poverty reduction among the rural poor and transformation of the rural scenario. It is acting as an engine in poverty alleviation by converting the asset-less poor into income generating asset-owning population.

**ANITHA R. RADHAKRISHNAN**  
**Minister for Fisheries–Fishermen**  
**Welfare and Animal Husbandry**

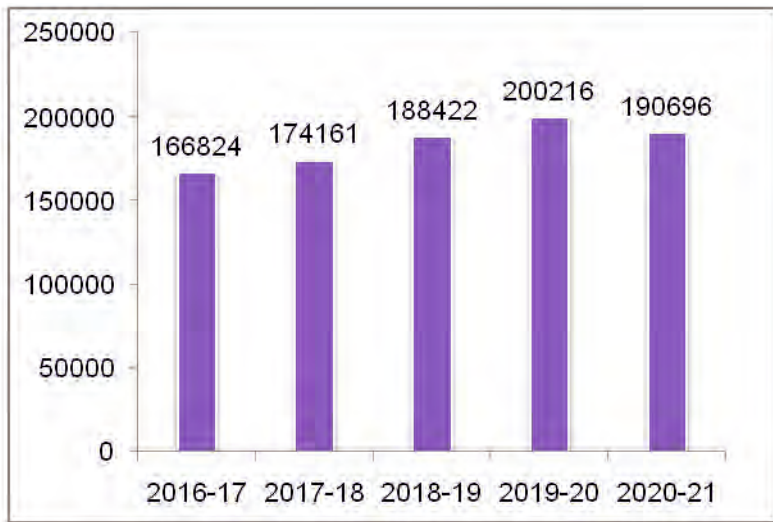
## Budget Allocation (Rs. in crore)



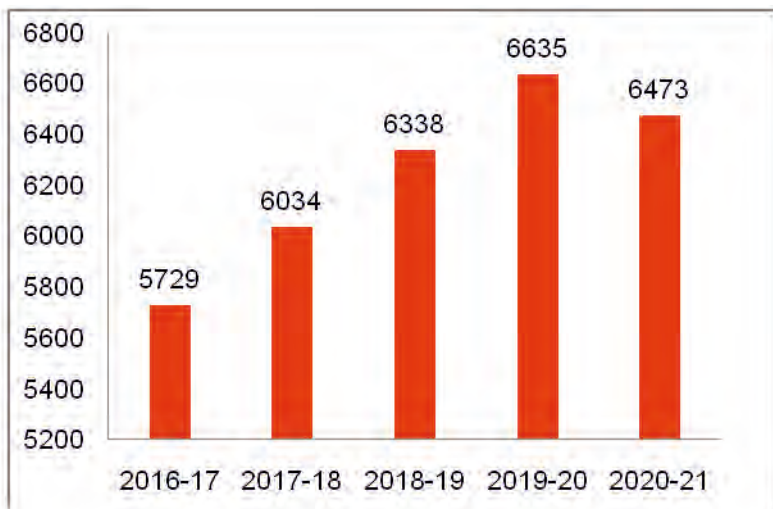
## Estimated Milk Production (Lakh Metric Tonne)



### Estimated Egg Production (Lakh nos.)



### Estimated Meat Production (Lakh nos.)





**Thiru. Anitha R. Radhakrishnan Hon'ble Minister for Fisheries, Fishermen Welfare and Animal Husbandry inaugurated a veterinary health camp at Ramanathapuram**



**Stone laying ceremony of the additional academic buildings of the Veterinary College and Research Institute, Tirunelveli by Hon'ble Minister for Fisheries, Fishermen Welfare and Fisheries Thiru. Anitha R. Radhakrishnan on 10.07.2021 for a total budget of Rs.13.41 crores.**



**Visit to Madras Veterinary College Hospital, Chennai by Thiru.Anitha R. Radhakrishnan Hon'ble Minister for Fisheries, Fishermen Welfare and Animal Husbandry, Thiru. P.K. Sekarbabu, Hon'ble Minister for Hindu Religious and Charitable Endowments, Thiru.M.Dayanidhi Maran, Member of Parliament and Thiru. I. Paranthaman, MLA**

## EXOTIC BREEDS OF CATTLE



HOLSTEIN FRIESIAN



JERSEY

## NATIVE BREEDS OF CATTLE



ALAMBADI



KANGAYAM

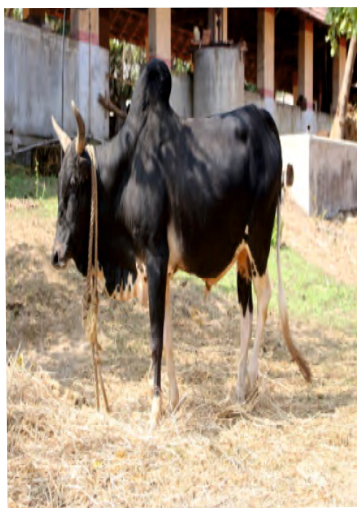
## NATIVE BREEDS OF CATTLE AND BUFFALO



BARGUR



PULIKULAM



UMBLACHERY

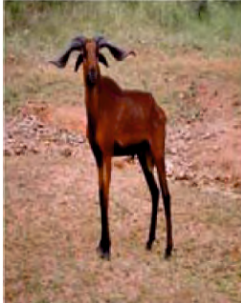


TODA BUFFALO

## **NATIVE BREEDS OF SHEEP**



**MADRAS RED**



**KILAKARISAL**



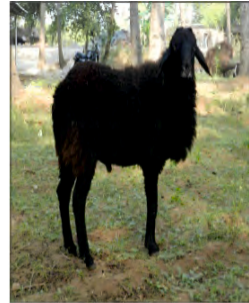
**MECHERI**



**CHEVAADU**



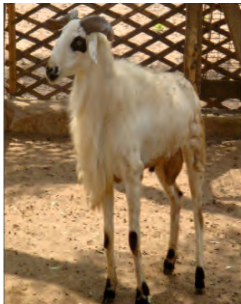
**COIMBATORE**



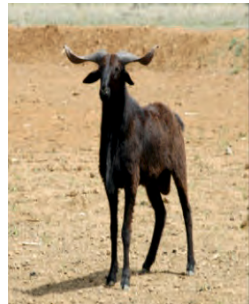
**TIRUCHI BLACK**



**VEMBUR**



**RAMNAD WHITE**



**KATCHAIKATTY**



## **NATIVE BREEDS OF GOATS**



**KANNI ADU**



**SALEM BLACK**



**KODI ADU**

## **NATIVE BREEDS OF DOGS**



**RAJAPALAYAM**



**CHIPPIPARAI**



**KOMBAI**



**KANNI**

