ANIMAL HUSBANDRY, DAIRYING AND FISHERIES DEPARTMENT

ANIMAL HUSBANDRY

POLICY NOTE
2014-2015

Demand No.6

T.K.M. CHINNAYYA
MINISTER FOR ANIMAL HUSBANDRY

I N D E X

ANIMAL HUSBANDRY DEPARTMENT

POLICY NOTE 2014-15

"In order to augment farm income, the increasing focus will be on allied activities. I have launched a number of important initiatives in the Animal Husbandry Sector, including the free distribution of milch cows, as well as the distribution of goats and sheep to poor families....."

- *Inaugural address of the* ***Hon'ble Chief Minister*** *at the Conference of the District Collectors and Police Officers on 11.12.2013*

1. INTRODUCTION

Animal Husbandry sector plays a crucial role in ensuring the welfare of rural population. A majority of farmers depend on Animal Husbandry for their livelihood. Moreover, Livestock sector provides supplementary employment and sustainable source of income to many small and marginal farmers. Thus, this sector is emerging as an important sector, leveraging the rural economy. In addition, this sector provides a continuous flow of essential food products like milk, meat, eggs besides draught power, raw materials like wool and hides for industries, and manure. With increase in production of livestock products, livestock rearing is also considered as an avocation with high export potential. Distribution of

livestock wealth is more egalitarian, compared to land and hence, from the equity and livelihood perspective, it is considered as an important component in poverty alleviation programmes.

As a component of agricultural sector, Animal Husbandry sector contributes 3.92% to Gross Domestic Product (GDP) (National Dairy Development Board) and employs 5.5% of the labour force (Source: 61st Round Survey, National Sample Survey Organisation). In recent years, livestock output has grown at a rate of around 4-5% a year. The contribution of livestock sector to the Gross State Domestic Product (GSDP) is 3.93% and that to the agriculture and allied activities is 40.99% (Advanced Estimate at Current Prices).

During 2006-07, the gross value of output of livestock, which was 11535.23 crore in the State has increased to 39461.42 crore during 2012-13 (Advanced Estimate at Current Prices). The dairy and poultry sectors contributed significantly to this growth. The estimated milk production, which was 54.74 lakh Metric Tonnes during 2005-06 in Tamil Nadu has increased to 70.05 lakh Metric Tonnes during 2012-13. Likewise, the estimated egg production, which was 62,225 lakh numbers during 2005-06 has increased to 1,19,334 lakh numbers during 2012-13. The per capita availability of milk per day and eggs per annum has increased from 231 gms and 100 numbers during

2005-06 to 260 gms and 162 numbers during 2012-13 respectively. Apart from these, the estimated meat production (including poultry meat), which was 2,200 lakh kgs during 2006-07 has increased to 4,620 lakh kgs during 2012-13. The State contributes 5.29% of milk production, 17.10% of egg production and 8.80% of total meat production (including poultry meat) and ranked 9th in milk production, 2nd in egg production and 5th in meat production in the country.

With the goal of sustaining and further improving the production of livestock products, the Animal Husbandry Department provides comprehensive veterinary assistance and health cover to all livestock and poultry across the State through a network of 2,579 Veterinary Institutions and 850 Veterinary Sub-Centres. Animals in remote villages also get veterinary assistance through Mobile Veterinary Units. With the implementation of cross breeding programme and various other schemes by the department, livestock farming has become economically viable and remunerative to a large number of rural households in the State.

Aiming to make Tamil Nadu 'numero uno' State in the country, a target of 11 per cent growth in Gross State Domestic Product (GSDP) by the year 2023 has been set by the Hon'ble Chief Minister of Tamil Nadu which is mentioned in the Vision Document prepared for the purpose. To attain this growth, development of

primary sectors like Agriculture and its allied sectors like Animal Husbandry is essential. The Hon'ble Chief Minister has given special emphasis to the Animal Husbandry sector, for the upliftment of economic status of the rural poor. This is being fulfilled by implementing flagship Schemes like “Free distribution of Milch Cows and Free distribution of Goats / Sheep” to poor women in rural areas. Since inception of the scheme during 2011-12 to 2013-14, 16 lakh goats /sheep and 36,000 milch cows have been distributed to poor needy families. These have given birth to 14,46,613 kids and 18,356 calves respectively. Further, 1,29,044 litres of milk is being produced out of which, 80,000 litres of milk is being procured by Tamil Nadu Cooperative Milk Producers' Federation Ltd. (TCMPF) every day from the Milch Cows distributed under the Free Scheme.

Further in order to improve the productivity of the livestock, thereby improving the economy of the livestock farmers, a scheme for augmenting fodder is under implementation since 2011-12. So far, a total 92,000 acres of farmers own land have been brought under fodder cultivation. With a view to increase the per capita income in economically backward districts and to encourage entrepreneurs at the village level, to take up commercially viable poultry farming as an avocation, a scheme for poultry development was launched by the Hon'ble Chief Minister during 2012-13.

2. AIMS OF THE DEPARTMENT

- Upgradation of local stock of cattle and buffaloes by Artificial Insemination using exotic and cross bred semen for cattle and Murrah semen for buffaloes.
- Conservation and propagation of indigenous breeds of livestock in their native tracts.
- Augmenting the production potentialities of livestock and poultry and thus increasing the production of milk, egg and meat.
- Providing necessary and timely modern veterinary assistance and health cover to the livestock and poultry.
- Ensuring livestock health by preventing major livestock diseases through vaccination.
- Implementing various Central and State Government schemes for the upliftment of economic status of rural poor.
- Protecting human health by preventing major zoonotic diseases of animals.
- Creating awareness among public about modern animal husbandry practices.
- Conducting training courses on basic and latest animal husbandry practices for farmers and officials.

2.1 The Department has initiated the following efforts towards achieving the aims:

- The number of Veterinary Institutions increased from 1,429 during 2010-11 to 2,579 during 2013-14. This ensured that each Veterinary Institution caters to 6,310 Cattle Units, which is close to the recommendation of National Commission on Agriculture, which is one Veterinary Institution for every 5,000 Cattle Units.
- The number of cases treated in Veterinary Institutions and first aid provided in Sub-centres together has increased from 223.26 lakh during 2010-11 to 314.41 lakh during 2013-14. This was possible since 1,049 Veterinary Institutions were established and professional Veterinary services were provided to livestock in needy remote areas.
- The daily average milk production of the Indigenous cow has increased from 2.578 kgs during 2011-12 to 2.718 kgs during 2012-13 (Source: Integrated Sample Survey, 36th Report, Government of Tamil Nadu). Similarly, the daily average milk production of crossbred cow has increased from 6.41 kgs during 2011-12 to 6.81 kgs during 2012-13 and that of Buffalo has increased from 4.093 kgs during 2011-12 to 4.401 kgs during 2012-13.
- In order to create awareness and to encourage rearing of indigenous breeds among the livestock farmers with the ultimate aim of conserving

indigenous cattle breeds, two Regional / State level workshops (One for Kangeyam breed at Tiruppur another for Umblachery breed at Nagapattinam) and 3 cattle fairs / exhibitions (for Kangeyam Breed at Tiruppur, Umblachery Breed at Nagapattinam and for Burgur Breed at Erode) were conducted at a total cost of Rs.10 lakh.

- Issues in the broiler farming industry, between the integrators and farmers with respect to fixing of minimum growing charges among several issues were amicably sorted out through a process of composite dialogue which was conducted as per the orders of the Hon'ble Chief Minister under the watchful supervision of the Hon'ble Minister of Animal Husbandry.

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 Establishment of Mobile Veterinary Units.

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.
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.

2007-2008 Tamil Nadu Veterinary Infrastructure Improvement Project (TANVIIP) was launched with funds sourced from NABARD RIDF XI.

2011-2012

- Implementation of Hon'ble Chief Minister's Special Schemes viz., Free distribution of Milch Cows and Free distribution of Goats / Sheep to women headed poor families.
- State Fodder Development Scheme (SFDS) launched to promote Fodder Production.
- 585 Sub-Centres were upgraded as Rural Veterinary Dispensaries.
- The number of Animal Husbandry Divisions were increased from 65 to 76 to match the number of Revenue Divisions.
- Infrastructure improvement in 360 Veterinary Institutions, 12 Livestock Farms through NABARD RIDF XVII.

2012-2013

- Implementation of Scheme for Poultry Development.
- Creation of 5 new Joint Director offices of Animal Husbandry to match the number of Districts (except Chennai).
- Upgradation of Anthrax Spore Vaccine Laboratory and Bacterial Vaccines Laboratory to Good Manufacturing Practices (GMP) standards at Institute of Veterinary Preventive Medicine (IVPM) was sanctioned under NADP.

2012-2013

- Sanction for establishment of Poultry Disease Diagnostic Laboratory (PDDL) at Palladam in Tiruppur District with Good Laboratory Practices (GLP) standards.
- Introduction and successful implementation of Embryo Transfer Technology (ETT) at District Livestock Farm (DLF), Hosur and at field level in 8 Districts.
- Conduct of 19th Quinquennial Livestock Census.
- 2 new Veterinary College and Research Institutes were established under TANUVAS at Orathanad of Thanjavur district and at Tirunelveli.

2013-2014

- Directorate of Animal Husbandry and Veterinary Services was awarded with the "**Best Practices Award** for improvement of quality Delivery System ensuring Good Governance" by the Hon'ble Chief Minister on Independence day.
- Upgradation of 100 Sub-Centres into Veterinary Dispensaries.
- Establishment of 11 Cattle Breeding and Fodder Development Units (CBFDs).
- Provision of 53 Ultra Sound scanning equipments to Clinician Centres, Livestock Farms and Cattle Breeding and Fodder Development Units (CBFDs).

- Provision of 5 handheld Ultrasound Doppler equipments to 5 Veterinary Polyclinics.
- Steps initiated for Conservation of Indigenous breeds of Livestock.
- Promotion of Slatted floor for rearing Goats through five Departmental Livestock Farms with funding from Integrated Development of Small Ruminants and Rabbits (IDSRR) Scheme.
- Effective control measures taken on a war footing to control and contain a very severe outbreak of Foot and Mouth Disease.
- Expansion of Rural Backyard Poultry Scheme to cover more Districts.
- Infrastructure improvement to Dog Breeding Unit at Saidapet.
- Establishment of “Stem Cell Research Centre for Animals”, the first of its kind in the country on 19.06.2013 at TANUVAS, Chennai.
- TANUVAS is celebrating its Silver Jubilee year from 20.09.2013.

4. LIVESTOCK AND POULTRY POPULATION

The Census on livestock, poultry, agriculture implements and fisheries is conducted once in 5 years since 1951 considering the shorter life span of livestock. The 19th Quinquennial Livestock and Poultry Census operation was carried out by the Department of Animal Husbandry in 2012-13. The on field census operations have been completed and the data is being compiled. The breed wise census operations which would throw light on the status of the indigenous breeds of livestock that are native to Tamil Nadu has also been completed. The results will be published with the concurrence of Government of India shortly.

As per the 18th Livestock and Poultry Census, comparison of the livestock and poultry population in Tamil Nadu with respect to the livestock and poultry population in India are as follows:

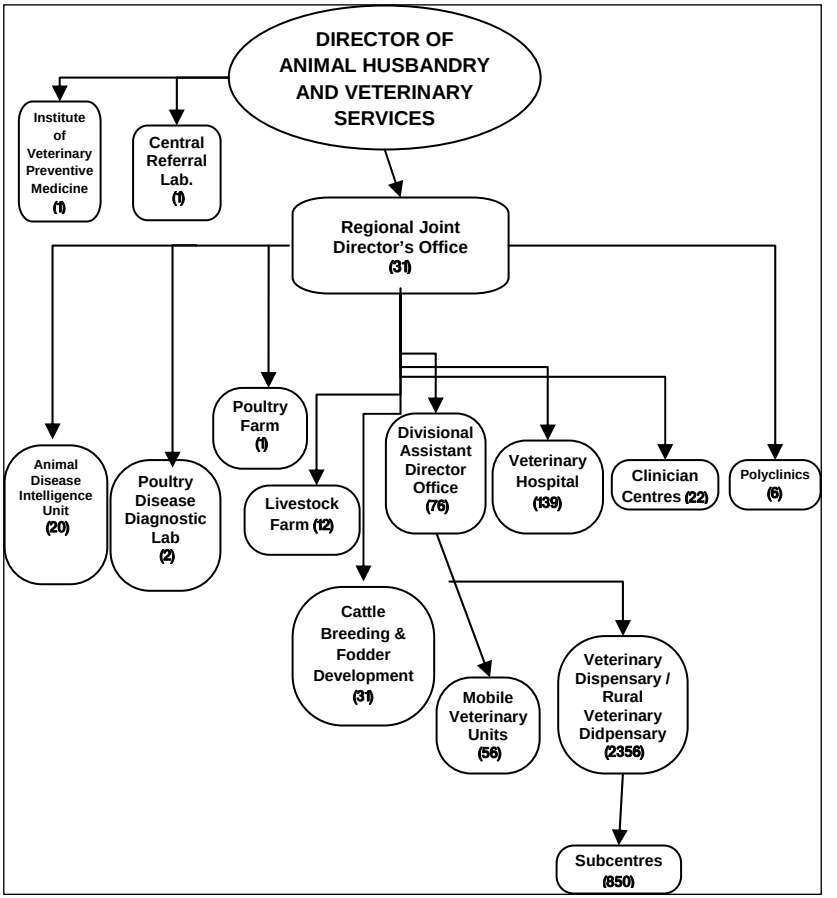
Table 1: Comparison of State Livestock and Poultry Population with India

Species	**Population in India** (in lakh Nos.)	**Population in Tamil Nadu** (in lakh Nos.)	**% of population available in Tamil Nadu**
Cattle	1990.75	111.89	5.62
Buffalo	1053.43	20.09	1.91
Sheep	715.58	79.91	11.17

Species	**Population in India** (in lakh Nos.)	**Population in Tamil Nadu** (in lakh Nos.)	**% of population available in Tamil Nadu**
Goat	1405.37	92.75	6.60
Pigs	111.34	2.84	2.55
Others (Horses, Ponies and Donkeys)	20.50	0.11	0.54
Total Livestock	**5296.98**	**307.59**	**5.81**
Total Poultry	**6488.30**	**1,281.08**	**19.74**

Tamil Nadu ranks 2nd in respect of Poultry, 4th in Sheep, 7th in Goats, 9th in Cattle and 10th in Buffalo population in the country.

5. ADMINISTRATION



The Animal Husbandry Department is headed and governed by the Director of Animal Husbandry and Veterinary Services. The Director is assisted by four Additional Directors, two Joint Directors, one Deputy Director and nine Assistant Directors in the Directorate

with allocation of different technical subjects. The Director is assisted by one of the four Additional Directors and a Deputy Director (Personnel) and 2 Administrative Officers in respect of administrative matters and a Financial Controller, a Chief Accounts officer and an Accounts officer in respect of finance and accounts.

Each of the 31 Districts (except Chennai) are under the control of one Joint Director and each of the 76 Administrative divisions, are headed by an Assistant Director. They are responsible for all the activities of the Department within their area of jurisdiction.

One Director in the cadre of Additional Director is the head of Institute of Veterinary Preventive Medicine (IVPM) located at Ranipet, which is engaged in the production of various livestock and poultry vaccines and other biologicals. One Central Referral Laboratory (CRL), assigned with the work of diagnosis, confirmation and monitoring of animal diseases is functioning at Chennai. The Central Referral Laboratory coordinates the work of the 20 Animal Disease Intelligence Units (ADIUs) and 2 Poultry Disease Diagnostic Laboratories (PDDLs) functioning in various parts of the State, that are engaged in disease surveillance and monitoring.

The Department also manages 8 Livestock Farms, 3 Sheep Farms, 1 Poultry Farm, 1 Fodder Farm and 31 Cattle Breeding and Fodder Development Units (CBFDs).

Table 2: Category wise Sanctioned Strength of Posts

S. No	Category of Post	Cadre Strength
1	Director of Animal Husbandry and Veterinary Services	1
2	Additional Director	4
3	Director, Institute of Veterinary Preventive Medicine, Ranipet.	1
4	Joint Director	34
5	Senior Research Officer	3
6	Deputy Director	43
7	Assistant Director	306
8	Research Officer	7
9	Administrative Officer	17
10	Assistant Research Officer	22
11	Veterinary Assistant Surgeon	2,635
12	Research Assistant	40
13	Senior Veterinary Livestock Supervisor	165
14	Livestock Inspector Grade I	1,404
15	Livestock Inspector Grade II	1,357
16	Animal Husbandry Assistant	4,521

The following measures have been taken to improve the administration in the Department during 2013-14:

- A total of 108 technical posts including 42 Assistant Directors, 42 Deputy Directors, 20 Joint Directors and 4 Additional Directors were filled up by promotion. In addition, 56 para-technical posts and 48 Ministerial posts were filled up through promotion from lower cadre posts. Further, 9 Statistical Inspectors, 93 Junior Assistants and 111 Typists were appointed through Tamil Nadu Public Service Commission (TNPSC).
- 12 new Deputy Director posts were created for the newly created Cattle Breeding and Fodder Development Units (CBFDs).
- 100 Veterinary Assistant Surgeon posts and 100 Animal Husbandry Assistant posts have been newly created for the 100 upgraded Veterinary Dispensaries.
- Out of 303 candidates trained at District Livestock Farms, Hosur, Pudukottai and Sheep Farm, Mukundarayapuram, 291 persons have been posted as Livestock Inspectors (2011-12 Batch). Further 328 candidates were selected for Livestock Inspectors training out of which, 316 candidates are presently undergoing training at Hosur, Pudukottai and Mukundarayapuram Farms since 17.10.2013 (2012-13 Batch).

- 450 veterinarians were provided training on various aspects of Animal Husbandry and Veterinary Sciences at various institutions.
- 50% pension benefit was provided to all 139 personnel who were diverted from the erstwhile Tamil Nadu Poultry Development Corporation (TAPCO).
- Action has been initiated to appoint 12 Drivers for the Vehicles of newly established Cattle Breeding and Fodder Development Units (CBFDs) through Tamil Nadu Ex-Service men's Corporation Limited (TEXCO).
- A total of 337 Right To Information (RTI) petitions were received by the Department and all the petitions were provided with appropriate responses during 2013-14.
- Out of a total of 524 petitions received from the Hon'ble Chief Minister's grievance redressal cell, replies have been provided for all the petitions, thus ensuring 100% compliance.

6. VETERINARY SERVICES

Animal Husbandry Department provides timely and effective health coverage to the livestock and poultry population of the State for augmenting their production and productivity. Veterinary services are provided through the wide network of Veterinary Institutions and Sub-centres located in all the districts. The services provided include health cover, disease

diagnosis, disease prevention, disease control, breeding support and imparting training to farmers. While Veterinary services are provided by the professional work force, minor veterinary services and first aid are provided through Para veterinarians.

6.1 VETERINARY INSTITUTIONS

Veterinary Institutions have expanded from a humble beginning of around 120 institutions during 1959-60 to the present 2,579 institutions during 2013-14. Field Veterinary Institutions numbering 2,579, which include 6 Veterinary Polyclinics, 22 Veterinary Clinician Centres, 139 Veterinary Hospitals, 1,771 Veterinary Dispensaries, 585 Rural Veterinary Dispensaries and 56 Mobile Veterinary Units provide Veterinary health services to the livestock and poultry of the State.

Table 3: Districtwise infrastructure facilities available across the State

Sl. No.	District	Divisions	P.U	Polyclinics	Clinician centres	Hospitals	Dispensaries	Rural Veterinary Dispensaries	Mobile Units	Sub centres	Visiting Subcentres
1	Ariyalur	2	6	-	-	2	29	9	1	2	-
2	Chennai	0	-	1	-	1	0	0	1	4	-
3	Coimbatore	2	12	1	1	12	61	24	2	22	3
4	Cuddalore	3	13	-	1	5	65	13	1	59	-
5	Dharmapuri	2	8	-	1	2	48	15	2	3	1
6	Dindigul	3	14	-	1	5	60	25	1	78	1
7	Erode	2	14	-	2	6	69	25	3	21	-
8	Kancheepuram	4	13	-	2	1	65	23	2	39	1
9	Kanniyakumari	2	9	-	1	2	36	12	2	16	-
10	Karur	2	8	-	1	2	36	16	1	21	-
11	Krishnagiri	2	10	-	1	2	54	12	1	7	6
12	Madurai	2	13	1	-	4	54	18	1	71	-
13	Nagapattinam	2	11	-	2	3	51	15	2	16	-
14	Namakkal	2	15	-	-	4	70	22	3	4	3
15	Perambalur	1	4	-	-	-	25	10	-	1	-
16	Pudukottai	2	13	-	1	4	61	16	2	33	-
17	Ramanathapuram	2	11	-	-	4	36	16	-	14	2
18	Salem	4	20	1	-	6	100	31	6	1	5
19	Sivagangai	2	12	-	-	2	49	20	-	49	-

Sl. No.	District	Divisions	P.U	Polyclinics	Clinician centres	Hospitals	Dispensaries	Rural Veterinary Dispensaries	Mobile Units	Sub centres	Visiting Subcentres
20	Thanjavur	3	14	-	2	6	75	22	3	28	3
21	Theni	2	8	-	-	3	34	11	1	52	5
22	The Nilgiris	2	4	-	1	2	19	4	3	13	2
23	Tirunelveli	3	19	1	-	7	80	19	1	31	-
24	Thiruvallur	3	14	-	-	5	60	19	1	27	1
25	Tiruvannamalai	2	18	-	1	5	78	25	3	25	-
26	Thiruvarur	2	10	-	1	7	44	16	1	37	-
27	Thoothukudi	3	12	-	1	2	45	17	1	39	1
28	Tiruchirapalli	3	14	1	-	8	68	25	2	27	2
29	Tiruppur	3	13	-	-	7	63	25	1	35	-
30	Vellore	3	20	-	1	8	81	27	4	27	6
31	Villupuram	4	22	-	1	7	107	34	4	18	2
32	Virudhunagar	2	11	-	-	5	48	19	-	30	11
TOTAL		76	385	6	22	139	1771	585	56	850	55

6.1.1 Veterinary Polyclinics

Veterinary Polyclinics function round the clock, providing specialized services in gynaecology, surgery and medicine. They are headed by Clinician in the rank of Assistant Director, who is assisted by Veterinary Assistant Surgeons. At present, Polyclinics are

functioning at 6 Municipal Corporations namely Chennai, Coimbatore, Madurai, Tiruchirapalli, Salem and Tirunelveli. These have in-patient, X-ray and laboratory facilities also. Diagnostic equipments like ultrasound scanners are being provided to these institutions so as to function as referral units in the District.

6.1.2 Veterinary Clinician Centres

Veterinary Clinician Centres are headed by Clinician who is assisted by Veterinary Assistant Surgeons. As of now, 22 Clinician Centres are functioning in the State. Apart from providing specialized services in gynaecology, surgery and medicine, they have in-patient and X-ray facilities. Diagnostic equipments like ultrasound scanners are being provided to these institutions so as to function as referral units in the District.

6.1.3 Veterinary Hospitals

Veterinary Hospitals are headed by Veterinary Surgeons and assisted by either Veterinary Assistant Surgeons or Senior Veterinary Livestock Supervisors or both. In patient facilities are also available in these Centres.

6.1.4 Veterinary Dispensaries / Rural Veterinary Dispensaries

The Veterinary Dispensary which is the basic structural and functional unit of the Department is manned by Veterinary Assistant Surgeons. Treatment to ailing animals, Artificial Insemination, treatment of infertility cases, Preventive Vaccination for diseases, Deworming, Castration, extension services and training to farmers are the activities carried out in these Veterinary Institutions. All the State and Central Government schemes including Hon'ble Chief Minister's flagship schemes of "Free distribution of Milch Cows and Goats / Sheep", Scheme for Poultry Development and Fodder Development Schemes are implemented by the Veterinary Dispensary.

During 2013-14, the Government upgraded 100 Sub-Centres as Veterinary Dispensaries. To fulfil the recommendations of NCA new Veterinary Institutions are created every year.

During 2014-15 also, the Government had announced upgradation of 100 Sub-Centres as Veterinary Dispensaries particularly in backward Districts.

6.1.5 Mobile Veterinary Units

Mobile Veterinary Units function in the Department with the aim of providing doorstep

delivery of veterinary health services to livestock reared in remote areas. At present, 56 Mobile Veterinary Units are functioning in the State. Further, during 2012-13, 31 Vehicles were procured under NADP and handed over to the Departmental officials to provide Mobile Veterinary services. These units headed by Veterinary Assistant Surgeons, go around their area of operation on a scheduled programme. These units are well recognized by the public as services are provided at the doorsteps of the farmers. During 2013-14, a total of 3.56 lakh livestock were provided treatment and 1.12 lakh Artificial Inseminations have been performed by the Mobile Veterinary Units. The objectives of these Mobile Veterinary Units are:

- to provide health cover and veterinary assistance to livestock and poultry at their doorsteps.
- to conduct preventive vaccinations and control measures against outbreak of contagious diseases.
- to conduct mass deworming of livestock in order to protect them from parasitic infestations.
- to undertake artificial insemination on cows and she-buffaloes.
- to provide advisory services to livestock farmers on best practices.

6.2 Sub-Centres

Sub-Centres, manned by Livestock Inspectors, provide first-aid to ailing animals besides, performing minor veterinary services artificial insemination, pregnancy verification, vaccination, deworming etc., under the guidance of the Veterinary Assistant Surgeons. At present, 850 Sub-Centres are functioning in the State. Livestock Inspectors also conduct yearly Livestock and Poultry Census enumeration work in the Sub-Centre area. During 2013-14, a total of 25.70 lakh first aid cases have been handled by these Sub-Centres.

Table 4 : Species wise workdone in the Veterinary Institutions during 2013-14(in lakh)

Species	Cases Treated	Castration	Deworming	Artificial Insemination
Cattle	111.93	1.61	43.92	44.80
Buffalo	9.59	0.04	5.03	2.82
Sheep	39.77	1.64	111.58	-
Goat	80.40	6.56	151.13	-
Dog & Cat	14.33	0.30	4.66	-
Poultry	28.66	-	10.31	-
Others	4.03	0.16	2.67	-
Total	288.71	10.31	329.30	47.62

Table 5: Species wise cases treated in the Veterinary Institutions during 2013-14 (in lakh)

Species	Medical	Minor Surgery	Major Surgery	Obstetrics and Gynaecology	Total
Cattle	83.88	7.22	0.81	20.02	111.93
Buffalo	7.03	0.54	0.04	1.99	9.59
Sheep	34.03	2.29	0.21	3.24	39.77
Goat	68.70	4.89	0.43	6.38	80.40
Dog & Cat	12.51	1.06	0.14	0.62	14.33
Poultry	26.94	1.06	0.08	0.58	28.66
Others	3.52	0.18	0.03	0.30	4.03
Total	236.61	17.24	1.73	33.13	288.71

6.3 NORMS FOR ESTABLISHING VARIOUS CATEGORIES OF VETERINARY INSTITUTIONS AND SUBCENTRES IN TAMIL NADU

The Veterinary Institutions in Tamil Nadu were established with the following criteria.

6.3.1 Norms for establishing Sub-Centres:

- The livestock population in the area of Sub-Centre should be atleast 3,000 Cattle Units.
- The distance between the nearest Veterinary Dispensary should be atleast 3 km.
- The number of first aid cases per day should be minimum 10.

6.3.2 Norms for establishing Veterinary Dispensaries:

- The livestock population in the area should be atleast 5,000 Cattle Units.
- The distance between the nearest Veterinary Dispensary should be atleast 5 km.
- The number of cases treated per day should be a minimum of 30.
- While requesting for establishing a Veterinary Dispensary at the Village or Town Panchayat, the Panchayat should provide atleast 20 cents of land for construction of permanent building.
- The Panchayat should identify a rent free building for the temporary functioning of the Veterinary Dispensary for a minimum period of 3 years.

6.3.3 Norms for upgrading the existing Sub-Centres into Veterinary Dispensaries:

- The livestock population criteria, as per the National Commission on Agriculture (NCA), norms which is one veterinary institution for every 5,000 adult Cattle Units will be considered. One adult cattle unit includes one cow or one bull or one bullock or one buffalo or one horse or one donkey or 10 goats or 10 sheep or 5 pigs or 100 poultry. The livestock population in the block will be converted into adult Cattle Units and matched with the Veterinary Institutions already available in the block. Based on this criteria, Sub-centres will be upgraded.

The following are the additional criteria:

- The Village Panchayat / Town Panchayat must provide 20 cents of land for construction of permanent building.
- The Village Panchayat / Town Panchayt must provide a rent free building for the temporary functioning of the Veterinary Dispensary for a minimum period of 3 years.
- The number of Artificial Insemination done in the centre will be considered. Since it will give an indication regarding the breedable bovine population in the area.

6.3.4 Norms for upgrading Veterinary Dispensaries into Veterinary Hospitals:

- The Number of cases treated per day should be above 40.
- The Veterinary Dispensary should be built in the Department owned land with atleast 20 cents.
- In-patients shed facilities should be available.
- Should have adequate space for construction of Staff Quarters.
- Enough potable water supply with well and motor.
- Rooms for storage of drugs, office room and treatment rooms should be available.
- Trevis, castration shed and casting yard should be available.

6.3.5 Norms for upgrading Veterinary Hospitals into Veterinary Clinician Centres:

- Number of cases treated should be above 60 per day.
- Should have sufficient space for construction for quarters for Clinician, Veterinary Assistant Surgeon and Animal Husbandry Assistant.
- In-patients shed facilities should be available.
- Water and drainage facilities should be available.
- Separate rooms for storing medicines, providing treatment and performing surgery, should be available.
- X-Ray diagnostic facilities should be available.
- One clinical laboratory should be attached to it.

6.3.6 Norms for upgrading of Veterinary Clinician Centres into Veterinary Polyclinics:

- Number of cases treated per day should be above 80.
- The Veterinary Clinician Centre should function from Department's own land. Sufficient land should be available for future expansion and construction of Staff Quarters.
- In-patient shed facility should be available.
- Water and drainage facilities should be available.
- Separated rooms for storing medicines, providing treatment and a surgical theatre should be attached to it.

- X-ray diagnostic facilities should be available.
- A referral Clinical laboratory should also be attached.
- Should offer round the clock service.

6.4 DISEASE PREVENTION, DIAGNOSIS, CONTROL AND ERADICATION

Various bacterial, viral, protozoal, parasitic diseases affect livestock and cause both direct (death of livestock) as well as indirect (decreased production and loss of productivity) losses 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.

Information about the prevalence rate and disease pattern of the State's livestock population is critical in the fight against livestock diseases and this forms the basis for planning and initiating disease prevention and control strategies. Early forecasting of diseases and surveillance is essential to provide early warning signals of outbreaks. Since adequate awareness levels among farmers regarding disease prevention and control is not available, the Department plays a major role in disease prevention and eradication. The Department has a systematic Disease control programme in place that provides for

periodical vaccinations (as per endemic chart) with the eventual goal of disease containment and eradication.

For this purpose, 20 Animal Disease Intelligence Units (ADIUs), 2 Poultry Disease Diagnostic Laboratories (PDDLs) and one Central Referral Laboratory (CRL) are functioning in the State.

6.4.1 Animal Disease Intelligence Units

Animal Disease Intelligence Units play a major role in developing a system of disease monitoring and surveillance of economically important livestock diseases with a view to evolve strategic control measures at District level. They map out the disease prone areas by collecting epidemiological information and data. This in turn helps in advising the field veterinarians to take adequate protective and prophylactic measures well in advance. Moreover, to check the efficiency of vaccination and to assess the immunity level by collecting the serum samples for sero monitoring for various diseases, especially Foot and Mouth Disease (FMD), Peste-des-Petits Ruminants (PPR) etc, collection and testing of samples for surveillance of various diseases from simple parasitic infestations to serious zoonotic diseases like Brucellosis, Tuberculosis, Para Tuberculosis, Avian Influenza and including the exotic disease - Bovine Spongiform Encephalopathy (BSE), the Animal Disease Intelligence Units play an important role.

During 2013-2014, 4,00,395 specimens have been tested by the above units. 54,883 samples have been tested for endoparasites and ectoparasites. Anthelmintics to eliminate the endoparasites and specific drugs to eradicate ectoparasites were advised. In blood protozoan positive cases anti-protozoan drugs along with mass deticking were advised and suggestions were given for vector control in that area. Based on the screening of dung samples verminous mapping has been undertaken by all ADIUs.

Animal Disease Intelligence Units also play a crucial role in protecting the life of livestock besides, augmenting livestock production through regular assessment of the quality of frozen semen straws, profiling the blood parameters of livestock with respect to micro and macro nutrients like Calcium, Phosphorous, Potassium etc. so as to provide advisories to the livestock rearers through Veterinary Institutions for treatment of deficiency diseases and metabolic disorders.

Mobile Veterinary Laboratories are provided to these units, so as to provide on the spot microscope aided diagnosis for livestock / poultry diseases. In addition, these units render door to door diagnostic services at village level and deliver vaccines and biologicals without compromising the cold chain through Mobile Veterinary Laboratories.

In order to protect Public health, monitoring slaughter houses for hygienic practices, ensuring preparedness with respect to diseases like Avian Influenza, keeping vigil on the wet markets of poultry, backyard and commercial farms of Poultry and weekly visits of bird sanctuaries and water bodies for any alarming levels of unusual mortality of birds are some of the important activities undertaken by these laboratories. So far 3,421 serum samples have been collected for this surveillance work and 1,158 weekly visits were made by ADIUs to slaughter houses.

Table 6: List of Animal Disease Intelligence Units

S. No	Animal Disease Intelligence Unit	Districts covered
1	Coimbatore	Coimbatore, Tiruppur
2	Cuddalore	Cuddalore
3	Dharmapuri	Dharmapuri
4	Dindigul	Dindigul
5	Erode	Erode
6	Kancheepuram	Chennai, Kancheepuram, Thiruvallur
7	Karur	Karur
8	Krishnagiri	Krishnagiri
9	Madurai	Madurai, Theni
10	Nagapattinam	Nagapattinam, Thiruvarur
11	Salem	Salem, Namakkal
12	Sivagangai	Sivagangai, Ramanathapuram
13	Thanjavur	Thanjavur, Pudukottai

S. No	Animal Disease Intelligence Unit	Districts covered
14	Tirunelveli	Tirunelveli, Kanniyakumari
15	Thoothukudi	Thoothukudi
16	Tiruchirapalli	Tiruchirapalli, Perambalur, Ariyalur
17	Udagamandalam	The Nilgiris
18	Vellore	Vellore, Tiruvannamalai
19	Villupuram	Villupuram
20	Virudhunagar	Virudhunagar

Basic and sophisticated instruments like haem analyser, urine analyser, biochemical analyser etc., are available at the Animal Disease Intelligence Units. Walk in coolers for storage of biologicals and vaccines are provided and thus the Animal Disease Intelligence Units are well equipped to diagnose various livestock diseases in their laboratories.

6.4.2 Poultry Disease Diagnostic Laboratories

To cater to the needs of the farmers in areas of high poultry production, Poultry Disease Diagnostic Laboratories are functioning at Andagalurgate, Namakkal District and at Erode. These are mainly involved in conducting post-mortem, testing of droppings, blood samples and other specimens for accurate diagnosis of Viral diseases such as New Castle Disease, Infectious Bursal Disease (IBD), Infectious Bronchitis (IB), Avian Leucosis Complex, common

bacterial diseases like Salmonellosis, E.coli, and Parasitic infestations. Feed and water samples testing services are also provided by these units. In addition, they offer technical advice to farmers on prevention, diagnosis and control of various infectious and parasitic diseases.

During 2013 -2014, a total number of 36,581 specimens have been tested by the above units. Out of the 6,172 poultry droppings tested for endoparasites, 3,255 were found positive and deworming and anticoccidial drugs were advised, accordingly. 3,599 Blood samples were tested for Salmonella species and 2,912 blood smears were examined, out of which, 833 were positive for micro-organisms and based on the Antibiotic Sensitivity Test (ABST) specific antibiotics were advised.

A total of 5,824 samples were screened for the presence of E.coli in droppings, feed, water and poultry sheds, out of which 3,994 were found positive. The farmers were advised to treat accordingly with antibiotics and water sanitizers. Based on test results, vaccination against Ranikhet disease was advised.

These laboratories play an important preliminary role in the declaration of commercial poultry farms as Avian Influenza free establishment / Disease free compartments by monitoring the Poultry farms that has been put in place and maintenance of the status

thereafter. Further, advisories regarding disease prevention and control measures are being issued to the farmers regularly.

Comprehensive field level monitoring and testing of poultry farms with flock identification for declaration of commercial poultry farms as Disease free establishment is carried out by PDDLs. This is done for issuance of Animal Health Certificates for export obligations. Further, these laboratories serve as local depots of Poultry Vaccines that are produced at Institute of Veterinary Preventive Medicine (IVPM), Ranipet.

During 2013-14, a total of 951 poultry farms and 658 villages have been visited from which 9,085 samples have been collected and examined.

These laboratories were upgraded as BSL II laboratories with a financial allocation of Rs.22 lakh each. These upgraded laboratories have commenced preliminary screening for Avian Influenza antibodies and the positive samples are being forwarded to Referral laboratories for further confirmation.

During 2012-13, Government have ordered establishment of a new Poultry Disease Diagnostic Laboratory (PDDL) with BSL II and GLP (Good Laboratory Practices) compliance at Palladam, Tiruppur District under National Agricultural Development Programme (NADP). The work is under progress.

6.4.3 Central Referral Laboratory

Central Referral Laboratory is the apex laboratory of the State and is functioning at Chennai. It co-ordinates the work of Animal Disease Intelligence Units and Poultry Disease Diagnostic Laboratories and also helps the field staff in early, quick and accurate diagnosis, and surveillance for various livestock diseases. Further, it plays a vital role in disease confirmations by approved laboratory techniques, declares disease outbreaks, provides technical guidance to the Animal Disease Intelligence Units (ADIUs) and Poultry Disease Diagnostic Laboratories (PDDLs) regarding control of diseases during outbreaks. Central Referral Laboratory also deals with issuing health certificates for export purpose.

Screening of farm animals for Sexually transmitted diseases, Tuberculosis by PPD Intradermal test, Brucellosis and Johne's disease by Enzyme linked Immuno Sorbent Assay (ELISA) test, sending samples for Bovine Spongiform Encephelopathy (BSE) surveillance to Southern Regional Disease Diagnostic Laboratory (SRDDL), testing of samples received for Sero surveillance for Peste-des-Petits Ruminants (PPR) and sero monitoring of Brucellosis have also been carried out by this laboratory. 349 breeding bulls were screened at various frozen semen stations. If the animals are found positive for the above diseases, retesting will be carried out after a stipulated period of 30 – 60 days.

A total of 2,117 specimens received from the field have been tested. Outbreaks of Anthrax (36 OBR), Black Quarter (12 OBR), Haemorrhagic Septicemia (3 OBR), Enterotoxaemia (1 OBR), Peste-des-Petits Ruminants (PPR) (8 OBR), Orf (2 OBR), Infectious Bursal Disease (IBD) (1 OBR), FMD (10 OBR) were confirmed and vaccination was advised accordingly. From October 2013 to December 2013, the State experienced a major outbreak of FMD in 25 districts. Based on the outbreaks recorded, the forecasting of endemic areas is being done for carrying out vaccination for the subsequent years.

As per the guidelines of Government of India during 2013-14, out of 3,421 serum samples, 160 samples have been sent to SRDDL, Bangalore for screening of Avian Influenza. During this year, 100 brain samples have been sent to Southern Regional Disease Diagnostic Laboratory (SRDDL), Bangalore for Bovine Spongiform Encephalopathy (BSE) surveillance.

This laboratory plays a vital role in providing training to the field veterinarians and Para-veterinarians in various disciplines under Assistance to States for Control of Animal Diseases (ASCAD) scheme. In addition, monthly Animal Disease Bulletins are prepared and distributed to the Veterinary Dispensaries and Hospitals.

6.4.4 Institute of Veterinary Preventive Medicine, Ranipet (IVPM)

Institute of Veterinary Preventive Medicine is an Institute of repute, producing vaccines and biologicals for various livestock diseases. The institute which was initially called as “Serum Institute” was established at Madras in 1932 to produce Anti-Rinderpest serum and maintain bull virus to combat Rinderpest which was rampant then, posing serious threat to livestock population. In 1942, the Institute was shifted to Coimbatore Agricultural College Estate as an emergency measure due to World War II. In March 1948, the Institute was shifted to the present campus of 129.5 acres at Ranipet. From then on, the institute has expanded its production to various vaccines and biological products required for protection of livestock and poultry in the state.

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 Price for Best Performance by the ICAR for the year 2013. At present, the Institute is producing 4 bacterial vaccines, 5 viral vaccines, 5 diagnostic reagents, 9 Pharmaceutical products and one diluent.

It is mandatory to upgrade the vaccine manufacturing Laboratories to Good Manufacturing Practice (GMP) Standards to meet standards in Vaccine Production. The poultry vaccine production laboratory was upgraded to GMP standards with funds from Assistance to States for Control of Animal Diseases (ASCAD) Scheme.

Upgradation of other laboratories at IVPM, Ranipet to GMP standards is taken up as under:

6.4.4.1 Upgradation of Bacterial Vaccines Facility to GMP Standards

Under National Agricultural Development Programme (NADP), upgradation of bacterial vaccines facility to Good Manufacturing Practice (GMP) standards is undertaken with a total financial outlay of Rs.7.52 crore. The vaccines produced will be as per the GMP standards from the year 2014-2015.

6.4.4.2 Anthrax Spore Vaccine Production Facility with GMP Compliance

Under National Agricultural Development Programme (NADP), a sum of Rs.11.31 crore was provided to construct and establish a new anthrax spore vaccine production facility with GMP standards.

7. SCHEMES

Animal husbandry provides livelihood opportunities to millions of people and is the mainstay of millions of small and marginal farmers and landless poor. Employment generation schemes if imaginatively conceived and properly implemented can ensure higher levels of economic activity leading to sustainable growth in rural areas. With this in mind, the Department is implementing various beneficiary oriented schemes for the economic upliftment and welfare of the poor and down trodden.

7.1 STATE SCHEMES

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

7.1.1.1 Introduction

The Hon'ble Chief Minister announced on 09.07.2011 that in order to usher in another 'White Revolution' in Tamil Nadu, the Government would distribute one crossbred Milch Cow to 60,000 beneficiaries over a period of 5 years. Thus, under the 'Scheme for Free Distribution of Milch Cows', 12,000 Crossbred Milch Cows are being distributed each year to needy families in the rural areas.

The Hon'ble Chief Minister also announced the implementation of a ‘Scheme for Free Distribution of Goats/Sheep’ to the poorest of the poor in the State in order to improve their living standards. Under this Scheme, 4 Goats/Sheep are being provided free of cost to 7 lakh poorest of poor rural landless families over a period of 5 years.

7.1.1.2 Salient features

A. Scheme for Free Distribution of Milch Cows

- The Scheme is prioritized in those Districts where the number of Milk Cooperative societies is less than the number of revenue villages.
- In such Districts, the distribution of Milch Cows is taken up in those Village Panchayats where there are no Primary Milk Cooperative Societies at present. Consequent to the distribution of Milch Cows, Primary Milk Cooperative Societies are formed in these Village Panchayats and milk is procured from the beneficiaries.
- Lactating cows that are in their first / second lactation are procured so as to ensure a continuous production for the next 5 lactations. The age of the animal should not be more than 5 years.
- Milch cows are procured at the rate of one cow per eligible household. In order to empower the

women, it is decided that the actual beneficiary will be the Woman of the household.

- The Milch Cows are sourced from outside the State only and purchased by the beneficiaries themselves.
- An amount of Rs. 30,000 is earmarked for the purchase of a Milch Cow per beneficiary. In addition, an amount of Rs. 1,000 is allocated for the travel of beneficiary to the shandy of the neighbouring State to purchase the animal and another Rs. 2,000 / Rs. 3,000 (depending on the District) is earmarked for the transportation of the animal to their village through a safe and secured manner.
- Insurance of the animals is done at Government cost.
- Training on best practices is provided to all the beneficiaries for 3 days for which a sum of Rs.300 is allocated per beneficiary @ Rs.100 per day.

B. Scheme for Free Distribution of Goats / Sheep

- Out of 4 Goats / Sheep given to each beneficiary, ordinarily one is male and 3 females. All the Goats/Sheep must be about 6 months of age.
- Beneficiaries are permitted to purchase the Goats / Sheep themselves from the local market shandies within the State / from breeders supplying good quality Goats / Sheep from the neighbouring State shandies in case of the bordering Districts.

- In order to empower women, it has been decided that the actual beneficiary will be the Woman of the household.
- The annual Distribution Plan is prepared so as to ensure that all the Districts and Blocks are covered proportionately (approximately one-fifth per year) as per the distribution schedule as under:

2011-12	:	1.00 lakh beneficiaries
2012-13	:	1.50 lakh beneficiaries
2013-14	:	1.50 lakh beneficiaries
2014-15	:	1.50 lakh beneficiaries
2015-16	:	1.50 lakh beneficiaries

- An amount of Rs. 2,500 is earmarked for the purchase of a Goat / Sheep and in addition, another Rs. 500 is earmarked as the seed money for the construction of shed / procurement of nutrients per animal - thus totalling Rs.3,000 per Goat / Sheep, and Rs. 12,000 per beneficiary. In addition, an amount of Rs. 150 per beneficiary is earmarked for transportation of the animals from shandy to the village.
- Insurance of the animals is provided at Government cost.
- Training on best practices is provided to all the beneficiaries for 3 days for which a sum of Rs.300 is allocated per beneficiary @ Rs.100 per day.

7.1.1.3 Eligibility criteria

For both Milch Cows Scheme and Goats / Sheep Scheme, selection of beneficiaries is done by the Grama Sabhas concerned after the initial shortlisting by a Village Level Committee (VLC). Some of the common criteria for eligibility of the beneficiaries are:

- Women headed households are to be given priority. (Widows, Destitutes and Disabled women are to be given priority within this group).
- Beneficiary is to be permanent resident of the concerned Village Panchayat and below 60 years of age to benefit under both the schemes. In case of Goats/Sheep scheme, for effective rearing of animals, one of the members of the family to be 18-60 years of age.
- At least 30% of the beneficiaries from the Village Panchayat should necessarily belong to the SC / ST Communities.
- Beneficiaries are not to be employees of Central / State Government or any Organization / Co-operative or member of any local body.

In addition, for Free distribution of Milch Cows Scheme, the beneficiary should not own land over 1 acre in their own name or family members' name and for Free distribution of Goats / Sheep Scheme, the beneficiary must be landless Agricultural labourers.

7.1.1.4 Achievements

- Since 2011-12, a total of 36,000 milch cows have been distributed to 36,000 beneficiaries belonging to 742 village panchayats. Similarly, 16 lakh Goats / Sheep have so far been distributed to 4 lakh beneficiaries belonging to 7,324 village panchayats.
- During the year 2013-14, the Scheme for Free Distribution of Milch Cows has been implemented in 245 Village Panchayats in 20 Districts and the Scheme for Free Distribution of Goats / Sheep has been implemented in 2,718 Village Panchayats in 31 Districts. 12,000 Milch Cows have been distributed to 12,000 beneficiaries and 6,00,000 Goats / Sheep have been given to 1,50,000 beneficiaries.
- So far (since 2011-12) 18,356 calves have born out of 36,000 milch cows given**.** Likewise, 14,46,613 kids have born out of 16,00,000 Goats / Sheep given so far.
- Further, 1,29,044 litres of milk is being produced out of which, 80,000 litres of milk is being procured by Tamil Nadu Cooperative Milk Producers' Federation Ltd. (TCMPF) every day from the Milch Cows distributed under this Scheme.

- In case of Milch Cows, 730 Milk producers Co-operative Societies have been formed and milk procurement started in almost all the villages where the Milch Cows are distributed. Instructions have also been given to give part of the payment of milk in terms of cattle feed so as to improve the nutritional status of the animals.
- Training in rearing of animals and milking method are being imparted to the beneficiaries concerned and monthly Veterinary Services are being given at the doorsteps of the beneficiaries by the Veterinary Assistant Surgeons of this department. Insurance of the animals is already done at Government cost.
- In order to ensure sound health of the animals distributed, Mass health camps are held once in 3 months in the villages of the beneficiaries.

7.1.2 SCHEME FOR POULTRY DEVELOPMENT

Poultry farming has developed on a commercial scale in the Western Districts of Tamil Nadu with Namakkal as the hub of development. To replicate the commercial success of Namakkal District and to develop poultry industry in non-poultry backward regions, the Government of Tamil Nadu launched the Scheme for Poultry Development during 2012-13 at a total outlay of Rs.22.35 crore. With the successful implementation of the Scheme, it was continued with

an allocation of Rs.25 crore for development of poultry clusters for the year 2013-14.

7.1.2.1 State Government Subsidy

The State Government provides 25% front ended subsidy for establishing Poultry farms. National Bank for Agriculture and Rural Development (NABARD) and commercial / Nationalised banks and poultry integrators are closely involved in the implementation of the Scheme. The Scheme is dovetailed with the existing Poultry Venture Capital Fund scheme of the Government of India, wherein 25% back ended subsidy is provided through NABARD to the individuals. The individual / farmer / entrepreneur must raise the rest of the funds through his own sources or through bank loans.

7.1.2.2 Beneficiary Selection

Farmers, individual entrepreneurs and Self Help Groups are eligible to benefit under the scheme. An individual is eligible for availing assistance only once for each component. However, if a beneficiary has already put up a shed with his own cost, he can also avail assistance under this scheme for putting up new sheds. The name of the Broiler / Native Chicken farm beneficiary should be recommended by an Integrator of repute and a Nationalised / Commercial Bank / Cooperative bank should be willing to fund the

beneficiary. The beneficiaries will be provided training on commercial poultry rearing by Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).

7.1.2.3 Establishment of Broiler Farm

Broiler Chicken rearing can be undertaken through integration wherein, integrators supply day old chicks and feed required for the birds. The integrators also ensure that the birds are marketed through their own channels. A broiler farm with strength of upto 5,000 birds can be profitably run using family labour alone and thus negates the requirement of additional man power.

For the year 2012-13, Broiler units were established in 7 Districts around Sankarankoil and Villupuram regions of the State. Sankarankoil Region includes suitable areas in Tirunelveli, Thoothukudi and Virudhunagar Districts. Likewise, Villupuram Region includes suitable areas in Villupuram, Cuddalore, Ariyalur and Perambalur Districts. During the year 2013-14, in addition to these Districts, this scheme has been extended to Sivagangai and Vellore Districts.

Out of the total target of 1,058 broiler farms for 2012-13, construction of sheds has been completed in 706 farms out of which chicks have been provided to 638 farms by the integrators.

Out of the total target of 500 broiler farms for 2013-14, construction of sheds has been completed in 212 farms out of which chicks have been provided to 159 farms by the integrators. Training for beneficiaries is being provided by Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).

7.1.2.4 Native Chicken Rearing

Native chicken rearing is also encouraged under the Scheme wherein a flock size of about 250 / 500 birds can be profitably reared and marketed by the farmer himself. The beneficiary is encouraged to have tie up with Native Chicken Breeders / Hatchery units for a regular supply of chicks at mutually agreed prices and the beneficiary himself can do the rearing and marketing since Native Chicken meat and eggs have a good market throughout the State.

During 2012-13, Native Chicken rearing is encouraged in 16 Districts viz., Dindigul, Dharmapuri, Kancheepuram, Kanniyakumari, Karur, Krishnagiri, Madurai, Nagapattinam, Pudukottai, Ramanathapuram, Sivagangai, Thanjavur, Thiruvarur, Thiruvallur, Tiruchirappalli and Vellore. During the year 2013-14, this scheme has been extended to Tiruvannamalai District in addition to the above 16 Districts.

For the year 2012-13, out of total target of 560 native chicken units, so far construction has been completed for 560 units for which chicks have been provided.

During 2013-14, out of the target of 4,080 native chicken units allocated, so far, construction has been completed for 2,533 units in which chicks were released in 2,160 farms. Training for the beneficiaries is being provided by Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).

During 2014-15 also, this scheme is being continued with a total financial outlay of Rs.25 crore.

7.1.3 FODDER DEVELOPMENT

Fodder Development is the fundamental block for livestock development. The feed given to cattle comprises of dry fodder, green fodder and concentrates, of which dry fodder forms the major share. The gap between dry fodder requirement and production is very narrow and the shortage is felt only during severe drought situations. But the green fodder production is inadequate to meet the requirement and there is always a shortfall of almost 25% in the State level.

Feed and fodder are the major limiting factors in enhancing livestock productivity. The economic

viability of livestock husbandry depends on sources of feed and fodder as feeding cost constitutes about 65% - 70% of the total cost of the livestock farming.

The green fodder resources for livestock are mainly derived from grazing in grass lands and pastures, fodder crops from cropped lands, weeds, bund grasses, tree leaves and mixed forages. Crop residues, mainly sorghum and paddy straws, constitute the major fodder for livestock. The total area available for grazing in the State is 1.10 lakh hectares. The availability of green fodder has been restricted to selected areas and seasons. Rapid urbanization has resulted in shrinking of grazing lands. Besides, with the increase in the pressure of land for growing food crops the gap between the demand and supply of green fodder has very much increased.

A trend of diminishing grass lands, common property resources and community lands are because of increasing pressure on land for non-agricultural use. Poor quality forage in grasslands and over grazing by stock calls for better scientific management of our common property resources.

Keeping this in mind, the Government have ordered not to transfer the grazing lands for other Governmental purposes unless alternate land of the same extent which is qualified for grazing is provided in the same District.

During 2011-12, 8,000 acres of farmers' land were brought under high yielding Cumbu Napier cultivation under irrigated condition and 16,000 acres of farmers' land were brought under fodder sorghum / fodder maize and cowpea cultivation under rainfed condition. To reduce wastage of fodder and increase palatability and improve digestability, 4,089 chaff cutters were distributed to farmers across the State. Further 1,954 acres of farmers' land were brought under raingun system of irrigation. Besides, to facilitate easy and uniform harvest of fodder, 2,500 grass cutters were also distributed to the farmers.

To bridge the gap between demand and supply of green fodder during 2012-13, 16,000 acres of farmers' land were brought under cultivation of high yielding fodder grass under irrigated condition. To familiarise farmers with latest technologies, IEC campaign was conducted across the State and 44,363 farmers were trained on various fodder cultivation techniques. Further, production of fodder slips were taken up in 5 Departmental farms viz., District Livestock Farm, Hosur, District Livestock Farm, Abishegapatti, Chinnasalem Sheep Farm, Mukundarayapuram Sheep Farm and Exotic Cattle breeding Farm, Eachenkottai @ 10 acres in each farm totalling 50 acres. A total of 116.41 lakh fodder slips were produced and distributed to the farmers.

To ensure continuous availability of green fodder a sum of Rs. 25 crore has been allocated during 2013-14 for the implementation of State Fodder Development Scheme. Under this Scheme, the following activities were taken up:

7.1.3.1 Cultivation of High Yielding Fodder Crops in farmers' lands under irrigated condition

Throughout the State (except Nilgiris and Chennai) 12,000 acres were brought under irrigated high yielding fodder crop cultivation at a financial outlay of Rs. 14.40 crore. Financial assistance to the tune of Rs.3,000 per unit of 0.25 acre as 100 per cent subsidy are provided towards cost of land preparation, ploughing, planting, labour for cultivation, fodder slips, chemical fertilizer etc. A total of 32,082 beneficiaries were benefitted under this component.

7.1.3.2 Installation of Raingun

To utilize the available water efficiently, 3,000 acres of farmers' land were brought under raingun system of irrigation across the state at a financial outlay of Rs.5.63 crore. Farmers were provided a subsidy of 75% amounting Rs.18,750 for installation of raingun.

7.1.3.3 Distribution of Power Operated Chaff Cutter

A total of 2,931 numbers of power driven chaff cutters were distributed to farmers at 75% subsidy at an outlay of Rs.3.83 crore. Procurement of the chaff cutters were undertaken through Tamil Nadu Livestock Development Agency (TNLDA). The indicative cost required for installation of one chaff cutter is Rs.17,400 out of which Rs.13,050 (75%) is provided as subsidy / farmer.

7.1.3.4 Distribution of Agathi Tree seedlings

A total of 30 lakh agathi tree seedlings have been raised in 7 Departmental Farms at the financial outlay of Rs.83.85 lakh and distributed to farmers. Preference was given to beneficiaries of "Scheme for Free distribution of Milch Cows and Goats / Sheep.

To ensure availability of green fodder in the State, this scheme will be continued during 2014-15 also, with a total financial outlay of Rs.25 crore.

It is also proposed to identify and develop Meikkal / Mandhai Poromboke lands in each District, and create fodder banks at village level. These fodder banks would provide green fodder throughout the year for the livestock in the village. The lands for the purpose shall be identified by the Animal Husbandry

Department with the help of the District Administration and District Rural Development Agency and handed over to Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) for development of fodder. All the required inputs for fodder development including planting material, machinery required for fodder cultivation, manpower, fencing, irrigation facilities will be provided through convergence with District Rural Development Agency / Animal Husbadry Department / Tamil Nadu Veterinary and Animal Sciences University. After maintaining for three years, the fodder bank will be handed over to the local village Panchayat for further maintenance. Suitable Meikkal land will be developed by Department of Animal Husbandry and TANUVAS in all the Districts. These lands will be fenced and used by the local livestock farmers. Necessary funds shall be sourced from Rural Development department, Animal Husbandry Department and TANUVAS for implementing the Scheme. A pilot project will be implemented in three districts during 2014-15, as per the above programme.

7.1.4 STRENGTHENING OF INFRASTRUCTURE AND RENOVATION OF EXISTING BUILDINGS SCHEME

In order to provide efficient veterinary services, renovation and repairs of all Veterinary Institutions and supply of furniture to them was undertaken at an outlay of Rs.25 crore every year since 2011-12. During

2011-12, a sum of Rs.22 crore was provided to undertake maintenance and renovation works in 390 Veterinary Institutions and field monitoring units and Rs.3 crore was provided for provision of furniture to 925 Veterinary Institutions. Similarly during 2012-13, maintenance and renovation work was undertaken in 402 Veterinary Institutions / monitoring units at an outlay of Rs.22 crore and provision of furniture was undertaken for 654 Veterinary Institutions and 31 Regional Joint Directors' offices at an outlay of Rs.3 crore. During 2013-14, Government have sanctioned Rs.22 crore for maintenance and renovation work of 345 Veterinary Institutions / monitoring units and Rs.3 crore for provision of furniture to 636 existing needy Veterinary Institutions and 76 Assistant Directors' offices. All the above works have been completed.

Table 7 : Infrastructure Development

S. No	Year	Repairs and Renovation of Buildings		Provision for Furniture	
		Funds allocated (Rs.in crore)	No. of buildings renovated	Funds Allocated (Rs.in crore)	No. of institutions to which furnitures provided
1	2011-12	22	390	3	925
2	2012-13	22	402	3	685
3	2013-14	22	345	3	712

7.1.5 KALNADAI PADHUKAPPU THITTAM

Under Kalnadai Padhukappu Thittam, Special veterinary health camps are conducted to provide total health cover to livestock and poultry in remote villages, where veterinary facilities are inadequate. This scheme is being implemented in the State since January 2000.

A total of 5,500 special camps are conducted in all the 385 Panchayat Unions at a cost of Rs.4,200 per camp. On the day preceding the camp, wide publicity is given regarding the place where the camp is to be conducted in the village and surrounding villages. During the process, pamphlets and leaflets are also distributed indicating various activities to be undertaken in the camp.

An exhibition depicting various livestock diseases and preventive measures of the Department, fodder development measures, and calf rally are being conducted for creating awareness among the farmers. It is also used as a platform for propagating schemes like Free Distribution of Milch Cows and Free Distribution of Goats / Sheep and Fodder Development Schemes.

In the calf rally, prizes worth of Rs. 400 per camp is being distributed to the best crossbred Heifer calves. The livestock rearers in the villages and nearby villages are benefitted through these camps.

During 2013-14, a sum of Rs.2.31 crore has been sanctioned to conduct 5,500 camps. A total of 5,500 camps were conducted benefitting 68.49 lakh livestock and 6.58 lakh farmers. The Scheme is being continued during 2014-15 also.

Table 8 : Details of animals benefitted in KPT camps during 2013-14

S.No	Details	Number
1	No. of animals Benefitted	(In Lakh)
	Cattle	18.75
	Buffaloes	2.05
	Goats	18.95
	Sheep	17.61
	Other Livestock	0.61
	Poultry	10.42
	Total	**68.49**
2	No. of Farmers benefitted	6.58
3	Calf Rally (No of Calves participated)	1.70
4	Average animal attendance / camp	1,245 (Nos.)

7.1.6 ENSURING ECONOMIC UPLIFTMENT OF RURAL WOMEN THROUGH BUFFALO REARING

Buffalo fetch more value for every litre of milk produced than white cattle due to higher fat content in

milk. In order to confer this advantage to the woman folk and encourage them to opt for buffalo rearing, Government sanctioned a sum of Rs. 1.02 crore under “Ensuring Economic upliftment of rural women through Buffalo Rearing” Scheme during 2013-14. A total of 250 beneficiaries are being provided with 2 buffaloes each at 50% subsidy.

The scheme is implemented in 10 Districts, where buffalo rearing is a traditonal activity namely, Erode, Tiruppur, Salem, Karur, Dindigul, Namakkal, Dharmapuri, Thiruvallur, Kancheepuram and Thanjavur Districts. Five Self Help Groups (SHGs) in each of these Districts have been identified and five women per Self Help Group (SHG) are being assisted with two buffaloes with their calves. The second buffalo will be provided after 4 to 6 months of purchase of the first buffalo. The second animal will be in lactation when the first animal enters dry period. This will ensure that the beneficiary's income is sustained throughout the year. Both the animals are being provided with concentrate feed for 3 months. Transportation cost and Insurance cost for the animals are also provided. The Scheme will be continued during 2014-15 also.

7.1.7 PART II SCHEMES

During 2013-2014, the following schemes were implemented:

- To Strengthen diagnostic facilities in the Department, Veterinary Polyclinics in Coimbatore, Madurai, Salem, Tiruchirappalli and Tirunelveli have been provided with Ultra Sound scan facilities at a cost of Rs. 40 lakh to aid in accurate diagnosis of ailments.
- The existing X-ray equipment in Veterinary Polyclinic at Coimbatore was replaced at a cost of Rs.5 lakh.
- To conserve the indigenous cattle breeds, two Regional / State level workshops, one for Kangeyam breed at Kangeyam block of Tiruppur District and another for Umblachery breed at Umblachery village of Nagapattinam District were held on 7.2.2014. In addition, three cattle fairs / exhibitions, for Kangeyam Breed at Kangeyam of Tiruppur District, Umblachery Breed at Umblachery village of Nagapattinam District and for Burgur Breed at Thurusanampalayam Village of Erode District were conducted on 8.2.2014, at a total cost of Rs.10 lakh, to create awareness and to encourage rearing indigenous breeds, among livestock farmers. In all these events, Hon'ble Minister for Animal Husbandry participated and distributed prizes to those farmers who maintained the best animals. A total of 3,575 cattle participated in the exhibitions which was attended by 5,050 farmers.

7.1.8 WESTERN GHAT DEVELOPMENT PROGRAMME

During the year 2013-2014, the Government sanctioned Rs. 72.90 lakh for the implementation of various Animal Husbandry activities in the Districts of Coimbatore, Dindigul, Tiruppur, Theni, Tirunelveli, Madurai and Virudhunagar under the Western Ghat Development Programme. The following activities were taken up under this scheme:

a. 290 beneficiaries were provided with Crossbred Heifer Calves at 50 % subsidy.
b. 320 beneficiaries are being provided with Concentrate and Cattle feed at 100% and 75% subsidy respectively for their Heifer calves.
c. Backyard poultry variety namely Giriraja distributed to 1,140 beneficiaries @ 50 % subsidy. Each beneficiary were provided with 10 birds (9 females and 1 male)
d. Sheep units (4 sheep and one Ram) were provided to 36 beneficiaries at 50% subsidy.
e. Infertility camps for bovines (13 camps) to improve their reproductive efficiency were conducted.
f. 30 beneficiaries who already posses heifer calves, were provided with cost of Insurance at 50% subsidy.

These activities were implemented by the Tamil Nadu Water Shed Development Agency at a cost of Rs.72.90 lakh. This Department monitored the implementation of the Scheme.

7.1.9 HILL AREA DEVELOPMENT PROGRAMME

The Government sanctioned Rs.32.83 lakh for the implementation of various Animal Husbandry activities in the Nilgiris District under Hill Area Development Programme during the year 2012-2013. 4,800 Giriraja Birds (10 birds per beneficiary) were distributed to 480 beneficiaries (300 ST beneficiaries at 50% subsidy and 180 beneficiaries belonging to other weaker sections at 25% subsidy).

7.1.10 INTENSIVE HEALTH COVER PROGRAMME FOR SHEEP

Sheep are reared mainly by grazing, thus making them highly vulnerable to endo parasitic infestations. These endoparasitic infestations results in weight loss, late maturity, high mortality rate, low fertility rate etc., apart from making them susceptible to other diseases. This also affects the quality of meat and carcass yield.

Sheep have to be dewormed periodically to avoid the above adverse impact. In this regard, the department is implementing Intensive Health Cover

Programme for sheep since the year 1982-83. Under this Programme, the sheep maintained by poor farmers in all the Districts except Chennai, are dewormed once in 3 months at their doorsteps. During the year 2013-14, the Programme was implemented using various deworming drugs at an outlay of Rs.38 lakh.

7.1.11 MEDICINES, EQUIPMENTS AND CHEMICALS

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

During the year 2013-14, the Government allotted a sum of Rs.19.71 crore for the purchase of Veterinary Medicines, Equipments and Chemicals.

Table 9 : Details of Amount allotted and Indented

Sl. No	Name of the Scheme	Amount Allotted [In Rs.]
1	General Medicines	16,31,82,500
2	Intensive Health Cover	38,00,000
3	Equipments, Chemicals & Surgicals	2,06,18,850
4.	5% Reserve Fund	95,07,150
	TOTAL	19,71,08,500

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

Table 10 : Veterinary Institutions and their Monetary ceiling for medicines

Sl. No	Type of Institution	Monetary ceiling (in Rs.)
1	Veterinary Dispensary	72,750
2	Rural Veterinary Dispensary	54,563
3	Veterinary Hospital, Royapuram	2,27,500
4	Other Veterinary Hospitals	1,35,800
5	a) Veterinary Clinician Centres (Cuddalore, Dharmapuri, Erode, Kancheepuram, Kumbakonam, Thanjavur, Vellore)	2,63,200
	b) Other Veterinary Clinician Centres	1,73,600
6	a) Veterinary Polyclinic, Saidapet	5,00,000
	b) Other Veterinary Polyclinics	3,45,000
7	a) Mobile Veterinary Unit, Saidapet	56,000
	b) Mobile Veterinary Unit, Thanjavur	28,000
	c) Other Mobile Veterinary Units	21,000
8	Veterinary Sub-Centre	13,095
9	Visiting Sub-Centre	3,000
10	Animal Disease Intelligence Unit (ADIU)	20,000
11	Poultry Disease Diagnostic Laboratory (PDDL)	40,000
12	Cattle Breeding and Fodder Development (CBFD)	40,000

Sl. No	Type of Institution	Monetary ceiling (in Rs.)
13	a. Exotic Cattle Breeding Farm, Eachenkottai	1,40,000
	b. Other Livestock Farms	1,00,000
	c. Sheep Farms	80,000
	d. Poultry Farm, Kattupakkam	50,000
14	Piggery Units (4 farms)	10,000
15	Poultry Extension Centres	15,000
16	Dog Breeding Unit, Saidapet	17,500

The budgetary provision for medicines has increased since 585 new Veterinary Dispensaries have been established since 2011-12. The monetary ceiling for each Veterinary Institution was previously increased during the year 2009-10, based on the requirements of the field.

In the recent past, there is a felt need in the field that the monetary ceiling for each Veterinary Institution is not adequate and needs to be further increased in the light of the various Government programmes that are under implementation. The requirement for each institution has been assessed based on the number of livestock as well as the nature of cases that are presented to the institution for treatment. Considering this, the Government have increased financial ceiling for medicines.

The Department indents for 130 medicines that belong to categories such as antibiotics, anti inflammatories, analgesics, antipyretics, supportive etc. However, basic health supplements like major and minor minerals that are found deficient in majority of the livestock in all the Districts are not provided sufficiently through the Veterinary Institutions. The Department of Medical Services has these vitamin / mineral supplements as an important component in their regular medicine list itself, which has Government's budgetery support and the same is now proposed to be included in the general medicines list for Veterinary Institutions. This inclusion of mineral mixture is expected to boost the health status of livestock. Livestock will be provided with minerals through the Veterinary Institutions, depending on their health status.

7.1.12 NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD – RIDF XVII)

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).

Under NABARD RIDF XVII, the following infrastructural works are being undertaken at a total cost of Rs.122.24 crore:

- Construction of buildings for 337 Veterinary Dispensaries.
- Construction of buildings for 13 Veterinary Hospitals.
- Construction of two Polyclinics.
- Construction of new buildings for 3 Animal Disease Intelligence Units.
- Construction of buildings for Frozen Semen Banks at five places.
- One NABARD Scheme Monitoring Cell at the Directorate of Animal Husbandry, Chennai.
- Infrastructure development in 12 District Livestock Farms.

Under the scheme, construction works in 351 Veterinary Institutions have already been completed and the rest would be completed by August 2014. Similarly, various infrastructure improvement works in Livestock Farms namely Korukkai, Chettinadu, Uthagamandalam, Hosur, Abishekapatti, Eachenkottai, Sathur and Orathanadu etc., have been completed. The work will be completed by December 2014 in Chinnasalem Sheep Farm. Further, as a measure of continuing the infrastructure development works in Veterinary institutions, Government have accorded administrative sanction to undertake new construction

of 450 buildings at a total cost of Rs.99 crore during 2013-14, through NABARD Rural Infrastructure Development fund XIX.

During 2014-15, 227 new buildings will be constructed for Veterinary Institutions at a cost of Rs.80.25 crore, through NABARD RIDF XX.

7.1.13 CONSTRUCTION OF BUILDINGS FOR 20 NEW VETERINARY DISPENSARIES

By strengthening the infrastructure, the department is providing better veterinary services with the aim of improving the productivity of livestock in the State. To ensure this, the Government have sanctioned Rs.6 crore for the construction of 20 new Veterinary Dispensaries during 2012-13. Construction of 14 buildings have already been completed and the works in the remaining buildings would be completed by September 2014.

7.1.14 CATTLE INSURANCE SCHEME

Death of livestock adversely affects the economy of the farmers and consequently rural economy. In order to insulate small and marginal farmers from sudden loss of livestock, a Scheme for providing livestock Insurance with funding from Government of India is under implementation in 15 Districts of the State. With a view to bringing in livestock reared in

other Districts also within the ambit of insurance, a similar Cattle Insurance Scheme will be implemented in the 16 Districts that are not covered under the Government of India sponsored insurance Scheme (except Chennai) to cover an additional 1.60 lakh breedable population, during 2014-15, with State funding of Rs.12 crore adopting the same implementation guidelines.

7.2 CENTRALLY SPONSORED SCHEMES

7.2.1 NATIONAL DAIRY PLAN I

Strengthening of semen station at District Livestock Farm, Udagamandalam

Under National Dairy Plan, a sum of Rs.6.46 crore has been sanctioned for strengthening the Frozen Semen Production Station at District Livestock Farm, Udagamandalam during the period 2012-13 to 2017-18, in order to produce high quality disease free frozen semen doses from genetically superior quality bulls. This measure is taken to address the perennial demand of frozen semen straws for artificial insemination and thus to make the state self sufficient. During the year 2013-14, the procurement of equipment and civil works has been taken up, at a total estimated cost of Rs.1.14 crore.

7.2.2 NATIONAL AGRICULTURAL DEVELOPMENT PROGRAMME (NADP)

During 2012-13, the following programmes were sanctioned under this scheme with a view of increasing the productivity of livestock:

- To upgrade the Anthrax spore vaccine production facility at Institute of Veterinary Preventive Medicine (IVPM) to Good Manufacturing Practice Standards (GMP), as mandated by the Drug Controller, Government of India, funds to the tune of Rs. 11.31 crore has been allotted. Tamil Nadu Medical Service Corporation (TNMSC) has already called for tenders for undertaking the works.
- A sum of Rs. 2.63 crore has been allotted for establishment of Poultry Disease Diagnostic Laboratory (PDDL) at Palladam, Tiruppur District. This will assist the broiler farmers by providing advisories on the prevalence of poultry diseases in the zone, through periodical collection of specimens and by conducting advanced diagnostic tests. Tamil Nadu Medical Service Corporation (TNMSC) has already called for tenders for undertaking the works.
- During the year 2012-13, Rs. 13.27 crore has been sanctioned for construction of 85 Veterinary Dispensaries. This would ensure that the Veterinary Institution apart from functioning as a

clinic also functions as a knowledge resource centre where best practices are disseminated to the farmers. Construction has been completed with respect to 42 buildings and the remaining work would be completed by September 2014.

- During the year 2011–12, a sum of Rs.5.50 crore was sanctioned for the establishment of Liquid Nitrogen bulk storage tanks and Liquid Nitrogen / Breeding inputs distribution facilities in 10 Districts. Construction of 10 new LN2 storage buildings at a cost of Rs.3.40 crore has already started and would be completed by September 2014.

During 2013-14, the following activities were sanctioned under this Scheme:

- To provide better diagnostic facilities, a sum of Rs. 8.82 crore was allocated for Procurement of 53 Portable Ultrasound Scanners. These Ultrasound Scanners will be provided to 22 Clinician Centers, 20 Cattle Breeding and Fodder Development Units and 11 Departmental farms. Under the Scheme, 100 Veterinarians have already been trained on Ultrasonography at Tamil Nadu Veterinary and Animal Sciences University (TANUVAS). Problems related to reproductive health of breedable bovines can be accurately diagnosed and their productivity enhanced. Tamil Nadu Medical Services Corporation (TNMSC) has

initiated the procurement process and the equipments would be supplied before the end of August 2014.

7.2.3 NATIONAL MISSION FOR PROTEIN SUPPLEMENT (NMPS)

Enthused by the success of the schemes aimed at enhancing protein supplementation through Goat rearing during the previous years, a scheme for “Intensive Goat production for enhancing protein supplement" is being implemented in 15 Districts at an outlay of Rs.5.05 crore so as to ensure year round availability of animal protein for consumers and to maximize economic returns to farmers. In each district, 8 Women Self Help Groups, each group consisting of 9 beneficiaries will be selected. Each beneficiary will be provided with 10 Goats (9 females and one male). Assistance in the form of construction of shed, insurance for the animals, health cover and training are provided by the Department at 100% subsidy. Concentrate Feed will be provided at 50% subsidy, restricted to a maximum of Rs.10 per kg of feed.

7.2.4 FODDER DEVELOPMENT UNDER NADP

Under National Agricultural Development Programme (NADP), the following components of fodder development activities are being undertaken:

7.2.4.1 Establishment of Fodder Seed Production Unit and Farmers' Training Centre

Fodder seed production Unit is being established in 70 hectares in District Livestock Farm, Orathanad at Eachenkottai. This is done with the aim of bridging the gap between availability and requirement of green fodder and to bring more area under fodder cultivation by producing quality fodder seeds. So far, a total of 2,200 kgs of certified seeds of African Tall Maize have already been produced and distributed to farmers. Further, to impart training on latest technologies in fodder production to the farmers, a training centre is also being established in Orathanad District Livestock Farm at Eachenkottai. The total financial outlay for this project is Rs.9.60 crore. All the works would be completed before August 2014.

- Moreover, 2,000 acres of farmers' land were brought under fodder crop cultivation at an outlay of Rs. 2.40 crore in 10 Districts viz Coimbatore, Erode, Tiruppur, Salem, Karur, Namakkal, Dharmapuri, Dindigul, Villupuram and Madurai to meet the green fodder requirement. It is estimated that 2 lakh MT of green fodder will be produced every year through this programme. A total of 6,428 beneficiaries were benefitted through this programme.
- Ensiling of fodder was taken up through 10 Milk Co-operative societies and 4 Departmental Farms to meet out the Fodder Requirement.

- 7,830 Azolla units benefitting 7,830 beneficiaries were established across the State @ 290 Azolla units / district in 27 districts with 100% financial assistance.

7.2.5 ACCELERATED FODDER DEVELOPMENT PROGRAMME

Under Accelerated Fodder Development Programme 2012-13, the following components were implemented at a total cost of Rs.10 crore:

7.2.5.1 Cultivation of high yielding fodder crops in farmers' holdings in 8 delta Districts

In order to increase production of green fodder and to ensure fodder availability in delta Districts, 4,166 acres of farmers lands were brought under high biomas yielding Cumbu Napier Hybrid (Co3/Co4) cultivation. 100% Financial assistance to the tune of Rs.3,000 for an unit of 0.25 acre was provided to 6,818 farmers.

7.2.5.2 Cultivation of Cereal Fodder crop (Sorghum) and Leguminous Fodder crop (Cowpea) in non-delta Districts

In non-delta Districts, 5,376 acres were brought under Cereal fodder sorghum and leguminous fodder cow pea cultivation. 100% financial assistance to the tune of Rs.2,000 for an unit of 0.25 acre was provided to 12,930 farmers.

7.2.5.3 Establishing Silage making Units

Silage Making is an established method of preserving surplus fodder which can be used by farmers to feed the livestock during the dry season. Fodder crops like sorghum, maize and sugarcane tops, which are usually wasted and burnt in the field, can be converted as silage, preserved and utilised as feed for livestock during lean periods. 160 silage making units were established across the State at a cost of Rs.25,000 per unit. 100% financial assistance was provided for construction of silo pits and input materials while 75% financial assistance was provided for power operated chaff cutters. A total of 160 farmers were benefitted.

7.2.5.4 Augmenting Fodder Production in District Livestock Farm, Uthagamandalam

To ensure availability of Fodder for feeding the farm animals throughout the year, 42 acres of land in District Livestock farm, Uthagamandalam was brought under cultivation of oats and maize at a total cost of Rs.20 lakh. This is done as a measure of ensuring continuous availability of green fodder to the bulls in the ISO certified Frozen semen production station.

7.2.6 CENTRAL MINIKIT TESTING PROGRAMME

To popularize the latest improved fodder varieties amongst farmers for fodder production and

to encourage the farmers to produce quality seeds, various kinds of fodder seeds of foundation class are distributed to the farmers at free of cost. During 2013-14, Khariff and Rabi, 3,485 and 5,341 fodder seed minikits of different crops respectively, were distributed to the farmers.

7.2.7 FOOT AND MOUTH DISEASE CONTROL PROGRAMME

Foot and Mouth disease is a highly contagious, viral, vesicular disease of cloven-footed animals. It causes severe blisters inside the mouth and on the feet that may rupture and lead to severe ulcers. It results in heavy economic loss due to reduction in milk production, infertility and high mortality in calves. Its containment demands considerable efforts in vaccination, strict monitoring, trade restrictions and quarantines. To control this disease, Extended Foot and Mouth Disease Control Programme funded by Government of India is implemented in all Districts of Tamil Nadu. So far, 6 rounds of FMD vaccination have been carried out in all the Districts of the State. During 2013-14, 91,52,778 nos. of cattle and buffalo were vaccinated during 5th round of vaccination from September to November 2013. During the 6th round of vaccination, a total of 92,65,401 cattle were vaccinated between 1st to 31st March 2014. A sum of Rs.5.06 crore has been released by Govt. of India under this scheme during 2013-14.

7.2.7.1 MEASURES INITIATED TO CONTROL OUTBREAK OF FOOT AND MOUTH DISEASE

Following the severe outbreak of Foot and Mouth Disease in certain Districts, control measures were initiated on a massive scale by the Department in coordination with line departments. The following were the measures:

- Meeting conducted by the District administration with the officials of the Animal Husbandry Department and line departments on a daily basis to ascertain and to implement immediate redressal measures.
- The District Administration undertook disease control measures in coordination with Revenue, Rural Development, Health Departments.
- Special Grama sabha for disseminating awareness among farmers about prevention and treatment protocols for Foot and Mouth Disease was conducted across the State.
- Enforcement of stringent sanitary measures followed by the local bodies at affected villages by dusting Bleaching powder on the streets, sprinkling 4% Sodium Hydroxide in the animal sheds and by disinfecting the animals, fodder, utensils and mangers using 4% sodium carbonate.

- Adequate number of teams with Veterinary and Para Veterinary personnel were deployed for Vaccination / treatment, based on the need.
- District Administration has ensured that adequate logistical arrangements are in place for the teams engaged in Vaccination / treatment.
- Special drive was initiated to vaccinate hitherto unvaccinated animals in the unaffected areas with exclusive teams.
- The animals which have died were physically verified by the Village Administrative Officer (VAO) and the fact intimated to the local Veterinarian and the Veterinary Assistant Surgeon (VAS) concerned has ascertained the cause of death and only after confirming that the cause of death is due to Foot and Mouth Disease, this fact was informed to the higher authorities for inclusion in the death toll due to Foot and Mouth Disease outbreak.
- Proper disposal of carcass as per bio security measures were followed with the help of local bodies.
- Demonstration of Bio security protocols at Village level were carried out involving local bodies and officials of line departments.
- Cattle shandies were temporarily closed and thus spread of disease was brought under control.
- All Vehicles entering the State and Districts were sprayed with disinfectants.

Since the breeding policy of the State was not adhered to, the severity of the disease was more pronounced. Hence, the Department is engaged in creating awareness among the livestock farmers about the need to maintain the exotic germplasm at 50% level for the crossbred cows.

7.2.7.2 PROTOCOL FOR DISEASE CONTROL IN SHANDIES / CATTLE MARKETS.

In order to prevent the spread of diseases from the numerous cattle markets that function in the State, a standard bio-security measures has been put in place. Bio security protocols to be established and maintained in the Shandies / Cattle markets are suggested below.

Important: Disinfectant is ineffective if dirt is present, therefore thorough cleaning is necessary before disinfectant is applied.

1. All the entrance / exit points of the shandy / cattle market must have bleaching powder sprinkled liberally. Foot baths with bleaching powder must be kept at all the entrance / exit points.
2. All the wheels of vehicles and the under part of chasis of vehicles must be sprayed with 4% Sodium carbonate or 4% Sodium Hydroxide solution as vehicles are the major sources of virus transmission. If wheel bath for vehicles is kept, it

must allow the wheel to roll twice inside the solution so as to ensure adequate disinfection of the wheels.

3. One day prior to the day of shandy, the premises must be sprayed with 4% Sodium carbonate or 4% Sodium Hydroxide (400gms in 10 litres of water). This is the disinfectant of choice for combating Foot and Mouth Disease Virus.
4. Animals that are transported by foot must also be made to walk through foot bath containing 4% Sodium carbonate solution. The level of the solution in the bath should be upto 6 inches height. The solution must be changed periodically.
5. Periodical disinfection of the premises when the market is functioning must be ensured. Dung along with feed / fodder waste should be removed and disposed off appropriately. The manure so collected should be removed and buried in pits with lime powder sprinkled liberally.
6. Adequate numbers of Livestock Inspectors must be deployed in the shandy to look for animals that show clinical signs of any ailments. Any such animal should be immediately brought to the notice of the concerned Veterinary Assistant Surgeon. The Veterinary Assistant Surgeon should notify the concerned authorities about any infectious / contagious disease prevailing among the livestock in the Shandy.

7. Ailing animals should be immediately isolated in the nearest possible location (Veterinary Dispensary / Veterinary Hospital / Clinician Centre / Polyclinic or any place) identified for the purpose of observation and quarantined. Appropriate treatment protocols should be initiated. The animal must be traced to its original location and disease surveillance should be initiated in its place of origin.
8. IEC material for prevention of livestock diseases must be kept at vantage points in the shandy / cattle market permanently. The material should include the following in vernacular:
    a. Follow good bio-security measures every time you enter / leave premises with livestock.
    b. Know the signs of notifiable diseases in animals. Seek the advice of the nearest Veterinarian as soon as possible.
    c. Don't come onto the premises with clothes, livestock or vehicles contaminated with mud or other farm contaminants.
    d. Use the facilities provided to cleanse and disinfect foot wear. Wash and scrub your hands with soap.
    e. Handling animals can spread diseases; you should wash your hands and clothing / footwear before you leave the premises.
    f. Clean and disinfect vehicles used for transporting livestock on site before leaving.

g. Bring the suspected cases of diseased livestock to the knowledge of the concerned Veterinarian and co-operate with the authorities in implementing the bio-security measures.

All the shandies in the State are under the control of the local bodies which maintain them. In order to ensure effective overall management of the shandies, it is proposed to undertake infrastructural improvement in all the Livestock markets / Shandies in the State with support of the Rural Development and Panchayat Raj Department. The following infrastructural works are proposed:

a. Provision of ramps for loading / unloading of livestock.
b. Provision of shelters inside the shandies for both cattle and small ruminants.
c. Provision of water troughs and augmenting water resources in the shandies through erection of borewells and provision of motors and over head tanks.
d. Provision of perimeter fencing to regulate entry / exit of animals and vehicles.
e. Provision of foot baths / vehicle wheel disinfectant bath in all the shandies.

7.2.8 NATIONAL CONTROL PROGRAMME OF PESTE DES PETITS RUMINANTS (NCP PPR)

Peste des Petits Ruminants (PPR), also known as 'Goat Plague', is an acute, highly contagious, viral disease characterized by fever, sores in the mouth, diarrhoea, pneumonia, and sometimes death. It causes heavy losses to the rural economy due to high morbidity and mortality in sheep and goats.

Vaccination for 119.09 lakh sheep and goat was undertaken in all the Districts in the State to control this disease, from the funds (Rs.3.83 crore) released during 2011-12. Sheep and Goats purchased under "Free Distribution of Goats / Sheep Scheme" announced by Hon'ble Chief Minister were also vaccinated.

During 2013-14, Rs.1.50 crore was released by Government of India. 57 lakh population of Sheep and Goat will be vaccinated against PPR in the current year.

7.2.9 NATIONAL CONTROL PROGRAMME FOR BRUCELLOSIS (NCPB)

Brucellosis is an important zoonotic disease affecting livestock for which a National Control Programme is under implementation. Under this programme Brucella vaccine was supplied to the 9 Districts located in the Western Ghats, in which 1.5

lakh heifer calves aged between 6 to 8 months were vaccinated during April 2014 in Vellore, Coimbatore, Madurai, Dindigul, The Nilgiris, Erode, Tirunelveli, Theni and Kanniyakumari Districts. Surveillance and screening programmes were taken up in the remaining 23 Districts and prevalence was noticed in 6 Districts namely, Cuddalore, Kancheepuram, Karur, Tiruvannamalai, Thiruvarur and Villupuram. Animals in these Districts will be vaccinated against brucellosis during current financial year on approval from Government of India.

7.2.10 NATIONAL PROJECT ON RINDERPEST ERADICATION (NPRE)

The aim of this Scheme is to eradicate Rinderpest disease, which causes great economic loss to the farmers. The Scheme is under implementation as per the guidelines of Government of India since 1992 in Tamil Nadu as a part of Global Rinderpest Eradication Programme. The objectives of the Scheme is to control and eradicate Rinderpest Disease from our State and Country by adopting "Zero Rinderpest" Vaccination and Sero Monitoring followed by Clinical Surveillance. The State was declared 'Provisionally free from Rinderpest' from March 1998 onwards. Subsequently, the State was declared 'Free from Rinderpest Disease" from May 2002.

During 2013-14, Rs.15 lakh was released by Government of India to continue the Clinical Surveillance Programme.

7.2.11 NATIONAL ANIMAL DISEASE REPORTING SYSTEM (NADRS)

NADRS is a specialized scheme implemented with the aim of avoiding delay in communication regarding animal diseases from field level to the Directorate. An online disease reporting system has been introduced through a dedicated computer network linking each block of District to the District head quarter, each District to the State head quarter, and each State to the country's central unit. The computer linkages would reduce time taken for data transmission, data compilation and report generation. 417 computers (Two at State Level, 30 at District Level and 385 at Block Level) have been supplied by National Informatics Centre (NIC) and 416 nodes were brought under the online network and information pertaining to animal diseases.

During 2013-14, the Department had ensured the functioning of 349 nodes in close coordination with National Informatics Centre (NIC) and Bharat Sanchar Nigam Limited (BSNL). All the nodes shall be made functional by August 2014. The Government of India will be approached to expand the Scheme to cover all the Veterinary Dispensaries.

Under the Scheme, Animal disease bulletins containing details regarding disease status in the Districts published by Central Referral Laboratory (CRL), are being distributed to field Veterinarians.

7.2.12 ESTABLISHMENT AND STRENGTHENING OF VETERINARY HOSPITALS AND DISPENSARIES (ESVHD)

Veterinary services needs to be delivered following "Good Veterinary Practices"(GVP) and “Good Animal Husbandry Practices”(GAP) for which, minimum infrastructure like proper building, necessary equipments, furniture, etc., should be available.

The advances in the field of Veterinary profession can be disseminated more effectively in an efficient, user friendly environment for the ultimate benefit of the farmers. Under this Scheme, during the past 3 years, Government have provided comprehensive infrastructure facilities for new construction of 166 institutions with a sum of Rs.19.48 crore and repairs and renovations to 90 buildings at a sum of Rs.6.04 crore.

Veterinary Institutions that are functioning from rental buildings do not satisfy the requirement of a typical veterinary institution, with a restricted scope for further expansion, besides incurring expenditure by way of rent for many years. To overcome this, the Department has identified several Veterinary

Institutions that require new buildings and repairs and renovations. Government of India have sanctioned Rs.16.56 crore during 2012-13 to undertake new construction of 142 new institutions including 3 Veterinary Hospitals, 32 Veterinary Dispensaries and 107 Rural Veterinary Dispensaries. So far, construction of 18 institutions have been completed and the remaining would be completed before October 2014.

7.2.13 LIVESTOCK CENSUS

Enumeration for Livestock Census, was started during the year 1919-1920. Since then it has been conducted once in every 5 years. The All India 19th Quinquennial Livestock Census commenced in our State on 15.09.2012 and enumeration work was done upto 14.10.2012 with reference date as 15.10.2012. A sum of Rs.15 crore has been released so far, for the exercise which would provide data for framing policies and plan various Schemes to farmers. The Enumerators and Supervisors collect information related to cattle, buffaloes, sheep, goat, pigs, horses, ponies, donkeys, dogs, rabbits and elephants and poultry which includes Fowls, ducks, turkeys, quails, Emu birds and other poultry birds and mechanised equipment such as milking machine, fodder cutter, chopper and baler (or) dung collection / disposal machines.

The process of consolidation of the data is presently underway and results will be published after the approval of Government of India.

7.2.13.1 Breed Survey

Tamil Nadu has 5 native breeds of cattle namely Kangeyam, Umblacheri, Alambadi, Burgur and Pulikulam, one native buffalo breed namely Toda, 8 breeds of Sheep namely Madras Red, Mecheri, Ramnad White, Vembur, Trichy Black, Nilgiris, Coimbatore and Kilakarisal and 3 breeds of Goats namely Kanni Adu, Kodi Adu and Salem Black. In order to assess the population of these native breeds, breed survey was conducted throughout Tamil Nadu in 15% of the villages selected by Government of India and completed on 31.8.2013. Data entry work is in progress and results will be published after finalization by the Government of India.

7.2.14 RURAL BACKYARD POULTRY DEVELOPMENT SCHEME

The objective of this Scheme is to introduce backyard poultry rearing as an additional income generating activity among families that are categorized as Below Poverty Line (BPL) in rural areas to improve their living standards. This Scheme was introduced during 2011-12 in 7 Districts of Tamil Nadu at a total cost of Rs.46.50 lakh. Government of India sanctioned

a sum of Rs.3.49 crore for implementation of this Scheme in 31 Districts of Tamil Nadu for the year 2013-14. As per this Scheme, a total number of 13,658 families living Below Poverty Line (BPL) (1,712 S.C beneficiaries + 11,946 other beneficiaries) will be provided with 45 numbers of 4 week old chicks besides Rs.750 per family for purchasing cages, feeders etc., Training will be provided by concerned Veterinary Assistant Surgeon and demonstration in nearby Government poultry farm. The Scheme will be completed before December 2014. Suitable proposals have been sent to Government of India for continuing this Scheme for 2014-15 also.

7.3 CENTRAL AND STATE SHARED SCHEMES

7.3.1 ASSISTANCE TO STATES FOR CONTROL OF ANIMAL DISEASES (75:25)

This Scheme is implemented with the aim to control economically important endemic diseases affecting livestock. This scheme (ASCAD) is implemented with 75% Central assistance. The State Government provides 25% of the share. Government of India released Rs.4 crore as Central Share (75%) for implementation of the Scheme during the year 2013-14. The Scheme is being implemented at a total cost of Rs.4.99 crore including the State's share.

During 2013-14, vaccination was carried out against the following diseases under this scheme:

7.3.1.1 Anthrax:

Anthrax is one of the zoonotically important bacterial diseases. 19 Districts in the State are endemic to anthrax. A total of 23.61 lakh animals in the 19 Districts were vaccinated against this disease during 2013-14. Vaccine is produced by Institute of Veterinary Preventive Medicine (IVPM), Ranipet.

7.3.1.2 Black Quarter:

Black Quarter is an important bacterial disease affecting cattle and buffaloes. Outbreak of Black Quarter disease is noticed in 6 Districts namely, Cuddalore, Erode, Kancheepuram, Salem, Thanjavur and Vellore. As a measure of protecting the livestock from this disease 3.36 lakh animals were vaccinated against this disease during 2013-14. Vaccine is produced by Institute of Veterinary Preventive Medicine (IVPM), Ranipet.

7.3.1.3 Haemorrhagic Septicaemia

Haemorrhagic Septicaemia is another important bacterial disease affecting livestock. Kancheepuram District has recorded outbreak of this disease. A total of 3.65 lakh animals were vaccinated against this disease during 2013-14. Vaccine is produced by

Institute of Veterinary Preventive Medicine (IVPM), Ranipet.

7.3.1.4 Sheep pox:

Sheep pox is a highly contagious, important viral disease affecting sheep. Sheep pox is the most severe of all pox diseases of animals. To control this disease, vaccination against the disease is provided to all sheep in 8 Districts. A total of 1.54 lakh Sheep were vaccinated against this disease during 2013-14. Sheep Pox vaccine is produced by Institute of Veterinary Preventive Medicine (IVPM), Ranipet.

7.3.2 INTEGRATED SAMPLE SURVEY SCHEME (50:50)

Annual Sample Surveys are being conducted under the Central Sector Scheme 'Integrated Sample Survey' from the year 1977-78 onwards with 50% financial assistance from Government of India. Under the scheme, production of Milk, Meat, Egg and Wool are estimated as per the guidelines from Department of Animal Husbandry, Dairying & Fisheries, Government of India. The Survey has been divided into 3 seasons viz., Summer, Rainy and Winter Season for studying the seasonal fluctuations. The Survey covers 7 villages / District / Season. But due to revision of Methodology by Government of India from 2012-13, 10-50% of villages are being covered in each District.

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 the Department to assess the impact of its efforts.

Table 11 : Percentage of Increase of Estimated Production of Milk and Egg over previous year

Item	Unit	2011-12	2012-13	Percent of increase in 2012-13 over 2011-12
Estimated Milk Production	lakh MT	69.68	70.05	0.53
Estimated Egg Production	Lakh Nos.	1,18,518	1,19,334	0.69
Estimated Meat Production	lakh kgs.	4600	4620	0.43

7.3.3 ASSISTANCE TO STATE POULTRY FARMS (80:20)

The department of Animal Husbandry is implementing a centrally shared Scheme with 80:20 financial sharing basis between Government of India and State Government in which the Department run poultry farms shall function as a continuous source of backyard poultry chicks.

This scheme is being implemented to improve the economic conditions and living standards of marginal farmers, landless labourers, Self Help Groups and other socially backward sections of the society by encouraging them to take up poultry rearing as a additional avocation, to create employment opportunities and supplement their income. Under this Scheme, separate hatchery units have been established in poultry farms in District livestock farms of Hosur, Chettinad and Orathanadu for 'Giriraja Development' and one unit in Kattupakkam Poultry Farm for Vanaraja Development at a financial outlay of Rs.85 lakh. So far, 76,740 chicks have been produced and supplied to the farmers from these farms.

Construction of sheds have been completed in Kattupakkam poultry farm for Turkey Development and in District livestock farm, Abishegapatti for Giriraja Development.

7.4 WORLD BANK AIDED SCHEME

7.4.1 TAMIL NADU IRRIGATED AGRICULTURAL MODERNIZATION AND WATER-BODIES RESTORATION AND MANAGEMENT (TN-IAMWARM) PROJECT

World Bank assisted Tamilnadu Irrigated Agricultural Modernization and Water-bodies Restoration and Management Project (TN-IAMWARM project) is being implemented at a cost of Rs.2,547 crore integrating 8 Departments since 2007 with the

objective of increasing the income of farmers by improving the utilization of each and every unit of water resource in agriculture and related activities. A sum of Rs.42.10 crore has been allotted to carry out Animal Husbandry activities. So far, a sum of Rs.41.15 crore has been incurred.

7.4.1.1 The activities undertaken by the department in the sub basins are:

- Fodder development by bringing additional areas under fodder cultivation thereby increasing the availability of green fodder.
- Ensuring complete veterinary care and increasing the percentage of conception through conduct of fertility cum health care camps, distribution of mineral mixture and mineral licks and oestrus synchronization.
- Periodical deworming of sheep and goats and heifer calves.
- Increasing the awareness level of farmers in best practices by training, exposure visits and utilising various mass communication, propaganda and publicity methods.

The project is being implemented in 9 sub-basins from 2007-08 as Phase I. The Project was extended to 15 more sub-basins from 2008-09 as Phase II, to 20 more sub-basins from 2009-10 as Phase III and to 5 more sub-basins from 2011-12 and one more sub-

basin from 2012-13 as Phase IV. Totally 50 sub-basins are taken up for implementation of Animal Husbandry activities under the project. The Project has been extended up to 30.09.2014.

Table 12 : Activity wise Progress Under IAMWARM Project

Sl. No.	Name of the Component	2007-08 to 2012-13		2013-14	
		Target	Achievement	Target	Achievement
1	Operation of Cluster Sub basin Veterinary Unit (In Nos.)	70	40	4	1
2	Artificial Insemination (In lakh Nos.)	18.14	18.14	2.47	2.47
3	Fodder Development (In Ha)	12,711	12,711	1,766	1,766
4	Azolla Demonstration (In Nos.)	1,819	1,819	0	0
5	Fertility Cum Health Care Camps (In Nos.)	7,282	7,282	1,729	1,729
6	Farmer's interactive meeting (In Nos.)	4,981	4,981	0	0
7	Oestrus Synchronisation (In Nos.)	7,290	7,290	3,420	3,420
8	Deworming of Heifer calves (In lakh Nos.)	2.70	2.70	0.98	0.98
9	Deworming of Sheep & Goats (In lakh Nos.)	15.38	15.38	13.07	13.07
10	Distribution of Mineral Mixture (No. of Animals)	65,170	65,170	34,580	34,580
11	Distribution of Mineral Licks (No. of Animals)	31,740	31,740	12,350	12,350
12	3 days Farmers training (No. of Farmers)	62,350	62,350	18,650	18,650

Sl. No.	Name of the Component	2007-08 to 2012-13		2013-14	
		Target	Achievement	Target	Achievement
13	Exposure visit (No. of Farmers)	3,750	3,750	700	700
14	Distribution of Chaff Cutters (In Nos.)	189	189	0	0
15	Financial (Rs. in crore)	34.02	33.07	8.08	8.08

Due to the non availability of contract Veterinarians, they could not be hired for 30 Cluster Sub-basin Veterinary Units. However, the Department engaged its own manpower and achieved all the targets.

The World Bank has appreciated the work done by the Animal Husbandry Department as follows:

"The Key Performance Indicator (KPI) for the Animal Husbandry Department is incremental increase in milk production from the baseline level of 17,61,000 tonnes to 23,48,000 tonnes per year, which is 33% over the baseline production. Similarly per animal milk production per day has increased from the baseline of 4.76 to 6.35 litres".

During 2014-15, Rs.118 lakh has been allotted for carrying out oestrus synchronisation in 5300 animals, distribution of mineral mixture for 16,365 animals and mineral licks for 11,500 animals free of cost.

8. LIVESTOCK DEVELOPMENT

8.1 Livestock Farms

The Department of Animal Husbandry maintains 13 Farms, out of which 8 are Livestock Farms, 3 are Sheep Farms, one is a Poultry Farm and one is a Fodder Farm. Livestock farms are maintained for selective scientific breeding of specific species of livestock. They also act as centres for training farmers on scientific methods of husbandry practices and serve as demonstration farms for the benefit of farming community. Moreover, they act as a source for quality livestock. The location, and species maintained in each farm is as follows:

Table 13 : Location of Departmental Farms, and species maintained

Sl. No	Name of the Farm	Species maintained
Livestock and Poultry Farms		
1	Exotic Cattle Breeding Farm, Eachenkottai (Thanjavur District)	Cattle and Buffaloes
2	District Livestock Farm, Hosur (Krishnagiri District)	Cattle, Sheep, Goats, Pigs, Poultry and Horses
3	District Livestock Farm, Abishekapatti (Tirunelveli District)	Cattle, Sheep, Pigs and Poultry
4	District Livestock Farm, Udhagamandalam (The Nilgiris District)	Cattle
5	District Livestock Farm, Pudukottai (Pudukottai District)	Cattle, Sheep, Goats, and Pigs

Sl. No	Name of the Farm	Species maintained
6	District Livestock Farm, Orathanad @ Eachenkottai (Thanjavur District)	Buffaloes and Poultry
7	District Livestock Farm, Chettinad (Sivagangai District)	Cattle, Sheep, Goats, Pigs and Poultry
8	Livestock Farm, Korukkai (Thiruvarur District)	Cattle
9	Sheep Farm, Chinnasalem (Villupuram District)	Sheep and Goats
10	Sheep Farm, Mukundarayapuram (Vellore District)	Sheep
11	Sheep Farm, Sathur (Virudhunagar District)	Sheep and Goats
12	Poultry Farm, Kattupakkam, (Kancheepuram District)	Fowls and Turkey
Fodder farm		
13	Fodder Farm, Padappai (Kancheepuram District)	

8.2 Cattle and Buffalo Development

Crossbreeding of Cattle and Grading up of Buffalo has led to increase in the total milk production of the State. As a result, income of the livestock farmers in almost all the regions of the State including drought prone, dryland and rainfed areas has enhanced. Dairy enterprise provides assured incomes and is considered as a profitable enterprise for marginal, small and medium farmers. In addition, Buffalo holds the promise of increased incomes through inherent increased fat content in milk. Its feed conversion efficiency is remarkable and breakthrough in buffalo breeding will provide a big push to livestock based

economy. In order to encourage the women folk to opt for buffalo rearing, Government sanctioned a sum of Rs. 1.02 crore under “Ensuring Economic upliftment of rural women through Buffalo Rearing Scheme" during 2013-14.

As per Integrated Sample Survey Scheme Report, the total estimated milk production of exotic and cross bred cows during 2012-13 was 55.80 lakh metric tonnes as against 54.12 lakh metric tonnes during the previous year 2011-12 with an increase of 3.10% and the estimated individual average milk yield of cow / day for the year 2012-13 was 6.810 kgs as against 6.410 kgs during the previous year with an increase of 6.24%. This increase is due to increase in cross bred cattle population compared to Indigenous cattle population. Increase in productivity and resistance to diseases will be possible if farmers breed their livestock in consonance with the breeding policy of the Government. With the implementation of Cross breeding programmes and various other schemes by the department, livestock farming has become economically viable and remunerative to a large number of rural households in the State.

As per the Farm Policy, the following Cattle and Buffalo breeds are maintained in the Departmental farms as on 31.03.2014.

Table 14 : Cattle and Buffalo breeds Maintained in Departmental Farms

S. No	Name of the Farm	Cattle / Buffalo	Stock (As on 31.03.14)
1	Exotic Cattle Breeding Farm, Eachenkottai	Jersey,Crossbred Jersey, Umblachery, Murrah	190
2	District Livestock Farm, Hosur	Crossbred Jersey, Crossbred Friesian, Sindhi, Kangeyam, Bargur, Pulikulam	389
3	District Livestock Farm, Abishekapatti	Crossbred Jersey, Sahiwal	121
4	District Livestock Farm, Udagamandalam	Jersey, Crossbred Jersey, Friesian, Crossbred Friesian	95
5	District Livestock Farm, Pudukottai	Crossbred Jersey, Crossbred Friesian	216
6	District Livestock Farm, Orathanadu	Murrah	149
7	District Livestock Farm, Chettinad	Crossbred Jersey, Crossbred Friesian, Tharparkar	314
8	Livestock Farm, Korukkai	Umblachery	404
	Total		**1,878**

A total of 423 calves were born in the Livestock farms of the department during the year 2013 – 14.

8.2.1 Frozen Semen Production

Frozen semen station is the nucleus of the Artificial Insemination Programme. It functions with

the main objective of production of quality frozen semen so as to ensure better fertility and conception rate and faster genetic progress among the cattle maintained by the farmers.

Three frozen semen production stations functioning in the Departmental farms, cater to the needs of the Artificial Insemination Centres located throughout the State. The minimum Standard Protocol for Frozen Semen Production Stations prescribed by Government of India are strictly adhered to in these Frozen Semen Production Stations to produce quality semen. A total number of 218 breeding bulls of Jersey, Holstein Friesian, Crossbred Jersey, Crossbred Holstein Friesian, Red Sindhi, Kangeyam, Umblachery, Bargur, Pulikulam and Murrah are being maintained in these Farms.

Table 15 : Frozen Semen straw Production
2013-14 (as on 31.03.2014)

Sl. No	Frozen Semen Station	Target (In lakh)	Production (In lakh)	Achievement Percentage
1	Exotic Cattle Breeding Farm, Eachenkottai	29.69	32.66	110
2	District Livestock Farm, Hosur	6.17	6.97	113
3	District Livestock Farm, Udhagamandalam	12.96	18.42	142
Total		**48.82**	**58.05**	**119**

Table 16 : Breeding Bulls under collection (as on 31.03.14)

Sl. No.	Name of the Farm	Jersey	Jersey Cross	HF	HF Cross	Red Sindhi	Kangeyam	Umbalachery	Pulikulam	Burghur	Murrah	Total
1	Exotic Cattle Breeding Farm, Eachenkottai	25	47	-	-	-	-	1	-	-	36	109
2	District Livestock Farm, Hosur	-	22	-	-	6	6	-	3	1	-	38
3	District Livestock Farm, Udhagamandalam	23	29	9	10	-	-	-	-	-	-	71
Total		48	98	9	10	6	6	1	3	1	36	218

8.2.2 Artificial Insemination

Artificial insemination of cattle using liquid semen of exotic and graded breeds of cattle was introduced by the Department of Animal Husbandry during 1948. Further with the introduction of frozen semen during 1975, liquid semen was gradually phased out and all the artificial insemination centres started using frozen semen from 1993.

Artificial Insemination horizontally disseminates superior genetic resources in a population within a short period. With this in mind, to improve the milk production traits of cattle and buffaloes, to bring more returns to the farmers and to increase the State's milk production, artificial insemination with semen of bulls

possessing high milk production traits is being carried out through 3,429 Artificial Insemination Centres functioning throughout the State. There are a total of 1,801 Artificial Insemination workers trained by Tamil Nadu Livestock Development Agency (TNLDA), through Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), engaged in Artificial Insemination programme in the State besides the above 3,429 Artificial Insemination Centres.

The revised Breeding Policy of the State for cattle which is in vogue since 2008–09 provides for selective breeding of native breeds and for crossing Non-descript cows with Jersey or Holstein Friesian depending on agro climatic conditions. Wherever crossing of Non-descript cows with Exotic germplasm is practiced the level of exotic inheritance should be restricted to 50%. Back-crossing with exotic breeds should be avoided. Indian breeds like Red Sindhi, Sahiwal and Tharparkar may also be used for cross breeding the Non-descript cows. Cross bred cows may be bred with bulls having 50% Jersey or 50% Holstein Friesian inheritance by inter-se mating.

Upgrading of Non-descript buffaloes with Murrah and pure breeding of Toda buffaloes has been advised in the breeding policy.

During 2013-14, 47.62 lakh Artificial Insemination were performed by the Department and 48.6% conception rate was achieved.

8.2.3 Cattle Breeding and Fodder Development Units

Cattle Breeding and Fodder Development Units functioning in 31 Districts (except Chennai), headed by a Deputy Director of Animal Husbandry are responsible for undertaking all the Cattle Breeding and Fodder Development activities in the State. Prior to 2013-14, there were only 20 Cattle breeding and Fodder Development Units. During 2013-14, 11 Cattle Breeding and Fodder Development units were newly created.

These Units ensure periodical supply of breeding inputs to the Artificial Insemination centers. Liquid Nitrogen, which is essential for production and storing of Frozen Semen Straws is procured from private sources through tenders floated by Tamil Nadu Livestock Development Agency (TNLDA). Cattle Breeding and Fodder Development Units are also responsible for supply of fodder seeds and monitoring the fodder development to ensure that the demand supply gap of green fodder is considerably reduced.

8.3 Sheep Development

Sheep rearing is a traditional rural economic activity and continues to be the primary source of

income for the small, marginal farmers and landless labourers as an alternate to agriculture. Sheep are mostly maintained on natural vegetation, on common grazing lands, wastelands and uncultivated lands, stubbles of cultivated crops. Sheep are mostly reared for meat and wool. Sheep skin and wool are used by a number of rural based industries as raw material. Sheep manure also provides a source of earning for the sheep rearers. During 2013-14, 111.58 lakh deworming and 39.77 lakh treatment were performed in sheep.

Tamil Nadu has 8 breeds of sheep namely, Kilakarisal, Ramnad white, Vembur, Mecheri, Madras red, Trichy black, Nilgiri and Coimbatore. In the State, the farmers' preference is to rear meat type breeds.

Table 17 : Sheep Breeds Maintained in the Departmental Farms as on 31.03.2014

Sl. No	Farms	Breed	Stock
1	District Livestock Farm, Abishekapatti	Keelakarisal	330
2	District Livestock Farm, Chettinad	Ramnad White	467
3	District Livestock Farm, Pudukottai	Ramnad White	65
4	District Livestock Farm, Hosur	Mecheri	127
5	Sheep Farm, Sathur	Vembur	60
6	Sheep Farm, Chinnasalem	Mecheri, Madras Red	958
7	Sheep Farm, Mukundrayapuram	Madras Red	322
	Total		**2,329**

The Animal Husbandry Department is assisting sheep breeders to augment meat production through scientific breeding, feeding and management practices so as to generate additional income to the farmers. Good Quality rams and ewes produced in these farms are sold to local farmers for breeding purposes.

During 2013–14, 991 lambs were born in the departmental farms and 605 lambs were sold. The farmers who desire to purchase sheep, register their names with the concerned Deputy Directors of the farms and sheep are provided based on seniority at the price fixed by the Government.

8.4 Goat Development

Goat comprises 6.6% of the total livestock population of Tamil Nadu. Goats can survive and flourish even in dryland areas. They contribute precious animal protein like meat, milk, fibre, skin and manure. By contributing to the income of rural households, they play an important role in the livelihood of landless, small and marginal farmers. The worth of goat rearing lies in their proliferation rates, higher rates of growth and the ease with which they can be marketed. During 2013-14, 151.13 lakh goats were dewormed and 80.40 lakh goats were treated.

Table 18: Goat Breeds maintained in the Departmental Farms as on 31.03.2014

Sl. No.	Farms	Breed	Stock
1	District Livestock Farm, Chettinad	Jamunapari	81
2	District Livestock Farm, Pudukottai	Jamunapari	99
3	District Livestock Farm, Hosur	Tellichery, Kodiadu	98
4	Sheep Farm, Chinnasalem	Salem Black, Tellichery	397
5	Sheep Farm, Sathur	Kanni	39
	Total		714

During 2013–14, 304 kids were born in the departmental farms out of which 115 kids were sold. The farmers who desire to purchase goats register their names with the concerned Deputy Directors of the farms and goats are provided based on seniority at the price fixed by the Government.

8.5 Piggery Development

Pig farming has ample scope to provide self employment, alternate source of animal protein and additional income. Pigs have wide adaptability to grow under different agro-climatic conditions. Among the various livestock species, pigs are the most efficient feed converters after broilers. Apart from providing meat, it is also a source of bristles and manure. There is a good demand from domestic as well as export

market for pig products such as pork, bacon, ham, sausages, lard etc.

Table 19 : Pig Breeds maintained in the Departmental Farms as on 31.03.2014

Sl. No	Farms	Breed	Stock
1	District Livestock Farm, Hosur	Large White Yorkshire	37
2	District Livestock Farm, Abishekapatti	Landrace, Crossbred Large White Yorkshire, Large White Yorkshire	62
3	District Livestock Farm, Chettinad	Large White Yorkshire	312
4	District Livestock Farm, Pudukottai	Landrace	92
	Total		503

During 2013 – 14, 1,304 piglets were born in the departmental farms and 1,229 piglets were sold. The farmers who desire to purchase pigs register their names with the concerned Deputy Directors of the farms and pigs are provided based on seniority at the price fixed by the Government.

8.6 Horse Breeding Unit

A horse-breeding unit is functioning at District Livestock Farm, Hosur. Kathiawar and Thoroughbred horses are maintained in this unit. As on 31.03.2014, 8 stallions and 14 mares are maintained in this Unit. The stallions of the farm are used for serving mares belonging to farmers for which a service fee of Rs.500 per service is charged. During 2013-14, 17 services were performed by the stallions of this unit.

8.7 Fodder Development

Traditionally community grazing areas and off-farm fodder sources has been important sources of fodder for the livestock. Urbanisation and continuous cropping combined with the indiscriminate use of grazing lands has resulted in pastures with very low biomass production leading to adverse effect on livestock production. To make dairying economically attractive, milk production and productivity has to be enhanced. This is possible only by ensuring that good quality feed and fodder is made available in adequate quantities. Therefore, efforts have to be initiated to improve fodder production and conservation of agricultural lands for fodder. Due to increased coverage of area under food crops, the area for fodder crops production is limited. The only way out is to increase the biomass production in the existing cultivable lands.

A crucial aspect of fodder development is availability of seed and planting material. Quality fodder seeds are not readily available. To overcome this deficit, the departmental farms are also functioning as fodder seed banks producing and supplying seeds and planting material to needy farmers. Government have taken initiatives to encourage farmers for taking up production of high yielding fodder varieties through various State and Central schemes.

Apart from this, the Department is undertaking the following fodder development activities:

- To enable the landless families and poor farmers to take up animal husbandry activities, Self-help groups are being encouraged for establishment of community feed and fodder banks.
- The Department has fodder seeds, slips and tree seedling production units in Padappai Seed Farm and District Livestock Farms at Hosur, Chettinadu, Abishekapatti, Eachenkottai, Chinnasalem and Ooty.
- Cultivation of perennial high yielding fodder grass like Cumbu-Napier- Co3, Co4, Para grass, Kolukattai grass, Guinea grass and Congo signal grass and fodder cereals like Sorghum, Maize and Bajra are being encouraged.
- Cultivation of Fodder crops and Tree seedling in Veterinary Institutions are being taken up.
- About 2390.53 acres of Departmental Farm lands were brought into fodder cultivation. During 2013-14, 32.84 MT of fodder, 264 lakh fodder slips and 812.70 kgs of fodder seeds were distributed to the farmers from the Government Farms for augmenting fodder production.

Table 20 : Fodder Development in Departmental Farms

Sl. No	Name of the Farm	Area (in acres)	Area under fodder (acres)	Fodder produced (mt)
1	Exotic Cattle Breeding Farm, Eachenkottai, Thanjavur District	638.61	101.00	2170
2	District Livestock Farm, Hosur, Krishnagiri District	1,561.41	58.88	2312
3	District Livestock Farm,Abishekapatti, Tirunelveli District	1,283.64	87.00	415.67
4	District Livestock Farm,Udagamandalam, The Nilgiris District	129.38	65.34	1055.372
5	District Livestock Farm, Pudukottai, Pudukottai District	959.31	193.00	288.053
6	District Livestock Farm, Orathanad @ Eachenkottai, Thanjavur District	731.44	22.50	1012.20
7	District Livestock Farm, Chettinad, Sivagangai District	1590.32	300.62	2577.50
8	Livestock Farm, Korukkai, Thiruvarur District	495.68	50.00	1428.779
9	Sheep Farm, Chinnasalem, Villupuram District	1,866.28	20.50	61.30
10	Sheep Farm, Mukundarayapuram, Vellore Diistrict	479.65	34.50	150.00
11	Sheep Farm, Sathur, Virudhunagar District	154.00	40.38	124.310
12	Poultry Farm, Kattupakkam, Kancheepuram District	9.65	-	-
13	Fodder Farm, Padappai, Kancheepuram District	17.00	13.00	16.845
Total		9,916.37	986.72	11611.83

A total of 11,611.83 MT of fodder was produced during 2013-14 out of which, 11,567.69 MT were used for the livestock maintained at the farms and 32.84 MT of fodder were distributed to farmers. 264 lakh fodder slips and 30.016 lakh tree seedlings were also given to the farmers

8.8 Dog Breeding

Tamil Nadu possesses excellent native dog breeds like Rajapalayam, Kombai, Chippiparai and Kanni. To preserve these native breeds and to propagate them, a Dog Breeding Unit was established at Saidapet, Chennai during the year 1980-81. As there was a heavy demand for other breeds like Labrador and Dobermann these breeds were also added to the existing unit during the year 1997-98. The puppies are sold to the public at the price fixed by the Government. The details of the dog breeds maintained at Dog Breeding Unit for the year 2013-14 is as follows:

Table 21 : Dog Breeds Maintained in Dog Breeding Unit (as on 31.03.2014)

Sl. No	Breeds	Adult			Pups		
		Male	Female	Total	Male	Female	Total
1	Rajapalayam	3	8	11	-	4	4
2	Chippiparai	1	1	2	-	-	-
3	Dobermann	1	1	2	-	-	-
4	Labrador Retriever	2	3	5	-	-	-
5	Dalmatian	1	-	1	-	-	-
6	Rottweiler	-	2	2	-	-	-
	Total	**8**	**15**	**23**	**-**	**4**	**4**

8.9 Poultry Development

Poultry keeping is no longer limited to backyard farming as it has attained the status of industry in Tamil Nadu. Poultry Extension Centres function as model farms for the farmers to know about scientific ways of breeding and management. The following Poultry Extension Centres are functioning in Tamil Nadu:

1. Poultry Farm at District Livestock Farm, Hosur, Krishnagiri District.
2. Poultry Farm at District Livestock Farm, Chettinad, Sivagangai District.
3. Poultry Farm at District Livestock Farm, Abishekapatti, Tirunelveli District.

4. Poultry Farm at District Livestock Farm, Orathanad, Thanjavur District.
5. Poultry Farm, Kattupakkam, Kancheepuram District.
6. Poultry Extension Centre, Kodaikanal, Dindigul District.
7. Poultry Extension Centre, Gandhigram, Dindigul District.
8. Poultry Extension Centre, Masinagudi, The Nilgiris District.

Poultry Extension Centres, act as demonstration farms and provide training to farmers to take up poultry rearing. Moreover, Government's support for establishing poultry units and widespread immunization against Ranikhet disease contributed to development of poultry rearing as an industry. Poultry farming has developed on Commercial scale, in the Western parts of Tamil Nadu with Namakkal developing as layer belt and Palladam Region developing into a hub for broilers. The development is restricted to the Western belt of the State, though there is a good potential for Poultry Development in other parts of the State. Hence, the Government of Tamil Nadu have launched a scheme for development of Poultry Clusters in the non poultry backward regions of the State at a total cost of Rs. 22.35 crore during 2012-13 and implemented for the year 2013-14 at a total outlay of Rs.25 crore. In order to continue the

Scheme during 2014-15, the Government have allotted Rs.25 crore.

The State occupies 2nd position in egg production in the country. As per Integrated Sample Survey Report, the total estimated Egg production of desi birds for the State during 2012-13 was 4,295 lakh Nos. and estimated egg production of improved birds for the year 2012-13 was 11,15,039 lakh Nos. and the total egg production shows an increase of 0.69% over the previous year estimate.

Ranikhet disease is one of the economically important diseases causing heavy mortality in poultry. The Department is providing vaccination against this disease on specified days at all the veterinary institutions and sub centres every week and also in the camps conducted under 'Kalnadai Padhukappu Thittam' to protect the poultry from this disease. Apart from this, the Department also conducts State wide vaccination drive against Ranikhet disease during the month of February every year (two weeks camp). During the year 2013-14, 256.57 lakh poultry have been vaccinated against Ranikhet disease.

Table 22 : Poultry Stock maintained in Livestock Farms

Sl. No	Location	Breeds maintained	Stock
1	District Livestock Farm, Hosur	Giriraja, HH260	1,669
2	District Livestock Farm, Orathanad	Giriraja	961
3	District Livestock Farm, Chettinadu	Giriraja	800
4	Poultry Farm, Kattupakkam	Vanaraja, Giriraja, HH 260, Turkey	5,523
5	District Livestock Farm, Abishegapatti	Vanaraja, Giriraja,White Leghorn Hen	1,165
	Total		**10,118**

Apart from this, poultry stocks are maintained at Kodaikanal, Gandhigram and Masinagudi Poultry Extension Centres.

9. DROUGHT MITIGATION

The Government of Tamil Nadu have sanctioned a total amount of Rs.52.15 crore to tackle Fodder shortage during Drought situation. Initially Rs.15 crore was sanctioned for provision of green fodder and dry fodder to livestock at 50% subsidy as a part of Drought Mitigation effort in 8 Delta Districts. Around 5,600 acres of farmers' land was brought under cultivation of fodder Sorghum in the Delta Districts @700 acres per District. A sum of Rs.6,800 per acre was released as 50% subsidy to the 4,635 farmers on

the cost of cultivation for taking up cultivation of short term fodder crops in their lands. Totally 29,181 MT of green fodder was produced out of which 14,170 MT of green fodder was procured by local Milk Producers Co-operative Societies (MPCS) and distributed to their members at 50% subsidy. A total of 4,635 farmers were benefitted under this Scheme in Delta Districts.

Besides this, a sum of Rs.24.65 crore was sanctioned for provision of green and dry fodder to livestock at 50% subsidy as a part of Drought Mitigation effort in 22 Non-Delta Districts except Chennai. Around 26,650 acres of farmers' land were brought under cultivation of Fodder Sorghum in these Districts. In the Nilgiris District, 110 acres of land was under Oats cultivation. Totally 1,23,387 Metric Tonne of green fodder was produced and 27,497 Metric Tonne of green fodder was procured by local Milk Producers' Co-operative Societies (MPCS) and distributed to their members at 50% subsidy. A total of 33,567 farmers were benefitted under this Scheme in non-Delta Districts.

Fodder depot

To prevent distress sale of cattle during summer months and during periods of fodder shortage, Government ordered the establishment of 125 Fodder Depots at a total cost of Rs.12.50 crore. Accordingly, 125 centres were identified to establish fodder depot

at a cost of Rs.10 lakh per Depot. Purchase of Dry fodder and distribution to the livestock farmers at the rate of Rs.2 per kg is in progress throughout the State except Chennai. Thus, the issue of non availability of fodder during prolonged non rainy period and resultant fodder scarcity is addressed. In addition, 60 Fodder depots were established throughout the State under State Disaster Response Fund (SDRF) at a total outlay of Rs.6 crore during 2014-15. So far, a total of 9,500 MTs of dry fodder have been distributed to benefit 1,04,915 farmers and 4,35,894 animals. Dry fodder will be distributed to needy farmers through these 185 fodder depots and the entire funds allocated for this purpose will be utilised.

10. EXTENSION SERVICES

Extension and propaganda are important tools for imparting skills and knowledge in basic and modern animal husbandry practices, which in turn can play a vital role in solving many field problems and in containment of economically important diseases. Moreover, it can make the schemes and programmes implemented by the Department more transparent to the public.

With the motto of “Seeing is learning” each and every opportunity is being utilized by the department to enlighten the farmers on various Animal Husbandry practices and disease prevention methods. Fairs and

exhibitions are conducted by the department to collect and disseminate knowledge about Animal Husbandry and allied activities to the public. Information on prevention and control of deadly diseases which are of significance (both existing and emerging diseases), deworming, vaccinations, artificial inseminations, calf rearing, goat and sheep rearing, poultry keeping, pasture management, meat inspection, sanitary measures, destruction, disinfection of contaminated premises and surface are provided to the farmers / stake holders.

During the year 2013-14, a sum of Rs.9.68 lakh was allocated to the Animal Husbandry Department towards conducting fairs and the department participated in the following fairs:-

- Dindigul - Kodaikanal – Kodai Vizha
- Krishnagiri - Mangani Exhibition
- Vellore - Elagiri Kodai Vizha
- Namakkal - Valvil Ori Vizha
- Coimbatore - Trade Fair
- Madurai - Trade Fair
- Thanjavur - Trade Fair
- Tirunelveli - Trade Fair
- Tiruvannamalai – Trade Fair
- Salem - Yercaud Kodai Vizha
- Thoothukudi - Trade Fair

Apart from these, the department participated in the 40th Trade Fair and Exhibition that was held from 3rd week of December 2013 to first week of February 2014, at Island Grounds Chennai and in Republic Day Parade Pageantry at Chennai.

11. VETERINARY PUBLIC HEALTH

Zoonotic diseases are diseases caused by infectious agents that can be transmitted between animals and humans. Animal husbandry plays important role in maintaining health of the general public in terms of prevention of zoonotic diseases. With animal husbandry forming the core livelihood of millions of rural population, veterinary public health plays a vital role in controlling the zoonotic diseases. Some of the services related to these aspects are detailed below:

11.1 Canine Rabies Control Programme:

Rabies in Human beings and animals is considered as a major public health problem in most of the States in India including Tamil Nadu. Dogs transmit Rabies disease not only to human beings but also to various other livestock which are of great economic importance to the stake holders. Thus, elimination of canine rabies constitutes the most effective means of controlling transmission to human beings and other livestock.

With above objective, Canine Rabies Control Programme Unit is functioning at Madurai and Tirunelveli. The main functions of these units are:

- Systematic, periodical door-to-door prophylactic vaccination of pet dogs against rabies is provided.
- Post exposure vaccination of all livestock including dogs is provided free of cost
- Creation of awareness among the public through publicity and propaganda by distributing pamphlets and handbills and by conducting dog shows.

During 2013-14, a total number of 7,737 owned dogs were vaccinated in the above centres.

11.2 Meat Inspection

The Department is conducting regular meat inspection in the registered slaughter houses functioning under the control of the local bodies located throughout the State. The chances of contracting meat borne diseases like Taeniasis, Trichinosis Hydatidosis by the meat consuming public is almost eliminated or prevented by this regular activity. During 2013-14, 1,158 weekly inspections to the slaughter houses were made by the Animal Disease Intelligence Units (ADIUs) in the State.

12. ANIMAL WELFARE MEASURES

The Government in coordination with Animal Welfare Board of India is addressing the problems of unethical treatment to animals in a three pronged approach, to prevent cruelty to animals and to treat them ethically in a humane manner.

1) At the market place
2) During transport
3) In the Slaughter Houses

12.1 Society for Prevention of Cruelty to Animals (SPCA)

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

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

Some of the important measures taken are:

- Society for Prevention of Cruelty to Animals (SPCA) has been established in all Districts in Tamil Nadu.
- Government of Tamil Nadu have constituted a State Level Coordination Committee headed by Secretary, Animal Husbandry, Dairying and Fisheries Department and District Level Co-ordination Committees headed by District Collector to oversee the enforcement of Prevention of Cruelty to Animals Rules, 2001.

12.2 Rules for Transportation of Animals

- Under Prevention of Cruelty to Animals Act, 1960, rules for transportation of Cow, Bullock, Bulls, Buffalo, Calves and Goat has been mentioned in Transport of Animals, Rules, 1978.
- A valid certificate by a qualified veterinary surgeon to the effect that the cattle are in a good condition to travel by rail or road and are not suffering from any infectious or contagious or parasitic diseases and that they have been vaccinated against Rinderpest and any other infectious or contagious or parasitic diseases, shall accompany each consignment.

- In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.
- The certificate shall be in the form specified in Schedule-E.
- Veterinary first-aid equipment shall accompany all batches of cattle.
- Each consignment shall bear a label showing in bold red letters the name, address and telephone number (if any) of the consignor and consignee, the number and types of cattle being transported and quantity of rations and feed provided.
- The consignee shall be informed about the train or vehicle in which the consignment of cattle is being sent and its arrival time in advance.
- The consignment of cattle shall be booked by the next train or vehicle and shall not be detained after the consignment is accepted for booking.
- The average space provided per cattle in Railway wagon or vehicle shall not be less than two square metres.
- Suitable rope and platforms should be used for loading cattle from vehicles.
- Cattle shall be loaded after they are properly fed and given water.
- Cattle in advanced stage of pregnancy shall not be mixed with other cattle in order to avoid stampede during transportation.

- Water arrangements on route shall be made and sufficient quantitiy of water shall be carried for emergency.
- Adequate ventilation shall be ensured.

12.2.1 When cattle to be transported by rail the following precautions are to be taken:

- An ordinary goods wagon shall carry not more than ten adult cattle or fifteen calves on broad gauge, not more than six adult cattle or ten calves on metre gauge, or not more than four adult cattle or six calves on narrow gauge.
- Every wagon carrying cattle shall have at least one attendant
- Cattle shall be loaded parallel to the rails, facing each other
- Rations for padding, such as straw, shall be placed on the floor to avoid injury if a cattle lies down and this shall not be less than 6 cms thick.
- Rations for the journey shall be carried in the middle of the wagon.
- To provide adequate ventilation, upper door of one side of the wagon shall be kept open properly fixed and the upper door of the wagon shall have wire gauge closely welded mesh arrangements to prevent burning cinders from the engines entering the wagon and leading to fire outbreak.
- Cattle wagons should be attached in the middle of the train.

- Cooking shall not be allowed in the wagons nor hurricane lamps without chimneys.
- Two breast bars shall be provided on each side of the wagon one at the height of 60 to 80 cm and the other at the height of 100 to 110 cm.
- Cattle in-milk shall be milked at least twice a day and the calves shall be given sufficient quantity of milk to drink.
- As far as possible, cattle may be moved during the nights only.
- During day time, if possible, they should be unloaded, fed, given water and rested.

12.2.2 When cattle are to be transported by goods vehicle the following precautions are to be taken:

- Specially fitted goods vehicles with a special type of tail board and padding around the sides should be used.
- Ordinary goods vehicles shall be provided with anti-slipping material, such as coir matting or wooden board on the floor and the super structure, if low, should be raised.
- No goods vehicle shall carry more than six cattle.
- Each goods vehicle shall be provided with one attendant
- While transporting the cattle, the goods vehicle shall not be loaded with any other merchandise.
- To prevent cattle being frightened or injured, they should preferably, face the engine.

As per Transport of Animal Rule 1978, in Rule No.50 the average space provided per Cattle in Railway Wagon or vehicle are as follows:

Table 23 : Required Space for Cattle During Transportation

Weight of Cattle	Space Required
Cattle weighing up to 200 kg	1 Square Meter (Sq.mtr)
Cattle weighing 200-300 kg	1.20 Square Meter
Cattle weighing 300-400 kg	1.40 Square Meter
Cattle Weighing above 400 kg	2.0 Square Meter

12.3 Stray Dog Birth Control Programme

This programme is being implemented to prevent the indiscriminate catching and killing of stray dogs. The Government of India have formulated the Animal Birth Control (Dogs) Rules, to control the stray dog population by the Municipalities and local body authorities.

This programme is being implemented with the following main objectives:

- Effective control of stray dog population
- Reduction in number of incidence of Rabies
- Prevention of killing of healthy stray dogs

The stray dogs are caught in a humane method, sterilized, vaccinated against rabies and left back in the same original place from where they were caught, under this programme. Government have ordered implementation of Animal Birth Control programme in 5 Corporations and 50 Municipalities involving Municipal Administration Department, Animal Husbandry Department and Animal Welfare Board of India.

13. JALLIKATTU

Jallikattu is an ancient Bull taming sports event conducted in notified places of Districts from the month of January to May every year. The Hon'ble Supreme Court of India has banned the conduct of the sport through its judgement dated 07.05.2014. The Government of Tamil Nadu has filed a Review Petition to lift the ban on 19.05.2014.

14. EMU FARM MAINTENANCE

In Erode District, 21 Emu farms were abandoned by its owners. In order to prevent the birds from dying due to starvation and as per the orders of the Honourable Chief Minister, the Department of Animal Husbandry along with the Erode District administration had taken the maintenance of 12,011 birds from August 2012 onwards.

The Animal Husbandry Department arranged for procurement of essential supplies such as feed and engaged labourers for providing feed and water to the birds. The Department provided Veterinary care to maintain the birds in good health. Adequate security arrangements by providing watch and ward were put in place, to ensure safety of the birds and properties of the farms.

The Government have so far released a sum of Rs. 3.75 crore for the maintenance of the abandoned Emu birds, in Erode District which has been utilized entirely.

Out of the 12,011 birds taken over by the Animal Husbandry Department, 415 birds were handed over to the owners and a total of 7,997 birds have been auctioned after getting permission from Tamil Nadu Protection of Interest of Depositors (TNPID) Court. A sum of Rs 11.72 lakh has been realized as auction proceeds. Necessary steps have been initiated for reimbursing the amount spent on maintenance of the Emu birds from the Emu Farm Companies.

15. TAMIL NADU LIVESTOCK DEVELOPMENT AGENCY

15.1 INTRODUCTION

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

Bringing all the breedable female cattle and buffaloes under defined breeding programme through artificial insemination and natural service and to increase milk production and per animal productivity are the objectives of the Agency.

To achieve the above objective the following activities are being implemented:

1. Supply of quality genetic inputs.
2. Introduction of quality bulls with high genetic merit for frozen semen production.
3. Implementing Quality control in semen production stations and semen banks.
4. Intensification of Progeny Testing Scheme (PTS).
5. Procurement and supply of high quality frozen semen and artificial insemination equipment.
6. Streamlining storage and supply of liquid nitrogen.

7. Increasing the breeding facilities;

   - Establishing new mobile AI centres by training rural youth and equipping them and encouraging Door-step delivery of breeding services.
   - Facilitating stationary Artificial Insemination Centre to perform mobile AI work by conversion of existing Stationary Artificial Insemination Centre into Mobile cum Stationary Centre.

8. Conservation of indigenous breeds through Milk recording programme and produce quality indigenous bulls of high genetic merit.
9. Human Resources Development through regular training.

15.2 QUALITY ASSURANCE

In the Frozen semen production stations of the State, the Minimum Standard Protocol (MSP) of the Government of India for frozen semen production stations is being implemented. In 2013-14, 8.26 lakh frozen semen straws produced by bulls of superior genetic quality have been purchased and supplied to the Department of Animal Husbandry.

15.3 ACTIVITIES UNDERTAKEN

a. Strengthening of Semen production stations

i. Strengthening of Frozen Semen Production Stations at District Livestock Farm, Hosur, by construction of a new collection yard, integrated drainage system, provision of centralized air-conditioning to the frozen semen laboratory, construction of covered pathway from bull shed to collection yard were taken up at a cost of Rs.0.79 crore.

ii. At Exotic Cattle Breeding Farm, Eachenkottai to increase the frozen semen production strengthening of collection yard, semen processing laboratory and construction of biosecurity wall at a cost of Rs.6.00 crore is in progress.

iii. At Nucleus Jersey and Stud Farm, Udhagamandalam of the Tamil Nadu Co-operative Milk Producers' Federation, infrastructure strengthening works at a cost of Rs.1.19 crore has been taken up.

b. Embryo transfer programme in Cattle

Embryo Transfer Technology (ETT) is a tool to realise the potential of genetically superior cow to the maximum by producing more number of calves from each cow within a short period of time to achieve the genetic improvement of the herd at a faster rate than

through Artificial Insemination. This technology is also useful for conservation of indigenous breeds.

A cow may produce 5-10 calves in a period of 10 to 15 years through the artificial insemination breeding programme. An elite cow through hormonal treatment is made to produce 5 to 15 ova in one estrous cycle. By breeding this super ovulated cow with the semen of a superior bull, multiple embryos are produced. The embryos are then collected by non-surgical method, evaluated and transferred to the recipient cows. The embryos of the cow can also be frozen and stored for use subsequently. The frozen embryos can be thawed and transferred to recipient cows. Thus, up to 50 calves may be produced from one cow through the Embryo Transfer Technology (ETT) in a short period of 1-2 years. These recipient cows are diagnosed for pregnancy after 60 days. Pregnant recipient cows are given additional concentrate feed in the last trimester of pregnancy.

The bull calves born through this technology are purchased at the rate of Rs.5,000 per calf and the heifer calves are left with the farmers.

Under National Project for Cattle and Buffalo Breeding (NPCBB), the first phase of the programme has been implemented at a cost of Rs.50 lakh through the Department of Animal Husbandry, in coordination with the Tamil Nadu Veterinary and Animal Sciences

University and Tamil Nadu Milk Producers Co-operative Union with funding through TNLDA. This programme was carried out in District Livestock Farm, Hosur and in the districts of Coimbatore, Madurai, Vellore, Tiruvannamalai, Dharmapuri, Krishnagiri, Salem and Namakkal to produce bull calves of high genetic merit to meet the State's demand for bull for semen production. In the Phase I of the programme, 53 calves (28 bull calves and 25 heifer calves) were produced in the farm and field.

During the year 2013-14, the second phase of the programme has been initiated at an estimated cost of Rs.2.50 crore and has been extended to the districts of Erode and Karur, District Livestock Farms Abishegapatti, Chettinad and Exotic Cattle Breeding Farm, Eachenkottai. So far, equipment and drugs worth Rs.1.00 (one) crore has been purchased and the process of purchasing donor cows are in progress.

c. Strengthening of Artificial Insemination Network in the State by establishing New Mobile Artificial Insemination Centers

From 2003-04, till 2013-14, 1508 rural youth have been trained on Artificial Insemination technique by TNLDA. A total of 14.93 lakh Artificial Inseminations have been performed by these rural Artificial Insemination workers out of which 2.10 lakh Artificial Inseminations were performed during 2013-14. During

2013-14, 260 rural youth were trained to take up doorstep artificial insemination work. The training has just been completed.

d. Training Programmes

i. 10 Veterinary Assistant Surgeons of Department of Animal Husbandry and Tamil Nadu Cooperative Milk Producers' Federation has been given training on frozen semen production at the Central Frozen Semen Production and Training Institute, Hesserghetta.
ii. 80 veterinarians were sponsored to attend the International Dairy Value Chain addition seminar at Madras Veterinary College.
iii. 15 veterinarians were given training in Extension film making at Madras Veterinary College
iv. 72 Veterinarians have been trained in Cattle reproduction and assisted reproduction technologies
v. 260 Village level workers of Tamil Nadu Cooperative Milk Producers' Federation and Private Artificial Insemination workers trained by TNLDA have been given retraining on Artificial Insemination.

e. Progeny Testing Scheme (PTS)

Elite bulls possessing superior genetic traits are selected under this programme and the semen from

these bulls are used for breeding. Since the inception of the Scheme, 92 Jersey crossbred bulls have been progeny tested. During the current financial year, 20 crossbred Jersey bulls are in the sixth phase and 25 crossbred Jersey bulls are in the seventh phase of progeny testing. This Scheme is being implemented by the Tamil Nadu Cooperative Milk Producers' Federation with financial assistance from Tamil Nadu Livestock Development Agency.

f. Conservation of indigenous breeds:

Milk Recording in Kangeyam cattle: This programme is implemented by Tamil Nadu Cooperative Milk Producers' Federation with the financial assistance from the Tamil Nadu Livestock Development Agency. From the elite Kangeyam cows that are enrolled in the programme, high yielding cows selected are inseminated and the bull calves born to these cows are selected and reared for semen production in the semen stations. The programme is implemented in the milk unions of Coimbatore, Erode and Tiruchirapalli. Under the Scheme, 17 Kangeyam bull calves that were born, have been procured for District Livestock Farm, Hosur.

g. Infertility Camps

During 2013-14, funds have been released to organize 770 infertility camps through Department of Animal Husbandry and Tamil Nadu Co-operative Milk Producers' Federation Limited. During 2013-14, a total of 38377 animals of 26608 farmers have benefitted from these camps so far.

15.4 LIVESTOCK INSURANCE SCHEME

The Centrally Sponsored Livestock Insurance Scheme is being implemented by Tamil Nadu Livestock Development Agency. The scheme was formulated with the twin objective of providing protection mechanism to the cattle rearers in the event of loss of their animals due to death and to demonstrate the benefit of the insurance of livestock. Under the scheme 50% of the premium is provided as Government subsidy and balance 50% is collected from the farmers. The indigenous /crossbred / Exotic milch cattle and buffaloes are being insured at their current market price. The subsidy is given for a maximum of 2 animals per beneficiary and for a policy of one year / three years. The scheme is being implemented in Coimbatore, Cuddalore Dharmapuri, Dindigul, Erode, Krishnagiri, Madurai, Namakkal, Salem, Thanjavur, Tiruchirapalli,Tiruvannamalai, Tirunelveli, Vellore and Villupuram Districts. For the year 2013-14, a sum of Rs.12.00 crore has been released for insuring the

animals against the target of 1.86 lakh animals and till now 58,568 animals have been insured at a cost of Rs.4.76 crore and the balance animals will be covered during 2014-15.

During this year to create awareness about the insurance of the animals among the public and to attract more number of beneficiaries towards the scheme, pamphlets illustrating the importance of the scheme and folders which exemplify the various diseases affecting cattle and the significance of insurance of those animals are being distributed in the camps exhibitions etc., Banners are being placed where farmers assemble like District Collector's campus, Veterinary Dispensaries, Veterinary Hospitals, Clinician Centres, Polyclinics, Sub-centres, Co-operative milk societies, etc. A documentary film was produced illustrating the importance of Livestock Insurance scheme, which can be viewed during various camps like Kalnadai Padukappu Thittam, Mass contact programme, Infertility camp, UTRC camps, various exhibitions, etc., Besides these necessary steps have been taken to advertise the scheme through medias like radio, television, etc.

The Government of Tamil Nadu has announced a similar Scheme to cover cattle in 16 Districts that are not covered under the Government of India funded Livestock Insurance Scheme to be implemented during 2014-15. A sum of Rs.12 crore

required for implementation of the Scheme shall be sourced from the State Government's own funds. As per the Scheme, cattle in the 16 Districts will be insured at 50% subsidy. The Scheme shall be implemented following the guidelines of the Government of India Sponsored Scheme, which is already in vogue.

15.5 NATIONAL DAIRY PLAN- PHASE I

Strengthening of Semen production Station at District Livestock Farm, Udhagamandalam

National Dairy Plan has been formulated with the objective of increasing the milk production, introducing high genetic quality bulls and increasing the availability of frozen semen doses in the country to 10 crore doses by the year 2016-17.

It is estimated that the requirement of frozen semen doses in the State would be 100 lakh doses by the end of the 12th five year plan.

Towards contributing to the National goal and to meet the State's requirement the strengthening of the frozen semen production station at District Livestock Farm, Udhagamandalam has been taken up at a total cost of Rs.645.89 lakh over the period 2012-13 to 2017-18, with an objective of increasing the semen production from 13.34 lakh doses in 2011-12, to 30 lakh frozen semen doses by end of project which will

account for about 2.85% of total semen doses to be produced in the country in 2017-18.

A sum of Rs.114.20 lakh has been released as advance for the year 2013-14. Strengthening of quarantine shed, collection yard and young bull shed has been completed at a cost of Rs.23.71 lakh, Laboratory equipments like Frozen semen doses packing and counting machine, cold handling cabinet and farm machinery like tractors, has been procured at a cost of Rs.90.87 lakh and the farm personnel have been trained at a cost of Rs.0.40 lakh.

The semen production at the District Livestock Farm, Udhagamandlam has increased from 13.34 lakh in 2011-12 to 18.42 lakh in 2013-14, an increase of 37.66% over that of 2011-12.

The above increase in production would increase the availability of quality frozen semen doses for Artificial Insemination and increase the number of cattle covered under AI, better conception rate and increased calf birth.

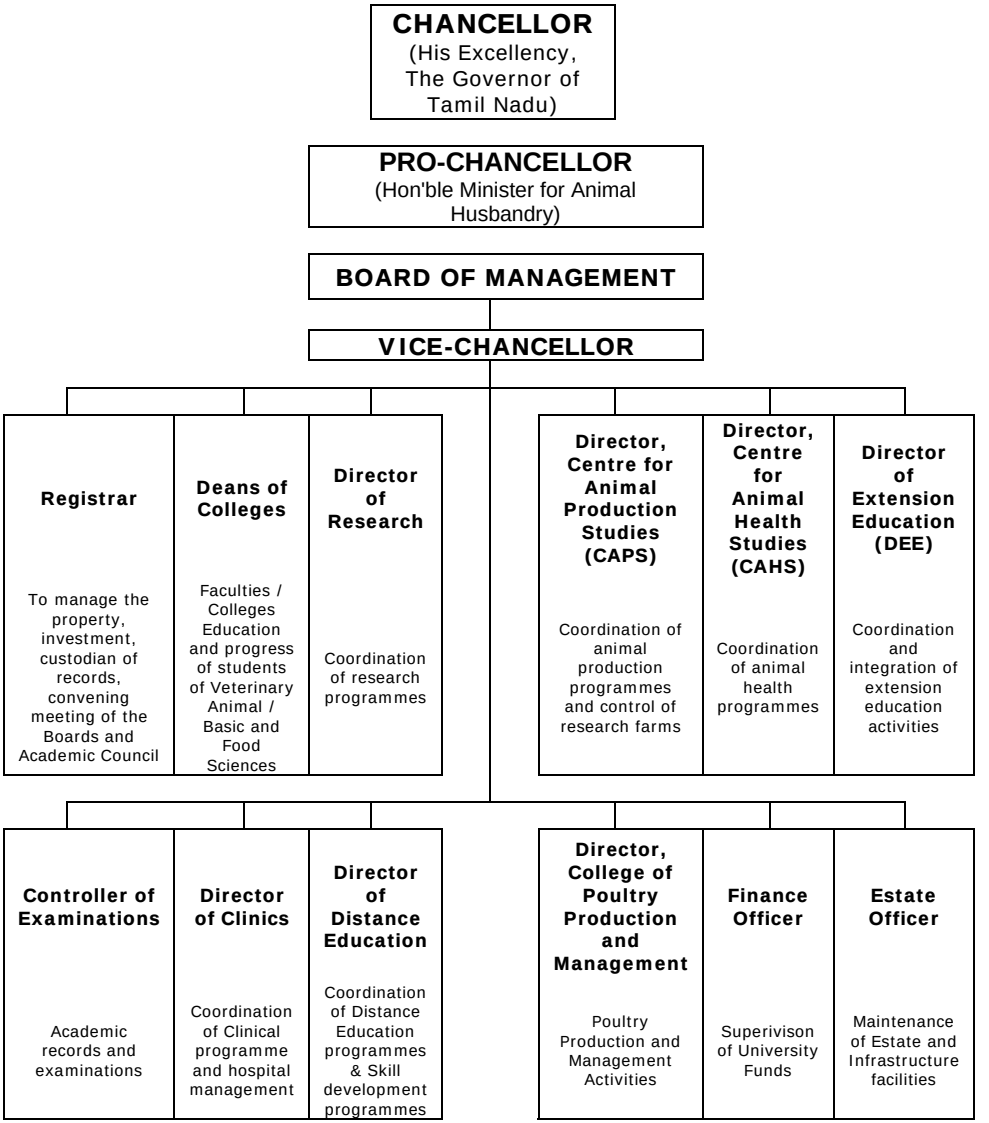
16. TAMIL NADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY

16.1 OBJECTIVES OF TANUVAS

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

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

16.2 ORGANOGRAM OF TANUVAS



16.3 UNITS OF TANUVAS

The following are the constituent units of Tamil Nadu Veterinary and Animal Sciences University.

Table 24: Constituent units of TANUVAS

- **COLLEGES** [To impart quality education to undergraduate, post-graduate and doctoral students in different fields of Veterinary and Animal Sciences and Food Science]

1. Madras Veterinary College (MVC), Vepery, Chennai
2. Veterinary College and Research Institute, Namakkal
3. Veterinary College and Research Institute, Orathanadu, Thanjavur
4. Veterinary College and Research Institute, Tirunelveli
5. College of Food and Dairy Technology, Koduvalli, Chennai
6. College of Poultry Production and Management, Hosur

- **CENTRES OF ADVANCED FACULTY TRAINING (CAFT)**[To provide training to the faculty members to update their skills on the latest technologies]

1. Veterinary Clinical Medicine, Ethics and Jurisprudence, MVC, Chennai
2. Poultry Science, VC&RI, Namakkal

- **CENTRE OF EXCELLENCE AND NICHE AREA OF EXCELLENCE** [To have state of art facilities and excelling in specific area of Veterinary and Animal Sciences]
  1. Animal Biotechnology and Immunology, Madras Veterinary College, Chennai
  2. ICAR Niche Area of Excellence in Animal Biotechnology, MVC, Chennai

a. **RESEARCH STATIONS** [To carry out research and supply germplasms to the farmers]

1. University Research Farm, Madhavaram Milk Colony (MMC), Chennai
2. Post Graduate Research Institute in Animal Sciences, Kattupakkam, Kancheepuram District
3. Poultry Research Station, MMC, Chennai
4. Mecheri Sheep Research Station, Pottaneri, Salem District
5. Sheep Breeding Research Station, Sandynallah, The Nilgiris District
6. Institute of Animal Nutrition, Kattupakkam, Kancheepuram District
7. TANUVAS Regional Research Centre, Pudukottai

a. **LABORATORIES / UNITS** [To assist in diagnosis and surveillance of diseases, and development of vaccines and biologicals]

1. Central University Laboratory, MMC, Chennai
2. Animal Feed Analytical and Quality Assurance Laboratory, Namakkal
3. Poultry Disease Diagnosis and Surveillance Laboratory, Namakkal
4. Pharmacovigilance Laboratory for Animal Feed and Food Safety, Chennai
5. Zoonoses Research Laboratory, MMC, Chennai
6. Bacterial Vaccine Research Centre, MMC, Chennai
7. Viral Vaccine Research Centre, MMC, Chennai
8. Avian Disease Laboratory, Thalaivasal, Salem
9. Central Feed Technology Unit, Kattupakkam, Kancheepuram

a. **VETERINARY UNIVERSITY TRAINING AND RESEARCH CENTRES**

[To disseminate knowledge on important technologies to line departments and farming community]

1. Coimbatore
2. Dindigul
3. Karur
4. Melmaruvathur
5. Cuddalore
6. Salem
7. Tiruppur
8. Tiruchirapalli
9. Dharmapuri
10. Erode

11. Madurai	17. Villupuram
12. Nagarcoil	18. Krishnagiri
13. Rajapalayam	19. Ramanathapuram
14. Thanjavur	20. Nagapattinam
15. Vellore	21. Perambalur
16. Tiruvannamalai	

- **FARMERS TRAINING CENTRES**

[To provide need based training to the farming community]

1. Kancheepuram 2. Theni 3. Thiruvarur

- **KRISHI VIGYAN KENDRAS**

[To disseminate knowledge on important technologies in Animal Husbandry, Agriculture and Horticulture to the farming community]

1. Kattupakkam 2. Kundrakudi
3. Namakkal

Important Activities undertaken during 2011-12, 2012-13 and 2013-14

2011-12

- Two new Veterinary College and Research Institutes at Orathanadu and Tirunelveli were established with student admission strength of 40 per college
- B.Tech in Poultry Production Technology was started. Five PG Diploma courses and Six PG diploma online courses were started to update the skills of the field veterinarians.

- Sixteen new technologies developed by TANUVAS were released by His Excellency the Governor of Tamil Nadu and Chancellor of the University, on 12.12.2011.
- With the financial support (Rs.22.94 crore) from Department of Biotechnology, New Delhi, TANUVAS established “Translational Research Platform for Veterinary Biologicals.”
- In order to have a Certification Laboratory for export purpose, Agricultural and Processed Food Products Export Development Authority (APEDA), New Delhi sanctioned two schemes to strengthen laboratories viz. Animal Feed Analytical and Quality Assurance Laboratory, Namakkal at a cost of Rs.436.23 lakh and Pharmacovigilance Laboratory for Animal Feed and Food Safety, Chennai at a cost of Rs.555.50 lakh.
- TANUVAS organised the first "Regional Livestock Exhibition" at Srirangam in Tiruchirappalli district from 24 – 26th February 2012.

2012-13

- TANUVAS established new Veterinary University Training and Research Centres at Tiruvannamalai, Krishnagiri and Villupuram at a cost of Rs.2.4 crore
- The B.V.Sc. & A.H. student admission strength was increased from 226 to 260

- Three more PG diploma online courses viz. Regenerative Medicine, Zoonoses and Small Animal Diagnostic Ultrasound were started with a student intake of 10 per course
- TANUVAS started Polytechnic courses in Animal Sciences.
- TANUVAS was conferred with the prestigious "Sardar Patel Outstanding ICAR Institution Award 2011" for its meritorious performance in education, research and extension in the country in the field of Agricultural Sciences including Veterinary and Animal Sciences and Fisheries Sciences by the Indian Council of Agricultural Research, New Delhi.
- TANUVAS completed the development of e-courses for B.V.Sc. & A.H. degree programme. The e-contents facilitate "any time – anywhere learning", the first of its kind in veterinary education in India
- TANUVAS organized the 2nd and 3rd "Regional Livestock Exhibitions" at Tirunelveli and Coimbatore respectively.

2013-14

- The Hon'ble Chief Minister of Tamil Nadu had announced the establishment of "Stem Cell Research Centre for Animals", the first of its kind in the country on 19.06.2013 with a budget

outlay of Rs.6.48 crore. The centre has started functioning.

- Stipend for the internship programme for B.V.Sc & AH students was increased from Rs.3,000 to Rs. 4,000 per month.
- To meet the demand for skilled manpower in the area of food processing technology, Government of Tamil Nadu has accorded sanction for 22 technical posts with a financial commitment of Rs.161.11 lakh and 17 non-technical posts with a budget of Rs.41.18 lakh to the College of Food and Dairy Technology, Koduvalli.
- Established three more new Veterinary University Training and Research Centres at Perambalur, Nagapattinam and Ramanathapuram at a cost of Rs.2.70 crore.
- Government of Tamil Nadu sanctioned a sum of Rs.1.50 crore for the construction of permanent buildings for the three University training centres viz. 1. Farmers Training Centre, Theni 2. Veterinary University Training and Research Centre, Rajapalayam and 3. Veterinary University Training and Research Centre, Tiruchirappalli. A total of 177 on and off campus training programmes were conducted in these centres benefitting 7985 farmers.
- Government of Tamil Nadu sanctioned a sum of Rs.1.85 crore to establish Veterinary University Disease Diagnostic Laboratories at Orathanadu

(Thanjavur) and Tirunelveli and the works have been initiated.

- Under Centrally sponsored Feed and Fodder Development Scheme, a sum of Rs.154 lakh (50:50 - Government of India and Government of Tamil Nadu) has been allocated for strengthening of two Feed Testing Laboratories.
- Hon'ble Minister for Animal Husbandry, Government of Tamil Nadu inaugurated the Fourth "Regional Livestock and Fisheries Exhibitions" on 20.04.2013, organized by the University at Villupuram.
- Ten new PG diploma courses viz. Bovine infertility and its management; Acaro entomology; Post Harvest Technology and Quality Assurance of Meat and Meat Products; Dairy Processing and Quality Assurance; Advanced Reproductive Biotechnology in Animal Models; Veterinary Clinical Laboratory Diagnosis; Bovine Production Diseases; Veterinary Endoscopy; Participatory Rural Appraisal and Wild Animal Disease Management for Veterinary graduates are offered from this year. A total of 38 students were enrolled in the PG diploma courses.
- The Government of Tamil Nadu has sanctioned the following schemes at a cost of Rs.215 lakh under Part II Schemes:

- Establishment of poultry hatchery for supplying indigenous / improved germplasm to small scale rural poultry farming at a cost of Rs.35 lakh
- Establishment of elite Murrah buffalo bull mother farm unit at Veterinary College and Research Institute, Orathanadu at a cost of Rs.30 lakh
- Revitalising the health of milch cows provided under the Hon'ble Chief Minister's "Free Distribution of Milch Cows" Scheme using SMART mineral mixture at a cost of Rs.150 lakh

- To motivate young faculty members in active research, TANUVAS had created TANUVAS Research Corpus Fund (TRCF) during 2012. During 2012-13, 30 projects have been sanctioned under TRCF to the tune of Rs.72.86 lakh.
- Publication of research papers is one of the important performance indicators for any University. To motivate the faculty members to publish research findings and to increase the number of publications of TANUVAS, the month of “October” is being observed as “TANUVAS Publication Drive Month” since 2012-13. During 2012-13, 261 articles were submitted for publication in national journals and 103 articles in international journals. During 2013-14, the

number of publications submitted were 265 and 123 respectively.

- TANUVAS is celebrating its Silver Jubilee year from 20.09.2013.
- A total of 46 RTI applications were received by the University and all the 46 applications were provided with appropriate responses during 2013-14.
- A total of 77 petitions were received from the Hon'ble Chief Minister's grievance redressal cell and replies have been provided for all 77 petitions, thus ensuring 100% compliance.

16.4 DETAILED ACTIVITIES OF TANUVAS DURING 2013-14

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

16.4.1 Education

Details of sanctioned students' admission strength for the year 2013-2014 at TANUVAS are furnished below:-

Table 25: Students admission strength

Courses	MVC, Chennai	VC&RI, Namakkal	PGRIAS, Kattupakkam	VC&RI, Orathanadu, Thanjavur	VC&RI, Tirunelveli	CFDT, Koduvalli	Total
B.V.Sc. & AH - Veterinary Science	118	78	-	40	40	-	**276**
B.V.Sc. & AH (NRI-2 ; Foreign Nationals – 5)	7	-	-	-	-	-	**7**
B.Tech. (Food Processing Technology)	-	-	-	-	-	20	**20**
B.Tech. (Poultry Production Technology)	-	-	-	-	-	20	**20**
M.V.Sc	82					-	**82**
M.V.Sc. (Foreign Nationals)	4			-	-	-	**4**
M.Tech (FPT)	-	-	-	-	-	5	**5**
M.Sc. (Bioinformatics)	1	-	-	-	-	-	**1**
M.Sc.(Biostatistics)	-	-	-	-	-	-	**-**
M.Phil in Biotechnology	1	-	-	-	-	-	**1**
M.Phil in Climate change and Fisheries	-	-	-	-	-	-	**-**
PG Diploma (Animal Sciences)	30	-	-	-	-	-	**30**
Ph.D. (Veterinary)	35			-	-	-	**35**
Ph.D. (Food Technology)	-	-	-	-	-	2	**2**

* **MVC - Madras Veterinary College**
VC&RI - Veterinary College and Research Institute
PGRIAS – Post Graduate Research Institute in Animal Sciences
CFDT - College of Food and Dairy Technology

Convocation

The 16th convocation of TANUVAS was held on 10.09.2013 at Madras Veterinary College, Chennai and His Excellency, The Governor of Tamil Nadu and Chancellor of the University presided over the function and conferred degrees to 246 candidates and awarded the prizes and medals to the meritorious candidates. The Honourable Minister for Animal Husbandry and Pro-chancellor of the University graced the occasion.

16.4.2. Research Achievements

ANIMAL HEALTH

Evaluation of R–Mutant *E. coli* vaccine against coliform mastitis

Escherichia coli isolate No.38 isolated from mastitis milk and maintained at Department of Veterinary Microbiology was used for vaccine preparation against coliform mastitis. This vaccine was effective not only in controlling clinical coliform mastitis but also mastitis caused by other gram-negative bacteria. After completion of field trials, the vaccine can be used for mass vaccination.

ANIMAL PRODUCTION

Enhancing utilization of nutrients in feed/fodder through TANUVAS GRAND (Gruel Rooted Additive Nourishment Drops) supplement –A Pilot project

Based on the study, it was found that TANUVAS GRAND (Gruel Rooted Additive Nourishment Drops) supplement increases milk yield ranging from 500 ml to 1500 ml with an average of 736 ml per cow per day leading to daily profit of Rs.13.50/cow. Maximum response to increase in milk yield was observed in cereal based diet.

Government of Tamil Nadu also sanctioned a sum of Rs.150 lakh towards implementation of the Scheme on “Revitalising health of free milch cows through SMART (Specific Mineral Array for Regions of Tamil Nadu) mineral mixture” under Part II Scheme under which 24,000 beneficiaries of the Free Distribution of Milch Cows scheme are being supplied with SMART mineral mixture of TANUVAS.

Development of low fat probiotic ice cream using starch and fruits

It was found that ice cream mix containing 2 per cent fat, 5 per cent starch (either tapioca starch or maltodextrin) incorporated with 4 per cent *L.reuteri* and 10 per cent fruit pulp (either mango or sapodilla)

is the ideal choice for the production of low fat probiotic ice cream, based on the overall high acceptability scores, low calorific value, low cost of production, no adverse taste or mouth feel and the better survivability of *L.reuteri*.

TECHNOLOGIES DEVELOPED

Products and technologies / Diagnostic kits developed at TANUVAS are listed below:

Products and technologies developed

Impregnated intra vaginal sponge; Kit for quantification of nitrate in water and forages; Modified technique for Broncho Alveolar Lavage (BAL) fluid collection through endoscopy in animals; Natural Colour and Flavour Concentrate

Diagnostic Kits

Muliplex PCR Kit for detection of Avian Oncogenic viruses; TANUVAS Lateral flow kit for the serodiagnosis of bovine brucellosis

Technologies released

The following 21 technologies developed at TANUVAS were released by the Hon'ble Minister for Animal Husbandry during the "Kalnadai matrum Meen Vala Vaara Vizha - 2013" celebrated by TANUVAS at

Post Graduate Research Institute in Animal Sciences, Kattupakkam on 19.01.2013.

- To improve animal production, the following new strains / varieties have been developed

  - Nandanam Chicken-4 : High yielding strain under backyard poultry
  - Nandanam Broiler Breeder quail : Higher body weight and production of more number of chicks
  - Namakkal Gold Quail : Egg type quail
  - Low fat cross bred pig : a new strain for productivity enhancement : low back fat
  - Dorset x Nilagiri Synthetic sheep : better meat quality

- To improve milk production, the following technologies have been developed

  - TANUVAS GRAND supplement : improves milk production under rice-gruel feeding system
  - TANUVAS SMART Mineral Mixture : region based mineral mixture to cut cost
  - Fodder seed Bank models for rain-fed condition : profitable farming business
  - Enriching and ensiling sugarcane tops : converting waste to wealth

❋ To improve animal / fish health, the following vaccines / diagnostics / technologies have been developed

- TANUVAS Infectious bronchitis vaccine for poultry : to protect against field strains
- Biofilm vaccine for Pasturellosis in sheep and goats : better potency
- Antibacterial, antineoplastic pigment : to treat bacterial infections
- Follicular wave synchronization for augmenting fertility in dairy cattle: to treat infertility
- Hind quarter elevator in a movable trolley for bovines : to treat sick animals
- Emu sexing kit : to differentiate male and female
- Assay for the detection of chloramphenicol residue in shrimp : to supply antibiotic residue free shrimp

❋ For value addition of milk, meat and fish, the following technologies have been developed

- Carotene enriched milk beverage
- TANUVAS Pet treat
- Fish macroni
- Value added fish fingers
- Hot filled, chilled fish curry

16.4.3 Clinical Services

TANUVAS is offering clinical services to the pet and livestock owners for 24 hours. The details are furnished below:

Table 26: Out-patient cases treated during the year 2013

Description	MVC		VUPH	VC&RI	Total
	Clinics	RVSS	Madhavaram	Clinics	
Bovines	9233	514	1180	9252	20179
Canine	62902	4194	14239	10265	91600
Feline	3391	390	249	283	4313
Equine	1696	41	14	386	2137
Caprine/ Ovine	3526	639	820	2706	7691
Avian	4878	0	976	131	5985
Others	616	62	101	200	979
Total	**86242**	**5840**	**17579**	**23223**	**132884**

Inpatient facilities

- A total of 300 large and 87 small animals were admitted and treated as in-patients for various ailments at Madras Veterinary College Teaching Hospital, Vepery.
- A total of 2,406 large animals and 66 small animals were admitted and treated as in-patients at Veterinary College and Research Institute, Namakkal.

- A separate quarantine unit to house animals suspected for rabies is functioning in both the institutions

Infrastructure facilities available

1. Doppler Blood Pressure apparatus
2. Digital phonocardiograph
3. Endoscopic image documenting system
4. Arthroscopy
5. Large and small Animal Anaesthetic machine

Laboratory services

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

This laboratory is involved in analysis of mycotoxins, pesticide and drug residues in animal feed and food. During 2013-14, 2,733 samples were analysed for mycotoxins and pesticide residues. The results are used for providing advisories to livestock farmers.

Animal Feed Analytical and Quality Assurance Laboratory, Namakkal

During 2013-14, 15,847 samples were tested and 38,352 analyses were carried out at this laboratory. Bi-weekly weather bulletins totalling 103

were issued in Namakkal, Salem, Dharmapuri and Krishnagiri Districts for the benefit of poultry and agricultural farmers.

Zoonoses Research Laboratory, Madhavaram Milk Colony, Chennai

A total of 4,470 human serum samples and 791 animal serum samples from suspected cases were screened by MAT for detection of leptospiral antibody. Out of 4,470 human samples tested, 1,844 (41.25%) were found positive. Out of 791 animal samples tested, 377 (47.66%) were found positive. The findings help in controlling the disease.

16.4.4 Extension Activities

The Directorate of Extension Education is functioning with the objective of planning and execution of all outreach programmes of the University in close coordination with other line departments / agencies such as the Department of Animal Husbandry, Tamil Nadu Co-operative Milk Producers' Federation Ltd., Tamil Nadu Livestock Development Agency and other Government organizations. The activities undertaken by the Directorate of Extension Education are furnished below.

Table 27: Training Programmes Conducted during 2013

Title of the Training Programme	No. of Training Programmes		Beneficiaries				
			SC/ST		Others		Total
	On cam pus	Off cam pus	Men	Women	Men	Women	
Dairy farming	71	172	646	2924	1908	4398	9876
Sheep & Goat farming	95	1012	1683	26885	5564	33995	68127
Poultry Farming	73	20	423	427	2062	2111	5023
Turkey Farming	11	4	111	125	299	113	648
Broiler farming	18	10	218	111	704	121	1154
Japanese Quail farming	20	9	112	75	369	96	652
Pig farming	14	1	35	2	228	10	275
Rabbit farming	10	2	42	185	175	42	444
Milk and Milk products	20	24	139	244	1059	873	2315
Meat and Meat products	22	4	17	166	144	265	592
Home Science	24	32	282	616	534	1168	2600
Horticulture	39	42	447	315	1720	1335	3817
Integrated livestock farming	8	9	104	153	312	205	774
Agricultural Engineering	27	47	139	207	2255	1875	4476
Feed and Fodder Cultivation	21	92	604	402	6280	1226	8512
Disease diagnosis and Management	15	18	210	282	854	352	1698
Breeding problems & its management in crossbreds	13	5	129	61	163	60	413
Ethno Veterinary medicine	18	42	50	710	994	1457	3211
Total	519	1546	5402	33902	25653	49720	114677

- During 2012-13, training on scientific rearing of animals were offered through peripheral centres of TANUVAS, to a total of 17,005 farmers including the beneficiaries of Hon'ble Chief Minister's programmes on "Free distribution of milch cows to the poor family in rural areas" and "Free distribution of goats/sheep to the poor family in rural areas".
- TANUVAS is observing Pongal festival season as "*Kalnadai matrum Meen Vala Vara Vizha*" in all its constituent units by organising a free livestock and pet animal health care campaign**,** seminar on food processing, training on scientific rearing of animals, fodder cultivation and preparation of value addition.

16.4.5 Skill Development programmes

A separate Directorate has been established in 2012 to coordinate the distance education programmes to undertake skill development courses. During 2013-14, 10 new PG diploma courses have been started to refresh the skills of the veterinarians in the latest advancements in veterinary practice. This Directorate is offering 21 PG diploma courses for the Veterinarians to update their skills on latest technologies. Apart from these, 18 skill development courses and 13 self-employment courses on various animal husbandry practices are being offered by this Directorate to boost livestock and poultry production.

During 2013-14, 47, 107 and 195 persons were enrolled for PG diploma, Skill development and Self-employment courses respectively.

16.5 NATIONAL AND INTERNATIONAL COLLABORATION

To promote national and international collaboration in academic, research and extension, TANUVAS has signed Memorandum of Understanding / Memorandum of Agreement with the following institutions during 2013:

- Virginia Polytechnic Institute and State University (Virginia Tech) to facilitate dual doctoral degree programme of both institutions.
- Wakeforest University Health Sciences, North Carolina in connection with research collaboration in the area of Regenerative Medicine.
- Entrepreneurship Development Institute, Chennai to promote and popularize entrepreneurial spirit among the youth of Tamil Nadu.
- Academic collaboration with National Institute of Animal Welfare, Haryana.
- Academic collaboration with National Research Centre on Meats, Hyderabad.
- Universitat Autonoma De Barcelona, Spain to have Academic, training, research and cultural collaboration in the field of Laboratory Animal Science and Medicine.

- School of Medicine, Loma Linda University, Loma Linda, California, USA for exchange of faculty and students.
- University of Glasgow, Scotland, UK to develop academic and research collaboration.

16.6 PRIORITIES FOR 2014-2015

1. Self sufficiency in fodder through "Meikkal Poramboke" lands

To make Tamil Nadu a self sufficient State in fodder, TANUVAS is planned to utilize "Meikkal Poramboke" lands in Tamil Nadu for cultivation of fodder with an outlay of Rs. 5.00 crore.

2. Conservation of Bargur cattle

To uplift the people of Bargur hills and also to conserve Bargur cattle from extinction, it is proposed to establish Bargur Cattle Research Station with a budget outlay of Rs. 6 crore at Bargur, Erode district.

3. Fodder Research Centre

Aiming to make Tamil Nadu a self sufficient State in feed and fodder, TANUVAS is planning to establish Fodder Research Centre at Hosur with a budget outlay of Rs.6 crore.

4. New Training and Research Centres

At present, the extension centres of TANUVAS viz. Veterinary University Training and Research Centres, Farmers Training Centres, Krishi Vigyan Kendras are functioning in 26 districts of Tamil Nadu. It is aimed to establish the extension outlets in three more districts of Tamil Nadu with a budget outlay of Rs.2.96 crore.

5. Diagnostic imaging facility

Establishing a “Diagnostic imaging facility” at Madras Veterinary College, Chennai for better management of surgical conditions in animals with a budget outlay of Rs.5 crore.

6. Regional Livestock Exhibition

“Regional Livestock Exhibitions” will be organized at Salem, Vellore and Madurai.

7. Skill development programmes

TANUVAS is planning to offer Diploma Programmes in Feed Technology, Hatchery Management, Milk Processing and Meat Processing by starting “Community College in Livestock and Poultry Farming”. It also plans to offer skill development programmes in livestock and poultry farming to 5000 personnel covering all districts of Tamil Nadu under

public private partnership mode. It is also planning to start a “Centre for Skill Development”.

8. Animal Bio-safety level 3 (ABSL III) – Large Animal Experimentation Facility

TANUVAS is planning to establish an “Animal Bio-safety level 3 (ABSL III) – Large Animal Experimentation Facility” at a budget outlay of Rs.4 crore to develop and test vaccines against virulent diseases affecting livestock such as Foot and Mouth disease, brucellosis, tuberculosis etc.

9. Thrust areas of TANUVAS for the next two years

- Nanotechnology
- Conservation and improvement of Native Germplasm
- Food processing
- Development of improved diagnostics and vaccines

17. BUDGET FOR 2014-15

A sum of Rs.1069.2451crore has been provided in the Budget for 2014-15. Out of this, projected revenue expenditure is Rs.1014.4373 crore, capital expenditure is Rs.54.8077 crore and loan amount is Rs.1000.

18. CONCLUSION

Under the visionary leadership and guidance of the Hon'ble Chief Minister, the Animal Husbandry Sector, has been provided the required impetus for improving the rural incomes. The Women centric welfare programmes that were launched during 2011-12 have started yielding the desired results, thus paving the way for rural development and increase in rural economy. The assetsless rural poor woman who was confined to poverty and misery have now been empowered and has become an asset owning livestock farmer, with the ability to contribute to rural prosperity. The schemes have not only ushered in a radiant second white revolution as envisaged by the Hon'ble Chief Minister but has also addressed the issue of food and nutritional security among the rural poor.

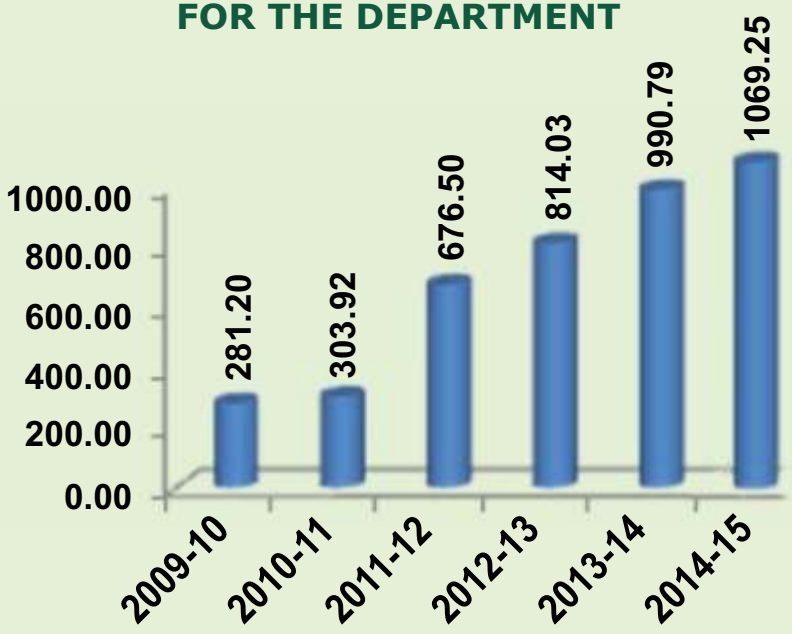
With the continued implementation of welfare schemes, more and more women belonging to the weaker sections of the society are baled out of poverty, thus ensuring equitable growth and development. Schemes like 'Scheme for poultry development' have created entrepreneurs in rural areas. This foresighted implementation of developmental schemes in Animal Husbandry Sector has enabled to increase the per capita income of rural households in backward Districts.

The importance given by this Government to this primary sector based activity is transforming the rural landscape.

With the thrust given to this sector, Tamil Nadu is marching ahead towards realising the goals as envisaged in the vision 2023 document of the Hon'ble Chief Minister and will be the 'numero uno' State in this sector.

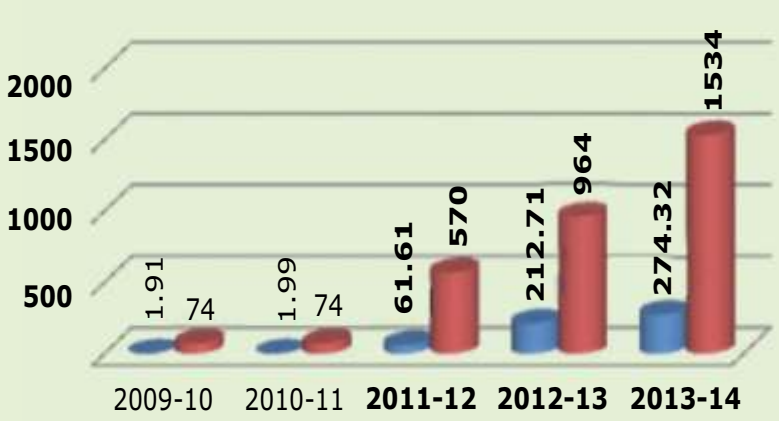
T.K.M. CHINNAYYA
Minister for Animal Husbandry

BUDGET ALLOCATION FOR THE DEPARTMENT



Year	Allocation (Rs. in cr)
2009-10	281.20
2010-11	303.92
2011-12	676.50
2012-13	814.03
2013-14	990.79
2014-15	1069.25

ALLOCATION FOR INFRASTRUCTURE IMPROVEMENT



Year	Allocation (Rs. in cr)	No. of works
2009-10	1.91	74
2010-11	1.99	74
2011-12	**61.61**	**570**
2012-13	**212.71**	**964**
2013-14	**274.32**	**1534**

ALLOCATION FOR FODDER DEVELOPMENT

YEAR	FUNDS ALLOCATED (Rupees in Crore)
2009-10	5.26
2010-11	0.81
2011-12	36.64
2012-13	42.27
2013-14	47.40

HON'BLE CHIEF MINISTER OF TAMIL NADU PRESENTING THE BEST PRACTICES AWARD TO THE DIRECTORATE OF ANIMAL HUSBANDRY AND VETERINARY SERVICES FOR SUCCESSFULLY IMPLEMENTING THE FREE DISTRIBUTION OF MILCH COWS AND FREE DISTRIBUTION OF GOATS/ SHEEP SCHEMES, DURING INDEPENDENCE DAY CELEBRATIONS HELD AT FORT. ST. GEORGE, ON 15.08.2013. THE RECIPIENTS ARE THIRU.T.K.M. CHINNAYYA, HON'BLE MINISTER FOR ANIMAL HUSBANDRY, DR.S. VIJAYAKUMAR, I.A.S, SECRETARY TO GOVERNMENT, ANIMAL HUSBANDRY, DAIRYING AND FISHERIES DEPARTMENT AND DR.R. PALANISAMY, I.A.S, DIRECTOR OF ANIMAL HUSBANDRY AND VETERINARY SERVICES.

HON'BLE CHIEF MINISTER DISTRIBUTED FREE MILCH COW TO A BENEFICIARY UNDER "FREE DISTRIBUTION OF MILCH COW SCHEME" ON 30.06.2014 AT SRIRANGAM, TIRUCHIRAPALLI.

HON'BLE CHIEF MINISTER DISTRIBUTED FREE GOATS TO A BENEFICIARY UNDER "FREE DISTRIBUTION OF GOATS/ SHEEP SCHEME" ON 30.06.2014 AT SRIRANGAM, TIRUCHIRAPALLI.

HON'BLE CHIEF MINISTER DISTRIBUTED NATIVE CHICKS TO A BENEFICIARY UNDER "POULTRY DEVELOPMENT SCHEME" ON 30.06.2014 AT SRIRANGAM, TIRUCHIRAPALLI.

NATIVE CHICKEN FARM UNDER "SCHEME FOR POULTRY DEVELOPMENT".

HON'BLE CHIEF MINISTER INAUGURATED 91 NEW BUILDINGS CONSTRUCTED THROUGH NABARD, NADP, ESVHD ON 27.06.2014 THROUGH VIDEO CONFERENCING.

ADIU, VIRUDHUNAGAR BUILT UNDER NABARD RIDF.

IMPROVED INFRASTRUCTURE IN A VETERINARY DISPENSARY.

VETERINARY DISPENSARY, KEERIPATTI VILLAGE SALEM DISTRICT.

FODDER DEVELOPMENT USING RAINGUN.

GREEN FODDER DISTRIBUTION THROUGH
MILK PRODUCER'S CO-OPERATIVE SOCIETY.

DRY FODDER DEPOT IN USILAMPATTY, MADURAI DISTRICT.

DISTRIBUTION OF FODDER SEEDS UNDER DROUGHT MITIGATION.

SKILL DEVELOPMENT TRAINING ON MEAT AND MEAT PRODUCTS AT VETERINARY UNIVERSITY TRAINING AND RESEARCH CENTER, COIMBATORE.

TANUVAS MINERAL MIXTURE FOR CATTLE.

TRAINING ON BACKYARD POULTRY REARING FOR SCHEDULED TRIBES AT PULIYANGUDI, TIRUNELVELI DISTRICT.

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