



**ANIMAL HUSBANDRY, DAIRYING &
FISHERIES DEPARTMENT**

ANIMAL HUSBANDRY

POLICY NOTE

2012-2013

DEMAND NO.6

**T.K.M. CHINNAIAH,
MINISTER FOR ANIMAL HUSBANDRY**

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I N D E X

Content	Page No.
<i>Animal Husbandry Department</i>	
Introduction	1
Aims of the Department	4
Chronological Development of the Department	5
Livestock and Poultry Population	6
Administration	8
Veterinary Services	12
Livestock Development	26
Special Schemes	54
Extension services	86
Veterinary Public Health	87
Animal Welfare Measures	89
Jallikattu	90
<i>Tamil Nadu Livestock Development Agency</i>	91
<i>Tamil Nadu Veterinary and Animal Sciences University</i>	100
Budget 2012-13	133
Conclusion	133

ANIMAL HUSBANDRY DEPARTMENT POLICY NOTE 2012-13

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

- **Mahatma Gandhi**

1. INTRODUCTION

Animal Husbandry and Agriculture are the twin occupations, which from time memorial have played a significant role in improving the rural economy. Livestock sector is directly linked to the livelihoods of more than 70% of rural households. Cattle wealth is still considered as an index of wealth among rural community.

Livestock rearing provides meaningful occupation both full time and subsidiary at the location itself and provides assured income and ensures better utilization of human resources. It provides employment especially self employment to a substantial number of rural and urban population, many of whom are women who play a major role in the care and management of livestock. Moreover, they provide the much needed balanced nutritious animal protein in the form of milk, meat and egg

and improve the house hold's food security and also contribute in improving the national nutritional standards.

Apart from that, livestock also provides raw materials in the form of blood, bones, offal, skin, hide, hoof, horns, bristles and hair to many non-farm industries like pharmaceutical, leather and by-products industry. Bullocks that are mainly used for draught power also provide bio-friendly organic manure and boost soil fertility. Animal Husbandry will be a lucrative occupation for alleviating poverty, unemployment and rural transformation besides reducing the migration of human population to urban areas from rural areas.

The Animal Husbandry Department of Tamil Nadu has been engaging itself on all the Livestock development and health cover activities, positively influencing the economy of the poor and downtrodden who are dependants on livestock rearing for their livelihood.

Various veterinary institutions spread over the State provide these services and play a major role in increasing the production potentialities of the livestock and poultry in the State. Upgradation of local stock of cattle and buffaloes by Artificial Insemination using exotic and cross bred frozen

semen straws through 3,359 Artificial Insemination Centres is being undertaken effectively to increase the cross bred population and decrease in unproductive animals in the State. This has resulted in decline in the total non-descript cattle population, but the milk production is steadily rising mainly due to the improved and superior germ plasm. Apart from this, various beneficiary oriented schemes are also being implemented to supplement the income of rural people.

Due to successful implementation of various welfare measures by the department, the estimated milk production, which was 49.90 lakh Metric Tonnes during 2001-02 in Tamil Nadu has increased to 68.34 lakh Metric Tonnes during the beginning of 2011-12. Likewise the estimated egg production, which was 4,223 million numbers during 2001-02 has increased to over 11,514 million numbers during 2011-12. The per capita availability of milk per day has increased from 219 gm during 2001-02 to 279 gm during 2011-12. During the same period the per capita availability of eggs per annum has gone up from 68 numbers to 171 numbers.

During 2010-11, the Gross Value of Output of Livestock in the State is Rs. 22,017.59 crores (at current prices). Livestock sector contributes about

2.58% of Tamil Nadu's Gross State Domestic Product (GSDP) and that to the agriculture and allied activities is 24.80%.

Tamil Nadu contributes 18.27% of egg, 8.78% of meat and 5.61% of milk production and stands 2nd in egg and 5th in meat, 8th in milk production in the country. Thus, the efforts of the department have contributed substantially for the economic improvement of the State as well as our country.

2. AIMS OF THE DEPARTMENT

- Upgradation of local stock of cattle and buffaloes by Artificial Insemination using exotic and cross bred frozen semen straws.
- Augmenting the production potentialities of livestock and poultry and thus increasing the production of milk, egg, meat and wool.
- Providing necessary and timely modern veterinary assistance and health cover to the livestock and poultry.
- Implementing various schemes of Central and State Government for the upliftment of economic status of rural poor.
- Protecting human health by preventing major zoonotic diseases of animals.

- Conducting training courses on basic and latest animal husbandry practices for farmers and officials.

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 was introduced in the State by using Liquid Semen.
- 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 started.
- 1981** Establishment of Poultry Disease Diagnostic Lab at Erode.
- Formation of Directorate of Veterinary Services.
- 2003** Formation of Tamil Nadu Livestock Development Agency under the National Project on Cattle and Buffalo Breeding.
- 2011-12**
- **Implementation of Hon'ble Chief Minister's Special Schemes for free distribution of Milch Cows and Goats & Sheep to women headed poor families.**
 - **State Fodder Development Scheme launched to promote Fodder Production in a massive manner.**
 - **585 Sub-centres upgraded into Rural Veterinary Dispensaries.**
 - **The number of Animal Husbandry Divisions has been increased from 65 to 76 to match the number of Revenue Divisions.**

4. LIVESTOCK AND POULTRY POPULATION

As per the 18th Livestock Census, the distribution of livestock and poultry population in the State is as follows:

Table 1: Distribution of Livestock and Poultry
(in lakh Nos.)

Species	18 th Census	Percentage to Total
Cattle	111.89	36.38
Buffalo	20.09	6.53
Sheep	79.91	25.98
Goat	92.75	30.15
Horses and Ponies	0.06	0.02
Donkeys	0.05	0.01
Pigs	2.84	0.93
Total Livestock	307.59	100
Backyard Poultry	268.80	20.98
Farm Poultry	1,012.28	79.02
Total Poultry	1,281.08	100

The total livestock population of the State is 307.59 lakhs, accounting to 5.81% of the country's livestock population of 5,296.98 lakhs.

The cattle population of 111.89 lakhs accounts for 36.38% of total livestock (307.59 lakhs) in the State. Cattle comprises 84.78% of the total bovines (131.98 lakhs) reared in the State.

The exotic, crossbred, native pure, non-descriptive and other graded cattle account for 3.03%, 62.95%, 6.44%, 25.20%, and 2.38% respectively to the total cattle population.

Buffalo comprises 15.22% of the total bovine population and 6.53% of the total livestock in the State.

The Murrah, Toda, Other Graded and Non-descriptive buffalo accounts for 12.28%, 2.51%, 23.60% and 61.61% respectively to the total buffalo population of 20.09 lakhs.

The total sheep and goat population of the State is 172.66 lakhs, accounting for 46% sheep and 54% goats.

The total sheep and goat population accounts for 56.13% of total livestock (307.59 lakhs) in the State.

5. ADMINISTRATION

The Animal Husbandry Department is under the overall control of 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 the allocation of different technical subjects. In respect of

administrative and accounts matter, the Director is assisted by Additional Directors, Deputy Director (Personnel) and Financial Advisor and Chief Accounts Officer.

The State is divided into 26 regions and each is under the control of one Regional Joint Director of Animal Husbandry, who is responsible for all the activities of the department in that region. The 26 Regions are divided into 76 Administrative divisions, each headed by one Assistant Director of Animal Husbandry who is responsible for all the activities of the department in that division.

Field veterinary institutions consist of Polyclinics, Clinician Centres, Veterinary Hospitals that are under the direct control of the Regional Joint Director and Veterinary Dispensaries and Rural Veterinary Dispensaries, which are under the control of the Assistant Directors.

For disease monitoring, surveillance and diagnosis, 20 Animal Disease Intelligence Units and 2 Poultry Disease Diagnostic Laboratories headed by Assistant Directors functioning in various Districts of the State.

The department manages eight Livestock Farms, three Sheep / Goat Farms, one Poultry Farm, one Fodder Farm and 20 Cattle Breeding and Fodder Development Units.

One Central Referral Laboratory for diagnosis, confirmation and monitoring of Animal Diseases is functioning at Saidapet, Chennai.

One Director in the cadre of Additional Director is in charge of the Institute of Veterinary Preventive Medicine (IVPM), located at Ranipet, which is engaged in the production of various kinds of livestock and poultry vaccines and other biologicals.

Table 2: Categorywise Sanctioned Strength of Posts

S.No.	Category of post	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	29
5	Senior Research Officer	3
6	Deputy Director	30

S.No.	Category of post	Strength
7	Assistant Director	313
8	Research Officer	7
9	Assistant Research Officer	23
10	Veterinary Assistant Surgeon	2,494
11	Research Assistant	44
12	Livestock Inspector Grade I	1,439
13	Livestock Inspector Grade II	1,307
14	Animal Husbandry Assistant	4,501

During 2011-12, the following measures have been taken to improve the administration in the Department:

Apart from existing 65 Divisional Assistant Director offices, 11 new Divisional Assistant Director offices each with one Assistant Director, one Superintendent, one Assistant, two Junior Assistants, one Typist, one Driver, one Office Assistant and one watchman, have been established to match the 76 Revenue Divisions.

One Monitoring Cell with one Joint Director, two Assistant Directors, one Manager, two Assistants and two Data Entry Operators, to monitor the implementation of the free distribution

of Milch Cows, Goats/Sheep Scheme, is established at the Directorate.

585 Posts of Veterinary Assistant Surgeons and 585 posts of Animal Husbandry Assistants were created. The Government have permitted to conduct Livestock Inspector training to 350 candidates for 2011-12 in District Livestock Farm, Hosur, Orathanad and Sheep Farm, Mukuntharayapuram. The Government have also permitted to conduct two more batches in the next two years 2012-13 and 2013-14.

6. VETERINARY SERVICES

The Animal Husbandry Department plays a major role in providing Veterinary Services in the state. These services are provided by the vast institutional network and professional work force of the Department. Over the years, the Department has become the major force in extending Veterinary Services like health cover, disease diagnosis, disease prevention, disease eradication, breeding support, imparting training to farmers, etc., apart from **"implementing the Hon'ble Chief Minister's Flag ship Schemes of free**

distribution of Milch Cows and Goats/Sheep" and other schemes.

6.1 VETERINARY INSTITUTIONS

Veterinary health services are provided by field Veterinary institutions, which include 6 Polyclinics, 22 Clinician Centres, 139 Veterinary Hospitals, 2,236 Veterinary Dispensaries and 56 Mobile Veterinary Units. National Commission on Agriculture (NCA) recommended one Veterinary Institution for every 5,000 cattle units by the year 2000 to ensure proper health care. In Tamil Nadu, there are 162.74 lakhs cattle units, which require 3,255 veterinary institutions to fulfill the norms of NCA. **During 2011-12, 444 Veterinary Dispensaries and 585 Rural Veterinary Dispensaries were added to the existing 1,207 veterinary institutions to narrow this gap.**

The services provided in the above institutions are:

- ⇒ Artificial insemination
- ⇒ Treating infertility cases.
- ⇒ Cases treatment
- ⇒ Vaccination
- ⇒ Deworming
- ⇒ Castration

- ⇒ Extension Services
- ⇒ Implementation of various schemes and
- ⇒ Training to Farmers

6.1.1 Mobile Veterinary Units

Mobile Veterinary Units manned by Veterinary Assistant Surgeons provide veterinary health services like vaccination, deworming and breeding coverage like Artificial Insemination to livestock reared by farmers residing in remote areas who face difficulties to reach veterinary institutions. These units go around their area of operation on a scheduled programme. The services provided by these units are well recognized by the public as they provide benefits at their doorsteps.

6.1.2 Sub-Centres

Sub-Centres are manned by Livestock Inspectors and provide first-aid to ailing animals besides carrying out Artificial Insemination for cows and buffaloes. Their services are also utilized for vaccination and deworming under the technical guidance of Veterinary Assistant Surgeon. At present, 900 Sub-Centres are functioning in various parts of the State.

Table 3: Districtwise infrastructure facilities available across the State

S. No	District	Divisions	Polyclinics	Clinician Centres	Veterinary Hospitals	Veterinary Dispensaries	Mobile Units	Sub-Centres	Visiting Sub-Centres
1	Ariyalur	2	-	-	2	37	1	2	-
2	Chennai	0	1	-	1	0	1	0	-
3	Coimbatore	2	1	1	12	76	2	28	3
4	Cuddalore	3	-	1	5	72	1	62	-
5	Dharmapuri	2	-	1	2	58	2	5	1
6	Dindigul	3	-	1	5	82	1	79	1
7	Erode	2	-	2	6	93	3	21	-
8	Kancheepuram	4	-	2	1	86	2	41	1
9	Kanyakumari	2	-	1	2	48	2	16	-
10	Karur	2	-	1	2	48	1	23	-
11	Krishnagiri	2	-	1	2	57	1	13	6
12	Madurai	2	1	-	4	67	1	72	-
13	Nagapattinam	2	-	2	3	63	2	17	-
14	Namakkal	2	-	-	4	89	3	5	3
15	Perambalur	1	-	-	-	30	-	4	-
16	Pudukottai	2	-	1	4	72	2	36	-

S. No	District	Divisions	Polyclinics	Clinician Centres	Veterinary Hospitals	Veterinary Dispensaries	Mobile Units	Sub-Centres	Visiting Sub-Centres
17	Ramanathapuram	2	-	-	4	51	-	12	2
18	Salem	4	1	-	6	124	6	4	5
19	Sivagangai	2	-	-	2	68	-	48	-
20	Thanjavur	3	-	2	6	93	3	30	3
21	The Nilgiris	2	-	1	2	20	3	16	2
22	Theni	2	-	-	3	43	1	53	5
23	Thiruppur	3	-	-	7	83	1	38	-
24	Thiruchirapalli	3	1	-	8	85	2	31	2
25	Thirunelveli	3	1	-	7	97	1	30	-
26	Thiruvallur	3	-	-	5	75	1	29	1
27	Thiruvannamalai	2	-	1	5	96	3	29	-
28	Thiruvarur	2	-	1	7	60	1	37	-
29	Thoothukudi	3	-	1	2	61	1	39	1
30	Vellore	3	-	1	8	104	4	26	6
31	Villupuram	4	-	1	7	134	4	22	2
32	Virudhunagar	2	-	-	5	64	-	32	11
TOTAL		76	6	22	139	2,236	56	900	55

6.2 DISEASE PREVENTION, DIAGNOSIS AND CONTROL

"Animal Health is Nation's wealth". Outbreaks of diseases cause huge economic loss to the farming community. The bacterial and viral diseases cause heavy morbidity and mortality where as protozoan and gastro intestinal parasitic diseases cause production losses. Control and eradication of many animal diseases is a must not only for profitable livestock production but also essential to make our livestock and livestock products globally acceptable.

"நோய்நாடி நோய்முதல் நாடி அதுதணிக்கும் வாய்நாடி வாய்ப்பச் செயல்"

"Let the physician enquire into the cause of disease, nature of disease, method of cure and treat it faithfully" was the quote of the famous Saint Poet Thiruvalluvar on the importance of diagnosis. The Department is giving utmost importance to this component of work.

This Department is monitoring the disease situation in the State through a network of 20 Animal Disease Intelligence Units spread throughout the State and 2 Poultry Disease Diagnostic Laboratories in the poultry belts one at Andagalurgate (Namakkal district) and another at

Erode which are functioning under the technical guidance of Central Referral Laboratory, Saidapet, Chennai.

6.2.1 Animal Disease Intelligence Units

A disease surveillance system is essential to provide early warning signals of outbreaks while epidemiology helps in systematic study of the distribution and determinants of health problems. Moreover accurate disease diagnosis plays a key role in strict monitoring and prevention of specific diseases.

Table 4: List of Animal Disease Intelligence Units

S. No	Animal Disease Intelligence Unit	Districts covered
1	Coimbatore	Coimbatore, Tiruppur
2	Cuddalore	Cuddalore
3	Dindigul	Dindigul
4	Erode	Erode
5	Kancheepuram	Chennai, Kancheepuram, Tiruvallur
6	Karur	Karur
7	Krishnagiri	Krishnagiri
8	Madurai	Madurai, Theni
9	Nagapattinam	Nagapattinam, Tiruvarur
10	Salem	Salem, Namakkal

S. No	Animal Disease Intelligence Unit	Districts covered
11	Sivagangai	Sivagangai, Ramanathapuram
12	Thanjavur	Thanjavur, Pudukottai
13	Thoothukudi	Thoothukudi
14	Tiruchirapalli	Tiruchirapalli, Perambalur, Ariyalur
15	Tirunelveli	Tirunelveli, Kanyakumari
16	Udhagamandalam	Udhagamandalam
17	Vellore	Vellore, Thiruvannamalai
18	Villupuram	Villupuram
19	Virudhunagar	Virudhunagar
20	Dharmapuri	Dharmapuri

Apart from disease forecasting, attending to outbreaks, disease diagnosis conducting awareness camps and collection of serum samples from poultry for screening Avian Influenza, the Animal Disease Intelligence Units are keeping vigil on the movement of the migratory birds around Bird Sanctuaries and Water bodies and watch for any alarming deaths among birds to observe for incidence of Avian Influenza. During 2011-12, 3,77,941 specimens have been tested by the above units.

6.2.2 Poultry Disease Diagnostic Laboratory

To cater to the needs of the poultry farmers in areas of high poultry production, 2 Poultry Disease Diagnostic Laboratories one at Andagalurgate and one at Erode are functioning. These laboratories are mainly involved in conducting post mortem, testing of droppings, blood samples and other specimens for accurate diagnosis of poultry diseases. In addition they render technical advice to farmers for prevention, diagnosis and control of various infectious and parasitic diseases.

During 2011-12, 2,007 poultry farms and 1,412 villages have been visited and 24,513 samples have been examined.

Government of India has decided to set up BSL II laboratories in each state to screen and despatch morbid samples as part of routine surveillance and samples collected from unusual mortality of poultry. The Poultry Disease Diagnostic Laboratories labs at Andagalurgate and Erode are the two laboratories that are being upgraded as BSL II labs in our State. For setting up of BSL II labs Rs.22 lakhs has been allotted to each Poultry Disease Diagnostic Laboratories.

The upgraded labs will also test serum samples as preliminary screening for Bird flu virus and forward the positive samples to referral laboratories for further confirmation.

6.2.3 Central Referral Laboratory

Central Referral Laboratory is an apex laboratory which caters to the needs of the field veterinarians in the diagnosis of diseases. The timely diagnosis and confirmation of the diseases helps in containing the disease and protecting other animals by prompt treatment and vaccination. 14,140 specimens received from the field have been tested and results communicated during 2011-12. ELISA test for PPR, Brucellosis and Johne's disease, screening of farm animals for Tuberculosis, Johne's disease and Sexually transmitted diseases, screening of animals for Brucellosis and BSE surveillance have also been carried out in this laboratory.

This laboratory also deals with issuing health certificates for animal origin. This laboratory plays a vital role in creating awareness among poultry farmers about Avian influenza and giving training to the field Veterinarians and Para-Veterinarians and Rapid Response Teams to act in case of emergency. As per the Government of

India guidelines, 12,314 samples during 2011-12 have been sent to SRDDL, Bangalore for screening of Avian influenza.

6.2.4 Institute of Veterinary Preventive Medicine, Ranipet (IVPM)

The Institute was started as 'SERUM INSTITUTE' on 07.04.1932. In March 1948, the Institute was shifted to the present campus at Ranipet with an area of 129 acres acquired by the State Government from the army under the post-war reconstruction Scheme. In the year 1950, the Institute was named as Veterinary Biologicals Research Institute and from 1954, it is known as Institute of Veterinary Preventive Medicine.

The Institute has gradually expanded its production line during the course of past 75 years, and at present 4 bacterial vaccines, 5 viral vaccines, 6 diagnostics, 9 Pharmaceutical products and one diluent are being manufactured.

The Institute of Veterinary Preventive Medicine, Ranipet, a unit of the Department of Animal Husbandry and Veterinary Services, Government of Tamil Nadu, is engaged in the

production of Veterinary Biologicals and Pharmaceuticals for health coverage of Livestock and Poultry by the field veterinary institutions in the State.

In addition, I.C.A.R aided All India Coordinated Research Project (AICRP) on Foot and Mouth Disease (FMD) is functioning in this Institute to undertake investigation in to FMD outbreaks and for virus typing and sero monitoring of vaccinated animals under FMD Control Programme.

Table 5: Vaccines and Diagnostics Produced

Sl. No	Details	2011-12 Achievement	2012-13 Target
1.	Black Quarter vaccine (in lakh doses)	5.34	5.00
2.	Haemorrhagic Septicaemia vaccine (Alum Precipitated) (in lakh doses)	6.52	7.50
3.	Enterotoxaemia vaccine (in lakh doses)	1.19	2.00
4.	Anthrax Spore vaccine (in lakh doses)	28.73	30.00
5.	Ranikhet disease 'K' vaccine (in lakh doses)	265.56	350.00
6.	Ranikhet disease 'F' vaccine (in lakh doses)	14.29	As per demand

Sl. No	Details	2011-12 Achievement	2012-13 Target
7.	Ranikhet Lasota vaccine (in lakh doses)	11.30	As per demand
8.	Duck Plague vaccine (in lakh doses)	77.10	85.0
9.	Sheep Pox vaccine (in lakh doses)	4.18	5.00
10.	Brucella abortus plate antigen (ml)	1,300	As per demand
11	Brucella abortus tube antigen (ml)	-	As per demand
12.	Brucella abortus milkring test antigen (ml)	-	As per demand
13.	Salmonella pullorum coloured antigen (ml)	610	As per demand
14.	California Mastitis test reagent (ml)	4,000	As per demand
15.	PBS (lt)	6,435	As per demand
16.	Boric ointment (kg)	-	As per demand
17.	Sulphur ointment (kg)	-	As per demand
18.	Zinc ointment (kg)	-	As per demand
19.	Whitefield ointment (kg)	-	As per demand

Good Manufacturing Practice (GMP) guidelines of World Health Organization (WHO) have been given "Mandatory status to Veterinary Biologicals by suitable amendments to Schedule 'M' of the Drugs and Cosmetics Act and Rules, 1940" Ministry of Health, Government of India. The Drugs Control & Licensing Authority, Government of India has directed all the Veterinary Biologicals Manufacturing Units in the country to adopt GMP within a time frame.

As a first step, the Poultry Vaccine Production Laboratory is upgraded to GMP standards under ASCAD Scheme. Since, Bacterial Vaccines are supplied at free of cost to vaccinate livestock of farmers of Tamil Nadu, the remaining Vaccine Production Laboratories and Quality Control divisions of the Institute are to be upgraded to GMP Standards under National Agriculture Development Programme at a total cost of Rs.7.52 crores.

In the forthcoming year, Anthrax, PPR, Brucellosis production labs will be upgraded to GMP standards.

7. LIVESTOCK DEVELOPMENT

7.1 Livestock Farms

In the Department, Livestock Farms are maintained for selective scientific breeding of specific species of livestock and poultry. They serve as demonstration farms and training centre for needy farmers. Moreover, it acts as a source for quality livestock to the farmers. There are 13 Farms, out of which 8 are Livestock Farms, 3 are Sheep Farms, one is Poultry Farm and one is Fodder Farm. These farms with total extent of 10,867.40 acres are spread in 12 districts.

Table 6: Location of Departmental Farms, their extent and species maintained

Sl. No	Name of the Farm	Area (in acres)	Species maintained
1	Exotic Cattle Breeding Farm, Eachenkottai (Thanjavur district)	1,338.36	Cattle and Buffalo
2	District Livestock Farm, Hosur (Krishnagiri district)	1,641.41	Cattle, Sheep, Goat, Pig, Poultry and Horses
3	District Livestock Farm, Abishekapatti (Tirunelveli district)	1,283.64	Cattle, Buffalo, Sheep, Pig and Poultry
4	District Livestock Farm, Udhagamandalam (The Nilgiris district)	129.38	Cattle

Sl. No	Name of the Farm	Area (in acres)	Species maintained
5	District Livestock Farm, Pudukottai (Pudukottai district)	959.31	Cattle, Sheep, Goat, Pig and Poultry
6	District Livestock Farm, Orathanad (Thanjavur district)	196.34	Cattle, Buffalo and Poultry
7	District Livestock Farm, Chettinad (Sivagangai district)	1,907.32	Cattle, Sheep, Goat, Pig and Poultry
8	Livestock Farm, Korukkai (Thiruvarur district)	495.68	Cattle
9	Sheep Farm, Chinnasalem (Villupuram district)	1,866.28	Sheep and Goat
10	Sheep Farm, Mukundarayapuram (Vellore district)	479.65	Sheep
11	Sheep Farm, Sathur (Virudhunagar district)	542.48	Sheep and Goat
12	Poultry Farm, Kattupakkam, (Kancheepuram district)	10.55	Fowls and Turkey
13	Fodder Farm, Padappai (Kancheepuram district)	17.00	Fodder Grasses and Trees
Total		10,867.40	

7.2 Cattle and Buffalo Development

Non-descript animals have a higher age at first calving, low lactation period, low milk yield, lengthy dry and inter-calving periods, but they are highly disease resistant and heat tolerant. The exotic breeds have early maturity, lengthy lactation period, high milk yield, short dry and intercalving periods but they are less disease resistant and heat

tolerant. To improve these economic traits and also to preserve the desirable traits like disease resistance and heat tolerance of indigenous animals in a short time at an affordable cost, cross breeding is an effective solution. Native pure breeds like Kangayam and Umbalachery germplasm have inherent capacity to withstand tropical environmental stress and diseases, have genes for better feed conversion efficiency and are well adapted to local environment.

Table 7: Cattle and Buffalo Breedable Age Female Population

(In lakhs)

Sl. No	Category	Breedable age female population		
		16th Livestock Census 1997	17th Livestock Census 2004	18th Livestock Census 2007
1	CATTLE			
	Exotic Crossbred	10.07	25.89	33.77
	Indigenous inclusive of non descript	25.22	15.28	14.32
	<i>TOTAL CATTLE</i>	35.29	41.17	48.09
2	BUFFALO	13.89	9.01	9.00
3	TOTAL BOVINES	49.18	50.18	57.09

As per Farm Policy, the following Cattle and Buffalo breeds are maintained in the Departmental farms as on 31.03.2012.

Table 8: Cattle and Buffalo breeds Maintained in Departmental Farms

S. No	Name of the Farm	Cattle / Buffalo	Stock
1	Exotic Cattle Breeding Farm, Eachenkottai	Jersey, Jersey X, Umbalachery, Murrah	203
2	District Livestock Farm, Hosur	Jersey, Jersey X, Friesian X, Sindhi, Kangeyam, Barghur, Pulikulam	606
3	District Livestock Farm, Abishekapatti,	Jersey X, Sahiwal, Murrah	201
4	District Livestock Farm, Udthagamandalam	Jersey, Jersey X, Friesian, Friesian X	104
5	District Livestock Farm, Pudukottai	Jersey X, Friesian X	245
6	District Livestock Farm, Orathanadu	Kangeyam, Murrah	160
7	District Livestock Farm, Chettinad	Jersey X, Friesian X, Tharparkar	405
8	Livestock Farm, Korukkai	Umbalachery	372

7.3 Conservation of Native Breeds

Tamil Nadu is known for its native breeds like Kangeyam, Umbalachery, Burghur, Pulikulam, Alambadi and Toda buffalo. The Native pure breed (6.69 lakhs) accounts for 5.07% of the total Bovine population (131.98 lakhs).

Table 9: Population of Native Breeds of Bovines

Sl. No	Breed	Population (in lakhs)
1	Kangeyam	3.15
2	Umbalachery	2.17
3	Pulikulam	0.34
4	Alambadi	0.32
5	Burghur	0.21
6	Toda	0.50
Total		6.69

Native breeds are unique in their adaptation to agro-climatic conditions of their habitat and management practices. The Native pure livestock populations possess valuable traits such as disease resistance, heat tolerance, high fertility, good maternal quality, longevity, adaptability to tropical environment and possess unique ability to utilise poor quality feed. The department, in close coordination with Tamil Nadu Livestock

Development Agency, is not only protecting the native breeds from further degradation but also ensure their conservation and improvement. The department is maintaining 3 Umbalachery and 3 Kangeyam breeding bulls for frozen semen collection. During 2011-12, 2.07 lakh Artificial Inseminations were carried out utilizing the semen of native breeds.

7.4 Cattle Breeding and Fodder Development

20 Cattle Breeding and Fodder Development units are functioning each headed by one Deputy Director of Animal Husbandry and are looking after the Cattle Breeding and Fodder Development work all over the State.

The main aim is to have systematic supply of frozen semen straws of exotic breeds, cross breeds and native breeds and Liquid Nitrogen for the Artificial Insemination work and supply of inputs required for fodder production. Apart from this, these units are involved in the extension activities to extend Artificial Insemination work with frozen semen and to increase the fodder production. These units are also actively participating in the "Kalnadai Padukappu Thittam" camps highlighting the usage of various fodder crops and frozen semen in augmenting the milk production.

Table 10: List of Cattle breeding and Fodder Development units

S.No.	Name of CBFD	Area of operation
1.	Tambaram	Chennai, Kancheepuram, Thiruvallur
2.	Vellore	Vellore
3.	Thiruvannamalai	Thiruvannamalai
4.	Cuddalore	Cuddalore, Villupuram
5.	Dharmapuri	Dharmapuri, Krishnagiri
6.	Salem	Salem, Namakkal
7.	Erode	Erode
8.	Tiruchirapalli	Tiruchirapalli, Perambalur, Karur, Ariyalur
9.	Thanjavur	Thanjavur, Thiruvarur, Nagapattinam
10.	Pudukottai	Pudukottai
11.	Coimbatore	Coimbatore, Tiruppur
12.	Dindigul	Dindigul
13.	Madurai	Madurai, Theni
14.	Ramanathapuram	Ramanathapuram
15.	Virudhunagar	Virudhunagar
16.	Tirunelveli	Tirunelveli
17.	Sivagangai	Sivagangai
18.	Thoothukudi	Thoothukudi
19.	Nagarcoil	Kanyakumari
20.	Udhagamandalam	Nilgiris

7.5 Artificial Insemination

Superior genetic resources play a pivotal role in productivity enhancement of the dairy animal. Moreover, a proven technology for faster multiplication of genetically superior milk production traits is Artificial Insemination as this horizontally disseminates superior genetic resources in a population within a short period and at low cost. With this in mind and to improve the production traits of cattle and buffalo, the Department introduced Artificial Insemination with liquid semen of exotic and graded breeds since 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.

As per 2010-11 data, the State occupies the number one position in the entire country in carrying out Artificial Insemination covering about 59.65 lakhs cases per year.

The Department is following the revised breeding policy for cattle and buffalo to improve the milk production in livestock and to sustain growth in the dairy sector.

- ❖ Selective breeding of native breeds is to be followed in Erode, Coimbatore, Karur and Dindigul districts for Kangeyam and in Nagapattinam, Thiruvarur and Thanjavur for Umbalachery and for lesser known breeds like Pulikulam, Bargur, Alambadi and Malaimadu in their respective breeding tracts.
- ❖ Crossing of low yielding non-descript cows with Jersey or Holstein Friesian depending on the agro-climatic conditions. In addition to the use of purebred Jersey, high pedigreed Indian milch breeds, Red Sindhi and Tharparkar may also be used. Likewise, Sahiwal breeds may be used in place of Holstein Friesian.
- ❖ Jersey crosses are to be bred with bulls of 50% Jersey inheritance and Holstein Friesian crosses are to be bred with bulls of 50% Holstein Friesian inheritance by *inter se* mating.
- ❖ Upgrading of Non-descript and Graded buffaloes with Murrah.
- ❖ Pure breeding of Toda buffaloes in the high ranges of the Nilgiris.

During 2011-12, 44.44 lakhs of Artificial Insemination were done and it is proposed to carry out 46.10 lakhs Artificial Insemination during 2012-13.

7.6 Frozen Semen Production

Three frozen semen production stations are functioning to cater the needs of the 3,359 Artificial Insemination Centres located throughout the State. The Frozen Semen Production Station at District Livestock Farm, Udthagamandalam is upgraded to ISO Standards with effect from 14.01.11.

A total number of 187 breeding bulls of Jersey, Holstein Friesian, Crossbred Jersey, Crossbred Holstein Friesian, Sindhi, Kangeyam, Umbalachery and Murrah are available in these Farms and mini straws are produced in all the Frozen Semen Production Stations. 27 breeding bulls which were not upto the Minimum Standard Protocol were culled to improve the quality of the Frozen Semen Straws produced in the above farms. 107 bulls were purchased.

Table 11: Frozen Semen Production

(In lakhs)

Sl. No	Frozen Semen Station	Production 2011-12	Proposed target 2012-13
1	Exotic Cattle Breeding Farm, Eachenkottai	18.05	22.06
2	District Livestock Farm, Hosur	7.89	7.90
3	District Livestock Farm, Udhagamandalam	13.73	14.10
Total		39.67	44.06

Table 12: Breeding Bulls available

Sl. No.	Name of the Farm	Jersey	Jersey Cross	HF	HF Cross	Red Sindhi	Kangayam	Umbalachery	Pullikulam	Burghur	Murrah	Total
1	Exotic Cattle Breeding Farm, Eachenkottai	34	42	0	0	0	0	3	0	0	39	118
2	District Livestock Farm, Hosur	0	10	0	0	10	3	0	2	4	0	29
3	District Livestock Farm, Udhagamandalam	15	16	4	5	0	0	0	0	0	0	40
Total		49	68	4	5	10	3	3	2	4	39	187

7.7 Liquid Nitrogen Production and Supply

To freeze and store the frozen semen straws, liquid nitrogen is essential. In the Department, liquid nitrogen plants are functioning at Eachenkottai, Tirunelveli, Hosur, Uthagamandalam, Saidapet and Thiruparankundram producing liquid nitrogen. Moreover, to store and distribute the liquid nitrogen and frozen semen straws to various veterinary institutions and sub centres involved in Artificial Insemination, 12 Frozen Semen Banks are functioning one each at Vellore, Coimbatore, Madurai, Tiruchirapalli, Dharmapuri, Tirunelveli, Thanjavur, Cuddalore, Sivagangai, Chennai, Dindigul and Salem.

Table 13: Liquid Nitrogen Production

(In litres)

Sl. No	Liquid Nitrogen Plants	No. of Plants	Production 2011-12
1	Exotic Cattle Breeding Farm, Eachenkottai	2	2,795
2	District Livestock Farm, Hosur	1	0
3	District Livestock Farm, Udhagamandalam	1	0
4	Saidapet	1	361
Total		5	3,156

7.8. Fodder Development

Feed and Fodder is the single most important factor which influences the productivity of livestock. The major constraint in dairy development is the lack of green fodder and under-feeding of the milch animals. By incorporating good quality feed combined with feeding of green fodder reduces the incidences of delayed breeding in both Cattle and Buffaloes and thereby reduces the intercalving period resulting in increased milk production. As productivity is directly proportional to bioavailability of nutrients, provision of green fodder for feeding milch animals is very essential. There is deficiency of green fodder availability in the State to an extent of 42.60%, which adversely affects the productivity of the Livestock population. Hence to reduce the gap between demand and supply of feed and fodder through enhancement of production and efficient utilization of available resources the following State and Central schemes are being implemented.

7.8.1 State Fodder Development Scheme/ Accelerated Fodder Development Programme

- Under State Fodder Development Scheme (which was introduced in 2011-12) /Accelerated Fodder Development Programme (funded by GOI), 8,000 acres of

farmers' irrigated land is brought under cultivation of high yielding Grass fodder Cumbu Napier Hybrid and highly proteineaceous Desmanthes and Stylosanthes under irrigated condition and 16,000 acres of land is being brought under Rainfed irrigation with cereal fodder like Sorghum, Maize and leguminous fodder Cowpea. Thus, totally 24,000 acres is being brought into fodder crop cultivation to ensure availability of balanced and nutritive feeding to the animals and by this additionally 9.6 lakh Mt of fodder is expected to be produced.

- To reduce wastage by encouraging chopping of fodder and to promote better utilization, it is proposed to distribute 1,000 Hand Driven Chaff Cutters and 3,424 Power Operated Chaff Cutters to the Farmers.
- As availability of Quality fodder seeds are limited, Fodder Seed Production Units are being set up in 30 acres each at Eachenkottai, Orathnad and Hosur Government Livestock farms to produce quality fodder seed for distribution to the farmers.

- In order to utilize available water efficiently, 770 acres of small/marginal farmers land are being brought under Raingun irrigation at 100% subsidy and 1,160 acres of other farmers lands are also being brought into Raingun irrigation with 75% subsidy.
- In order to reduce the cost towards labour in fodder cultivation operations, 2,500 grass cutters are being distributed to the beneficiaries at 50% subsidy of Rs.12,500.
- To preserve surplus fodder for feeding during lean periods and to avoid seasonal crisis of feed shortage, 350 units of silage making unit are being established across the State with 100% financial assistance.
- Common grazing land in each village is an important source of feed for cattle particularly of weaker sections like landless / small / marginal farmers. To avoid degradation and depletion of common grazing land, 1,400 acres of Common grazing land are to be brought into fodder cultivation @ 100 acres/district in 14 District.
- The total financial allocation for the above Schemes is Rs. 35.50 crores.

7.8.2 Centrally Sponsored Feed and Fodder Development Scheme

Under the Grassland Development Scheme, 365 acres were brought into cultivation with nutritionally good quality, high yielding fodder grass -Hybrid Napiers and leguminous fodder Desmanthes covering 1,470 beneficiaries with 100% subsidy across the State. Besides this, 125 acres of land in the Government farms are also brought under fodder cultivation with Co (FS)-29, African Tall Maize, Co (FS)-27, K3 Cholam, Chencrus, Stylosanthes, Desmanthes and Cowpea.

To reduce wastage and to promote better utilization of green fodder, it is proposed to distribute 506 power driven chaff cutters to the beneficiaries.

7.8.3 Central Minikit Testing Programme

To popularize the latest improved fodder varieties amongst the farmers for fodder production and to encourage the farmers to produce quality green fodder, various kinds of fodder seeds are distributed to the farmers free of cost. During Khariff and Rabi 2011-12, 10,288 and 8,053 fodder seed minikits of different crops respectively have been distributed to the farmers.

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, establishment of community feed and fodder banks with the help of Self Help Groups are being encouraged.
- ❖ 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 Udthagamandalam.
- ❖ 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 Cowpea, Stylosanthus and Co3 grass in Coconut groves as inter crop is also being encouraged.

- ❖ Cultivation of Fodder crops and Tree seedling in Veterinary Institutions are being taken up so as to encourage the farmers to take up fodder cultivation in the State.
- ❖ About 2390.59 acres of Departmental Farm lands were brought into fodder cultivation. During 2011-12, 230.322 Mt of fodder, 229.777 lakhs of fodder slips and 126.75 kgs of fodder seeds were distributed to the farmers from the Government Farms for augmenting fodder production.

7.9 Sheep Development

Sheep comprises 46% of the total sheep and goats reared in the State in which exotic & crossbred and indigenous accounts for 13% and 87% respectively. Sheep husbandry is an important subsidiary animal husbandry activity in the State and it involves only low cost technology. It acts as a primary source of income for majority of landless agricultural labourers and supplements the income of small and marginal farmers. Besides skin and meat, income is also derived through penning which is a very common practice followed to fertilize the fields.

Table 14: Sheep Breeds Maintained in the Departmental Farms

Sl. No	Farms	Breed	Stock
1	District Livestock Farm, Abishekapatti	Keelakarisal	350
2	District Livestock Farm, Chettinad	Ramnad White	266
3	District Livestock Farm, Pudukottai	Ramnad White	160
4	District Livestock Farm, Hosur	Mecheri	153
5	Sheep Farm, Sathur	Vembur	90
6	Sheep Farm, Chinnasalem	Mecheri, Chennai Red	869

Quality rams and ewes produced in these farms are sold to local farmers to improve the progeny of local sheep.

7.10 Goat Development

Goat, which is poor man's cow, comprises 54% of the total sheep and goats reared in the State in which indigenous and Non descriptive and other graded accounts for 26% and 74% respectively. The worth of goat rearing lies primarily in their quick proliferation intervals, higher rates of growth and the ease with which they

can be marketed. In fact goats can survive and flourish in areas where sheep and cattle cannot. They can utilize the crop residues efficiently and have higher digestible efficiency than sheep. Moreover, goats provide significantly more meat and milk per unit live weight than cattle and sheep. In addition among the livestock slaughtered, goat slaughter rate is the highest as goat meat (chevon) is the most preferred meat for consumption in the State and is the costliest in the market.

Table 15: Goat Breeds Maintained in the Departmental Farms

Sl. No.	Farms	Breed	Stock
1	District Livestock Farm, Chettinad	Jamunapari	43
2	District Livestock Farm, Pudukottai	Jamunapari	127
3	District Livestock Farm, Hosur	Telichery, Kodiadu, Kodivalli	166
4	Sheep Farm, Chinnasalem	Salem Black, Telichery	247
5	Sheep Farm, Sathur	Kanni	57

The progeny of these goats are supplied to local farmers to improve the local goats.

7.11 Piggery Development

Pig husbandry, like sheep and goat husbandry, can provide excellent livelihood support to small, marginal and landless labourers as they are the best converters of feed into meat, have short generation intervals, have high prolificacy and fecundity. It can produce gainful self-employment, improved nutrition and additional income to weaker sections of the society. Even though pig farming was not practiced on scientific lines during the early years, it is picking up in the recent years. To satisfy the considerable demand that exists for pork and pork products, this Department is encouraging pig rearing.

Table 16: Pig Breeds Maintained in the Departmental Farms

SI. No	Farms	Breed	Stock
1	District Livestock Farm, Hosur	White Yorkshire	135
2	District Livestock Farm, Abishekapatti	Landrace, Landrace x, Large White Yorkshire x, White Yorkshire	133
3	District Livestock Farm, Chettinad	White Yorkshire	99
4	District Livestock Farm, Pudukottai	Landrace	98

7.12 Horse Breeding

To revive the breeding and to conserve the equine species, one horse-breeding unit is functioning at District Livestock Farm, Hosur. Kathiawar, Thorough bred and Cross bred horses are bred in this unit. The stallions are allowed for natural service at the rate of Rs.500/- per service. 6 stallions, 12 mares and 7 young ones are being maintained in this Unit.

7.13 Dog Breeding

Tamil Nadu has the privilege of having excellent dog breeds like Rajapalayam, Kombai and Chippiparai. 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 is heavy demand for other breeds like Labrador and Doberman these breeds were also added to the existing unit during the year 1997-98. The puppies are sold to the public. To create awareness and encourage the dog lovers to rear native breeds, the Department participates in the dog shows.

Table 17: Dog Breeds Maintained in Dog Breeding Unit

Sl. No	Breeds	Adult			Pups		
		Male	Female	Total	Male	Female	Total
1	Rajapalayam	2	11	13	1	-	1
2	Chippiparai	1	1	2	5	4	9
3	Doberman	1	3	4	-	-	-
4	Labrador	1	3	4	-	-	-
5	Dalmation	1	-	1	-	-	-
6	Rottweiler	1	2	3	-	1	1
	Total	7	20	27	6	5	11

7.14 POULTRY DEVELOPMENT

The term poultry includes fowls, ducks, turkeys, geese, quails, swans, ostriches and guinea fowls domesticated for economic purpose. Fowls constitute 99% of the total poultry reared in the State. The development of poultry industry is significant in the State. The State occupies 2nd position in egg production in the country. The State also accounts for nearly 19.74 % of the poultry population of the country.

Poultry farming in the State has transformed into a big vibrant industry from a mere backyard enterprise over the past three decades. Now, this sector is a dynamic industry having a vast scope for exports and employment generation.

Though poultry farming has developed into a big industry, eco-friendly backyard poultry rearing is also practiced in the State as a profitable traditional backyard enterprise. It still continues to be the livelihood preposition of several poor farmers in the rural areas and contributes to 3.35% of the total egg production in the State. Backyard poultry rearing consists of 5 to 10 birds per household and is reared with little investment. The household gets meat and eggs from these birds.

Birds are on free range and feed on worms, insects, waste grains, white ants etc. and they convert the farm and kitchen waste into egg and meat. These birds are very susceptible to the highly fatal Ranikhet disease. To protect the poultry from this disease, the Department is providing vaccination against this disease on specified days at the veterinary institutions and sub centres every week and also in the camps conducted under 'Kalnadai Padukappu Thittam'. This, apart the Department also conducts a Statewide vaccination drive against Ranikhet disease during the month of February every year.

7.14.1 Poultry Extension Centres

Poultry Extension Centres are the model farms for the farmers to know about scientific ways of breeding and management. Poultry keeping is no longer limited to backyard farming it was attained a status of industry and is more sustainable. The extension activities are more directed to Turkey and Rabbit farming. The concept of emergence of P.E.C was to educate the farmers on scientific ways of rearing poultry.

At present, 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, Chenttinad, 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, Kodiakanal, Dindugal District.
7. Poultry Extension Centre, Gandhigram, Dindugal District.
8. Poultry Extension Centre, Masinagudi, Nilgiris District

7.14.2 Assistance to State Poultry Farms

To improve the economic conditions and living standards of rural people by encouraging them in poultry rearing, to create additional avocations, employment opportunities and supplement the income of marginal farmers, landless labourers, Self Help Groups and other socially backyard sectors of the society and thereby improving their living standards, the department is implementing a Central and State Share Scheme (80:20) at Poultry Farm, Kattupakkam. The Government have sanctioned Rs. 68 lakhs to develop turkey units and a sum of Rs. 34 lakhs was released as 1 installment. A proposal for a sum of Rs. 34 lakhs sent to Govt. of India for release of 2nd installment.

7.14.3 Rural Backyard Poultry Development Scheme

The Objective of the Rural Backyard Poultry Development Scheme is to create an additional livelihood opportunities among BPL families in rural areas, to improve living standards of BPL families, to generate supplemental employment income on substantial basis and to empower rural poor farmers by making them owners of income generating assets and thereby alleviating the poverty of the rural poor farmers.

The Rural Backyard Poultry Development Scheme is implemented in 7 districts viz Kancheepuram, Dharmapuri, Thanjavur, Thiruvarur, Sivagangai, Tirunelveli, and Thiruvallur with 100% subsidy from Government of India at a total cost of Rs. 45.60 lakhs. 300 BPL families are selected as beneficiaries and approved by the District Collector concerned. Each family receives 45 birds of 4 weeks old native chicks. Rs.750/- per beneficiary family, at Rs.30 per chick, is given as fixed cost subsidy to beneficiaries for cage / night shelter, feeder, waterer etc. The Animal Husbandry Department provide the Veterinary Health Services, by periodical deworming and vaccination in nearby Veterinary Institution.

7.14.4 Establishment of Poultry Clusters

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. It is proposed to establish and develop Poultry Clusters (both broilers and layers) in such regions that have climatic conditions that favour Poultry rearing.

Considering the scope and income earning potential of poultry farming in the State, a cluster of broiler / layer farms can be encouraged in the Regions around Sankarankoil and Villupuram for development of broilers / layers.

The intervention of the State Government will be in the form of providing 25% subsidy for establishing Poultry farms. The Scheme will be integrated with the existing Poultry Venture Capital Fund of the Government of India, wherein 25% bank ended subsidy is provided for the individuals. The subsidy provided under this Scheme will be over and above that provided by NABARD.

7.14.4.1 Native Chicken Rearing

A similar encouragement from the State Government will also be provided to native chicken rearing also wherein barring the Districts of Coimbatore, Tiruppur, Erode, Salem, Namakkal, Karur and Krishnagiri and in the regions where broiler / layer farming is proposed to be encouraged like Tirunelveli and Villupuram, native chicken rearing units will be encouraged.

8. SPECIAL SCHEMES

Livestock rearing is an important economic activity for the rural people. It generates more value both economically and socially. To provide opportunities to weaker section of the society for earning through livestock and poultry keeping, the department is implementing various free and beneficiary oriented schemes.

8.1. SCHEME FOR FREE DISTRIBUTION OF MILCH COWS

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 Free Milch Cows to 60,000 beneficiaries over a period of 5 years. Thus, under the '**Scheme for Free Distribution of Milch Cows**', about 12,000 Milch Cows of Cross Bred Jersey/ Cross Bred Holstein-Friesian breeds would be distributed each year to the poor needy families in the rural areas.

Salient Features

- ❖ The Scheme is prioritized in such Districts that are considered to be milk deficient and

where the number of Milk Cooperative societies are also lesser 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 upon the distribution of Milch Cows, Primary Milk Cooperative Societies are formed in such Village Panchayats and milk procured from the beneficiaries, thus rendering necessary hand-holding assistance.
- ❖ 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 is not more than 5 years.
- ❖ Milch cows are procured at the rate of one cow per eligible household and 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 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 the village.

Eligibility Criteria

For Milch Cows Scheme, the selection of beneficiaries is done by the Grama Sabhas concerned after the initial short listing by a Village Level Committee. Some of the common criteria for eligibility of the beneficiaries are:

- ❖ Women headed households are to be given priority. (Widows, Destitutes, Disabled women and Transgender are to be given priority within this group).
- ❖ Beneficiaries are to be a permanent resident of the Village Panchayat concerned and below 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 (nor should their spouse or father / mother / parents-in-law / son / daughter / son-in-law / daughter-in-law be so).
- ❖ Beneficiary **should not own land over 1 acre** in their own name or family members' name.

Achievement during 2011-12

- ❖ The Scheme has been implemented in 170 Village Panchayats in 21 Districts.
- ❖ The Milk Cooperative Societies have been formed and milk procurement started from 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 nutrient status of the animals.
- ❖ Training in rearing of animals is being imparted to the beneficiaries concerned and weekly Veterinary Services are being given at the doorsteps of the beneficiaries by the Veterinary Assistant Surgeons and Livestock Inspectors of this department. Insurance of the animals is done at Government cost.

- ❖ 12,000 beneficiaries have been provided with Milch Cows during 2011-12.
- ❖ **40.03% of the actual beneficiaries belong to SC/ST communities.**
- ❖ Over 30,000 litres of milk is being poured for the Aavin network by the beneficiaries of the scheme on each day.
- ❖ The department is organizing mass vaccination against diseases like Foot and Mouth disease to hand-hold the beneficiaries for some period in the post purchase process.
- ❖ In order to encourage the beneficiaries take care of the cows well, it has been directed to give Prizes to beneficiaries who are best maintaining the Milch cows distributed under this Scheme in each district.

8.2 SCHEME FOR FREE DISTRIBUTION OF GOATS/SHEEP

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 standard of living. Under this Scheme, 4 Goats/Sheep are to be given free of cost to 7 lakh

poorest of poor rural landless families over a period of 5 years.

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 are to be about 6 months of age.
- ❖ The Goats/Sheep are permitted to be purchased by the **beneficiaries 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 the women, it has been decided that the actual beneficiary will be the **Woman of the household.**
- ❖ 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 totaling 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.

Eligibility Criteria

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

- ❖ Women headed households are to be given priority. (Widows, Destitutes, Disabled women and Transgender are to be given priority within this group).
- ❖ Beneficiaries are to be a permanent resident of the Village Panchayat concerned and one of the members of the household to be 18-60 years of age in case of Goats/Sheep to effectively rear the animals.
- ❖ 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 (nor should their spouse or father / mother / parents-in-law / son / daughter / son-in-law / daughter-in-law be so).
- ❖ Beneficiary must be **landless Agriculture labourers.**

Achievement during 2011-12

- ❖ The Scheme has been implemented in 1,138 Village Panchayats in 31 Districts.
- ❖ Training in rearing of animals is being imparted to the beneficiaries concerned and weekly Veterinary Services are being given at the doorsteps of the beneficiaries by the Veterinary Assistant Surgeons and Livestock Inspectors of this department. Insurance of the animals is done at Government cost.
- ❖ 1 lakh families are provided with 4 lakh Goats/sheep during 2011-12.
- ❖ Till 31.03.2012, 9,341 kids were born to the free Goats/Sheep distributed under the Scheme.
- ❖ **41.34 % of the actual beneficiaries belong to SC/ST communities.**
- ❖ In order to encourage the beneficiaries take care of the Goats/Sheep well, it has been directed to give Prizes to beneficiaries who are best maintaining the free Goats/Sheep distributed under this Scheme in each district.

The Scheme has enhanced the income levels of the landless poor beneficiaries.

8.3 STATE INFRASTRUCTURE DEVELOPMENT PROGRAMME

During 2011-12, under this Strengthening of Infrastructure and Renovation Of Existing Buildings Scheme, Government have sanctioned Rs.20.005 crores for repairing and renovation of existing buildings of Veterinary Institutions and for 3.00 crores for the purchase of required furniture to the existing 75 Veterinary Hospitals and 850 Veterinary Dispensaries at the rate of Rs.32,417 per Institution.

During 2012-13, further funds will be allocated to upgrade the existing Veterinary Infrastructure for ensuring better veterinary health delivery system.

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

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

- Construction of buildings for 335 Veterinary Dispensaries at a total cost of Rs.89.31 crores.

- Construction of buildings for 15 Veterinary Hospitals at a total cost of Rs.3.99 crores at the rate of Rs.26.66 lakhs per Veterinary Hospital in such places where these facilities are not available.
- Construction of two Polyclinics at a cost of Rs.63.28 lakhs at the rate of Rs.31.64 lakhs per unit.
- Construction of new buildings for 3 Animal Disease Intelligence Units, that are functioning in rented buildings / do not have facilities for conducting laboratory works, at a total cost of Rs.1.37 crores at the rate of Rs.45.50 lakhs per unit.
- Construction of buildings for Frozen Semen Banks at five places at a total cost of Rs.2.18 crores at the rate of Rs.43.50 lakhs per Frozen Semen Bank.
- One NABARD RIDF - XVII Scheme Monitoring Cell at the Directorate of Animal Husbandry, Chennai at a cost of Rs.5.72 lakhs.
- Infrastructure development in 12 District Livestock Farms at a total cost of Rs.2,469.85 lakhs.

8.5 ESTABLISHMENT AND STRENGTHENING OF EXISTING VETERINARY HOSPITALS AND DISPENSARIES (ESVHD)

There are many Veterinary Institutions in this State which are functioning without adequate and proper infrastructure facilities. Improved infrastructure facilities will provide improved veterinary services contributing to reduction in the incidences of animal diseases thereby increasing the overall productivity of animal wealth. Many buildings are in a dilapidated state almost on the verge of being unfit for human occupation. Further functioning of veterinary institutions in the rental building do not satisfy the requirement of a typical veterinary institution and with a restricted scope for further expansion, besides incurring excess expenditure by way of rent for many years, these are not ideal infrastructure. Hence, the Department has identified several Veterinary Institutions that urgently require new building and require repairs and renovations. Government of India have sanctioned 1st installment of Rs.6.72 crores as Central share and Rs.2.24 crores as State share for establishing 4 Veterinary Hospitals, 20 Veterinary dispensaries and Strengthening 16 Veterinary Hospitals, 74 Veterinary Dispensaries during 2011-12 at a total cost of Rs.8.96 crores.

During 2011-12, it is proposed to get Government of India release a sum of Rs.1,216.725 lakhs as 2nd installment for new construction of 11 Veterinary Hospitals and 64 Veterinary Dispensaries and renovation of 44 Veterinary Hospitals and 46 Veterinary Dispensaries respectively.

8.6 KALNADAI PADHUKAPPU THITTAM

To provide comprehensive animal health care at the doorstep of the farmers, "Kalnadai Padhukappu Thittam" is being implemented from the year 2000-2001.

- ❖ Under this Scheme, total health cover both preventive and curative is provided to livestock and poultry reared by farmers in remote villages, which do not have an access to veterinary services from veterinary institutions directly.
- ❖ Special camps are conducted at the rate of one camp per month 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 in the village and surrounding places informing the place where the camp is to be conducted. Pamphlets and leaflets are also distributed regarding the various services provided during the camp.

- ❖ In these camps various activities like health care, disease prevention, deworming, castration, artificial insemination, pregnancy verification, infertility treatment etc., are carried out at free of cost. In the calf rally, prizes worth of Rs. 400/- per camp is being distributed to the best calves.
- ❖ The camps are conducted under the direct supervision of the divisional Assistant Directors and monitored by the concerned Regional Joint Directors. A team of veterinarians and para veterinarians working in the Panchayat Union and nearby Panchayat Unions are drafted for conducting the camps. The service of the Tamil Nadu Veterinary and Animal Sciences University is also utilized in needy places.
- ❖ In addition, exhibition depicting various livestock diseases and their preventive measures, fodder development measures are conducted for creating awareness among the farmers.
- ❖ The beneficiaries are all animal growers in the villages and nearby villages where the camps are conducted. Since all the facilities

are provided at the farmer's doorsteps at free of cost, this scheme is very popular among the rural farming community.

- ❖ During the year 2011-12, 5,500 camps were conducted at a total cost of 2.31 crores. For the year 2012-13, 5,500 camps will be conducted at a total cost of 2.31 crores.

Table 18 : Kalnadai Padukappu Thittam 2011-12

Sl. No	Details	Number
a	No of animals Benefited	
	Cattle	16,65,486
	Buffaloes	2,01,119
	Goats	16,95,329
	Sheep	13,98,892
	Other Livestock	52,862
	Poultry	9,14,834
	Total	59,28,522
b	No of Farmers benefited	6,44,756
c	Average animal attendance / camp	1,078
d	Calf Rally (No of Calves participated)	1,66,262

8.7 PART II SCHEME

Under Part II Schemes of 2011-12,

- The condemned vehicles of 14 Regional Joint Directors of Animal Husbandry (Light Motor Vehicle) have been replaced with new vehicles for a total sum of Rs.84 lakhs.
- Furniture to 243 new Veterinary Dispensaries has been provided at a total cost of Rs.40.92 lakhs.

During 2012-13, it is proposed to improve the administration by improving the basic infrastructure facilities in the administrative offices at a total cost of Rs.154.50 lakhs:

- Replacement of condemned vehicles of 9 Regional Joint Directors at a cost of Rs.6 lakhs each with a total cost of Rs.54 lakhs.
- Replacement of condemned jeeps for 15 Assistant Directors at a cost of Rs.6.20 lakhs each and at a total cost of Rs.93 lakhs.
- Purchase of 7 computers at the Directorate at a cost of Rs.0.50 lakh each and at a total cost of Rs.3.50 lakhs.
- Purchase of 4 copiers at the offices of the Directorate and Regional Joint Directors, Tirupur and Namakkal at a cost of Rs.1 lakh each at a total cost of Rs.4 lakhs.

8.8 WESTERN GHAT DEVELOPMENT PROGRAMME

Under Western Ghat Development Programme during the year 2011-12, the following Animal Husbandry activities are being implemented at a total cost of Rs.77.65 lakhs in the Western Ghat Districts of Coimbatore, Tiruppur, Dindigul, Madurai, Theni, Tirunelveli, Kanyakumari and Virudhunagar.

1. 59 Acres of farmers' land brought under Green Fodder Cultivation at a total cost of Rs.2.36 lakhs with 100% subsidy.
2. 935 beneficiaries are supplied with Giriraja birds at a total cost of Rs.2.81 lakhs with 50% subsidy.
3. 150 beneficiaries are supplied with sheep units at a total cost of Rs.66.88 lakhs with 50% subsidy.
4. 30 beneficiaries are supplied with Goat units at a total cost of Rs.5.60 lakhs with 50% subsidy.

8.9 HILL AREA DEVELOPMENT PROGRAMME

Under Hill Area Development Programme, during the year 2011-12, the Government have sanctioned Rs.64.63 lakhs to implement various activities in Nilgiris District. In this, Rs.43.63 lakhs

has been allotted for the implementation of following Animal Husbandry activities:

- ✓ Strengthening infrastructure and roads of the District Livestock Farm, Ooty at a cost of Rs.42.50 lakhs.
- ✓ 500 beneficiaries are provided with Giriraja birds at a cost of Rs.0.63 lakhs and Green fodder seeds are distributed to the farmers at a cost of Rs.0.50 lakhs.

8.10 INTENSIVE HEALTH COVER PROGRAMME

Sheep and goats are reared mainly by grazing thus making them highly vulnerable to parasitic infestations. These infestations cause many health problems in them like weight loss, delayed maturity, high mortality rate, low fertility rate, etc., apart from making them susceptible to other infections. This also affects the quality of meat, skin and carcass yield.

To overcome all the deleterious impact due to parasites, sheep and goat have to be dewormed periodically. For this purpose, the Department is implementing an Intensive Health Cover Programme since 1982-83. Under this programme, the sheep maintained by farmers are dewormed periodically to overcome the problems due to parasites. During 2011-12, drugs worth of Rs. 40.00 lakhs were used to deworm the sheep.

8.11 NATIONAL AGRICULTURAL DEVELOPMENT PROGRAMME (NADP)

Under the Scheme, "Enhancement of fertility in cows through Oestrous Synchronization" it was put forward to swaddle 50,000 cows at a total cost of Rs. 378.98 lakhs to increase the conception rate of cows thereby increasing the number of calves and milk production. For the first phase, 10,108 animals are to be made fertile at a cost of Rs. 104.00 lakhs.

Under the Scheme 'Revamping of Sheep Farm at Mukundrayapuram', supply of quality breedable male lambs, fodder seeds and fodder slips to the farmers of Vellore District, Purchase of 500 female Sheep and 25 male Sheep and Fodder development in 25 acres of land under irrigated condition along with fodder tree cultivation and 60 acres of land under pasture/ grazing land cultivation are to be taken. Renovations of pens, purchase of fodder seed, fertilizer and construction of farm pond have been completed.

It is proposed to increase the Semen production of bulls maintained at District Livestock Farm, Udhagamandalam by providing green fodder. For this, 9 acres of fodder is being developed with Oats, Barley, Maize, Berseem, Cumbu Napier Hybrid, etc., with a total allocation of Rs.4.31 lakhs.

For increasing the buffalo population and to create awareness among farmers in buffalo rearing, One Self Help Group comprising of 5 members per block are to be empowered under the scheme, 'Empowering women to become economically self reliant through buffalo rearing with the sanctioned fund of Rs.355.16 lakhs. Under this Scheme buffalo with a calf each, concentrate feed and insurance are given at 50% subsidy. For the 1st phase Rs.91.33 lakhs was allotted for covering 14 Districts and the Scheme is under implementation.

To acquire quality and clean milk production, 10 milking machines are being provided to District Livestock Farms at a total cost of Rs.6.00 lakhs and the work is under progress.

For effective implementation of artificial insemination programme, Liquid Nitrogen is mandatory for keeping up the quality of frozen semen straws. Establishing a fully automated Liquid Nitrogen (LN2) Plant with a production potential of 6-8 lakh litres / annum and an approximate life time of 15 years for the Department is essential. Hence, LN2 Plant is to be erected at Exotic Cattle Breeding Farm, Eachenkottai at a cost of Rs.5.50 crores and the work is under progress.

8.11.1 NATIONAL MISSION FOR PROTEIN SUPPLEMENT (NMPS)

In the context of ensuring year round availability of animal protein for consumers and to maximize economic returns to farmers, under the 'Development of Goat for enhancing animal protein supplement scheme' Rs.160.00 lakh was allotted towards 'Promoting Intensive Goat Production'. As per the scheme 4 Self Help Groups are selected from each district and each Self Help Group will contain 9 beneficiaries. Each beneficiary will be provided with 10 Goats, feed, shed, insurance, equipments, etc., free of cost, thereby facilitating their living standards. The Scheme is being implemented in 15 districts.

To emphasis the importance of feeding concentrate to Goats, 2 clusters comprising of 2,000 goats per cluster will be formed per district and for providing concentrate feed at free of cost for 2 months Rs.90.00 lakhs was allotted. The Scheme is implemented in 10 Districts.

With a view to securing food and nutritional security for a fast growing population, an integrated approach to livestock farming is now practiced. With a view to increase animal protein availability for farmers and to maximize economic returns to them, Rs.300.00 lakhs was allotted towards the scheme 'Promotion of Pig Development through breeding Farms'. Under this scheme, Nucleus

Breeding Farm was established at a cost of Rs.252.23 lakhs at District Livestock Farm, Abisheghapatti. The Piglets produced from the farms will be supplied free of cost to 10 satellite breeding farm at a cost of Rs.47.77 lakhs and the Scheme is under implementation.

8.12 EXTENDED FOOT AND MOUTH DISEASE CONTROL PROGRAMME

Extended Foot and Mouth Disease Control Programme is a Government of India Scheme implemented in all districts of Tamil Nadu including Kanniyakumari district. Government of India released Rs.5.16 lakhs for implementation during 2011-12. As a first round, 99.91 lakh doses of FMD vaccination was undertaken in all districts including Kanniyakumari District (as 12th round). 2nd round of FMD vaccination is being carried out in all the districts.

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

To control Peste des Petits Ruminant (PPR) disease, Government of India released Rs.383.20 lakhs for implementation during the year 2011-12. Vaccination programme against PPR is being

undertaken in all the districts in the State for the targeted population of 145 lakhs sheep & goats.

8.14 ASSISTANCE TO STATES FOR CONTROL OF ANIMAL DISEASES

Under this component, assistance is provided to State Government for control of economically important diseases of livestock and poultry by way of immunization, strengthening of existing State Veterinary biological production units, strengthening of existing State Disease Diagnostic Laboratories, holding workshops / seminars and in-service training to Veterinarians and Para-veterinarians. The main aim of the programme is protecting livestock against endemic diseases. During 2011-12, the following vaccination target was achieved:

- 22 Districts for Anthrax vaccination with 25.61 lakhs,
- 8 Districts for Black quarter vaccination with 2.84 lakhs,
- Kancheepuram District for Haemorrhagic septicemia vaccination with 4.81 lakhs, and
- 9 Districts for Sheep pox vaccination with 2.68 lakhs.

Rs.327.14 lakhs released (75:25) by the Government to implement the programme during 2011-12.

8.15 NATIONAL ANIMAL DISEASE REPORTING SYSTEM (NADRS)

Under this Scheme, it is proposed to introduce an online disease reporting system in the country in the form of National Animal Disease Reporting System (NADRS). In the proposed system, a dedicated computer network will be established linking each Block of the District to the District head quarter, each District of the State to the State headquarter, and each State to the Country's Central Unit. The information available at the Block level would be electronically transmitted to the District Veterinary office as well as the State office. Finally from all the States the information would be compiled and transmitted to the Centre at the Department of Animal Husbandry and Dairying.

Under this Scheme, the following programmes have been started:

- 417 computers (Two at State Level, 30 at District Level and 385 at Block Level) were

supplied by National Informatics Centre (NIC) and user name and password given by NIC.

- Software development process is being undertaken by Government of India through NIC.
- During 2011-12, a total no. of 449 officials from Animal Husbandry Department was trained for application of software.
- During 2011-12, Government of India released Rs.5 lakhs for printing and publication of monthly disease bulletin and purchase of photo copiers.
- During 2012-13, it is proposed to link Central Referral Lab, Institute of Veterinary Preventive Medicine, Tamil Nadu Veterinary and Animal Sciences University and Veterinary University Training Research Centre.

8.16 NATIONAL CONTROL PROGRAMME FOR BRUCELLOSIS (NCPB)

To achieve the ultimate goal of 'Zero Incidence of Brucellosis' in Tamil Nadu especially in 'Endemic areas', Government of India released Rs.92 lakh during 2011-12 for implementation of

the scheme, in which 1.5 lakh no. of heifer calf population were vaccinated against Brucellosis in 9 districts and screening in all districts is in progress.

In the forthcoming year, based on the screening results, endemic areas will be covered by Brucellosis Control Programme for the tune of Rs.100 lakh per year from Government of India fund.

8.17 NATIONAL PROJECT ON RINDERPEST ERADICATION (NPRE)

The objective of the Scheme is to control and eradicate Rinderpest Disease from our State and Country. The State was declared "Provisionally free from Rinderpest" from March 1998 onwards.

During 2011-12, Rs.16.06 lakhs was released by Government of India for the continuous Clinical Surveillance Programme. In the forthcoming years, it is proposed to get release of Rs.32 lakhs approximately from Government of India for continuous clinical surveillance programme.

8.18 QUINQUENNIAL LIVESTOCK CENSUS

The census on livestock, poultry, agriculture implements and fisheries is conducted once in 5 years since 1951 considering the shorter life span of livestock. It provides Animal Husbandry Statistics to serve as a base for planning and monitoring developments in the field of Animal Husbandry and Veterinary Sectors. The 18th Quinquennial Livestock and Poultry Census is carried out by the Department of Animal Husbandry in 2007 with a financial allocation of Rs. 18 crores. The 19th Livestock Census will be conducted with reference date 15.10.2012.

8.19 INTEGRATED SAMPLE SURVEY SCHEME (50:50)

From the year 1977, the Government of India provides grant in-aid to the State on 50:50 sharing basis for the implementation of the Integrated Sample Survey Scheme, covering all the Districts. The main objective of the scheme is to estimate the production of milk, egg, wool and meat in the State.

The Survey is conducted in the entire rural areas of State and has been divided into 3 seasons viz., summer, rainy and winter for studying the seasonal fluctuations in the production of livestock products. Further, reliable production estimates of MLP and the estimates of feed and fodder consumption are vital for preparing the estimates of value of output and the estimates of GDP from Animal Husbandry sector.

During 2011-12, the Government of India formulated a revised methodology, based on total number of villages in a District, 10-50 % of the villages will be selected in a year for complete enumeration of livestock and poultry population. This complete enumeration is conducted to arrive at the estimated number of Livestock.

The selection will be in the form of two independent sub-samples by using Simple Random Sampling without Replacement (SRSWOR). From the list of these two sub-samples of villages, a representative sample of 21 villages will be further selected for detailed study for collection of information on yield of Livestock at the district

level. Equal number of sample villages (7villages/season) from each sub-sample will be allocated among the three seasons.

Table 19: Estimated production of Milk, Egg and Meat 2010-11

Item	Summer Season	Rainy Season	Winter Season	Total
Milk (Thousand tonnes)	2,099.885	2,232.950	2,084.301	6,417.136
Egg (Lakh numbers)	38,351.774	39,078.792	37,706.597	1,15,137.163
Meat (Thousand tonnes)	139.915	145.176	139.196	424.287

8.20 TAMIL NADU IRRIGATED AGRICULTURAL MODERNIZATION AND WATER-BODIES RESTORATION AND MANAGEMENT PROJECT (TNIAMWARM)

Tamilnadu Irrigated Agricultural Modernization and Water-bodies Restoration and Management project (TN-IAMWARM project) is being implemented at a cost of Rs.2,547 crores integrating 8 Departments from 2007 to 2013 for a

period of 6 years with the assistance of the World Bank. The prime objective is to increase the income in farmers by improving the utilization of each and every unit of water resource in agriculture and related activities. For the entire project period, a sum of Rs.41.40 crores has been allotted to carry out animal husbandry activities.

The objectives of Animal Husbandry Department in this project are:-

- To increase the productivity of livestock in the sub basins.
- To provide veterinary services and breeding support at the farmers door step or nearest to the farmers door steps.
- To ensure complete cattle protection (Disease prevention and Cure).
- To increase the conception and calving rate in bovines.
- To reduce the gap between the availability and demand for fodder.
- To increase awareness among farmers in best animal care techniques.

During 2011-12, the following activities are being conducted in the Phase-I nine sub basins, Phase-II fifteen sub basins, Phase-III twenty sub

basins and Phase IV five sub basins at a total cost of Rs.11.26 crores.

- Continuation of the operation of 70 Cluster Sub basin Veterinary Units already established under the project. Upto March 2012, 39 Cluster Sub basin Veterinary Units are in operation.
- Performing 4.84 lakh artificial inseminations by utilizing the services of Cluster Sub basin Veterinary Units veterinarians, department veterinarians and para-veterinarians in the project area. Up to March 2012, 4.56 lakh artificial inseminations have been performed.
- Fodder development by bringing 2,672.50 hectares of private lands under fodder cultivation by providing fodder inputs like Co3/Co4 slips, fodder maize, fodder cholam, desmanthus, agathi, cow pea, kollukattai and stylo grass seeds to the farmers free of cost, distribution of 189 chaff cutters with 75% subsidy and conducting 843 Azolla cultivation demos. Up to March 2012, 2,672.50 hectares have been brought under fodder cultivation and 843 azolla demos have been conducted.
- Conducting various outreach programmes like 1,793 Fertility cum veterinary health care camps, 4,779 follow up visits, distribution of

mineral mixture to 15,725 animals and mineral licks to 17,450 animals, oestrus synchronization in 4,290 bovines, periodical deworming in 1.43 lakh heifer calves and 0.93 lakh sheep and goats. Up to March 2012, 1,793 Fertility cum veterinary health care camps, 4,679 follow up visits have been conducted. 1.43 lakh heifer calves and 0.93 lakh sheep and goats have been dewormed.

- Improving the human resource in the project area by providing three days training on best animal husbandry practices to 15,750 farmers, 61 Exposure visit to 3,050 farmers and refresher training to 119 veterinarians. Up to March 2012, 15,750 farmers have been provided 3 days farmers training, 61 exposure visits have been organized.

During 2012-13, it has been planned to conduct the following activities in the Phase-I nine sub basins, Phase-II fifteen sub basins, Phase-III twenty sub basins and Phase IV five sub basins at a total cost of Rs.7.73 crores.

- Continuation of the operation of 70 Cluster Sub basin Veterinary Units already established under the project.

- Performing 4.73 lakh artificial inseminations by utilizing the services of Cluster Sub basin Veterinary Units veterinarians, department veterinarians and para-veterinarians in the project area.
- Fodder development by bringing 1,771 hectares of private lands under fodder cultivation by providing fodder inputs like Co3/Co4 slips, fodder maize, fodder cholam, desmanthus, agathi, cow pea and kollukattai grass seeds to the farmers free of cost and conducting 738 Azolla cultivation demos.
- Conducting various outreach programmes like 1,507 Fertility cum veterinary health care camps, 4,521 follow up visits, distribution of mineral mixture to 13,125 animals and mineral licks to 13,690 animals, oestrus synchronization in 3,000 bovines, and periodical deworming in 1.25 lakh heifer calves.
- Improving the human resource in the project area by providing three days training on best animal husbandry practices to 13,325 farmers.

9. EXTENSION SERVICES

Without proper extension and propaganda, all the new techniques and scientific know-how cannot be fully utilized. With efficient activities people can not only be made aware of the latest developments in Animal Husbandry practices but also can make the scheme and programmes of the department more transparent to the public. Moreover it will have a greater role in solving many field problems and in containment of economically important diseases that threaten livestock.

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 diagnosis. Fairs and festivals are conducted by the department to collect and disseminate knowledge about Animal Husbandry and allied activities to the public in those areas. Information, prevention and control, knowledge about deadly diseases which are significance, deworming, vaccinations, artificial inseminations, calf rearing, goat and sheep rearing, poultry keeping, pasture management, meat inspection, sanitary measures, destruction and disposal of carcasses, disinfection and disposal of carcasses, disinfection of contaminated premises

and surface are provided to the farmers/ stake holders.

During the year 2011-12, the Government allocated a sum of Rs. 4 lakhs to the Animal Husbandry Department towards conducting fairs and the department participated in the following fairs: -

- Dindugal – Kodaikanal – Kodai Vizha
- Yercaud – Kodai Vizha
- Villupuram – Kalvarayan Malai – Kodai Fair
- Chennai – Island Ground Trade Fair (37th All India Tourist & Trade Fair)
- Salem Trade Fair
- Namakkal – Valvil Ori Vizha

A sum of Rs. 87,900 was allocated for the department to take part in Republic Day Parade Pageantry at Chennai.

10. VETERINARY PUBLIC HEALTH

Zoonotic diseases have emerged as a major public health concern in the modern era. With majority of the population living in rural areas and the farming system depending on livestock, the responsibility of animal health services in surveillance, prevention, control and possible eradication of zoonotic diseases are matter of great

importance. Some of the services related to these aspects are detailed below:

10.1 Mass Vaccination and Deworming

Deworming and routine vaccination will considerably reduce the disease incidence. The department is conducting regular vaccination and periodical deworming of livestock and poultry. By this the chances of spreading the zoonotic diseases like Anthrax, Brucellosis, Taeniasis, Strongylosis, Amphistomiasis etc., is minimized. Also the life cycle of parasites for which the human beings act as permanent or intermediate host is broken.

10.2 Meat Inspection

Meat is a rich source of animal protein and essential minerals for human beings. Presently there are about 121 registered slaughter houses functioning in the State. To provide safe and wholesome meat and to prevent environmental pollution, it is necessary that meat inspection work by competent veterinarians has all the more attained a special significance. By this, the chance of getting meat borne diseases like taeniasis, trichinosis and hydatidosis in meat consumers is almost eliminated.

11. ANIMAL WELFARE MEASURES

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

- ❖ At the Market Place
- ❖ During Transport
- ❖ In the Slaughter Houses

As per Section 38 of the Prevention of Cruelty to Animals Act, 1960 enacting Prevention of Cruelty to Animals Rules 2001, in every district of Tamil Nadu a Society for Prevention of Cruelty to Animals (SPCA) with the following objectives has been formed:

- ➔ To rescue and take care of all animals in the district and administer the PCA Act 1960.
- ➔ To register cases of cruelty to animals and produce the offenders before the court for conviction.

The Government have constituted State Level Coordination Committee and District Level Coordination Committees to oversee the

enforcement of Prevention of Cruelty to Animals, Rules.

12. JALLIKATTU

Jallikattu is conducted in the villages of Southern Districts of Tamil Nadu every year during Pongal/Harvest seasons as a part of the festival celebrations for the 400 years and more. The District Administration conducts the Jallikattu in the Districts.

During 2012, Jallikattu events were conducted from January 15th to 29th in notified 8 villages spread over 4 Districts viz., Dindigul, Madurai, Sivagangai and Tiruchirapalli, as per the Tamil Nadu Regulation of Jallikattu Act, (Act27/2009, already in force, directions of the Hon'ble Supreme Court of India in its order dated 25.11.10, 07.03.11 and Directions on 12.01.12 issued by Honourable Madras High Court of Madurai Bench.

The Hon'ble Madras High Court of Madurai Bench on 30.01.12 have not granted a blanket permission on conduct of Jallikattu events in future in the State and informed that the organizers of Individual events would have to obtain permission for conduction of Jallikattu events by filling separate Writ Petitions.

Hence as per the direction of the Hon'ble Madras High Court of Madurai Bench on 30.01.12, the Jallikattu event were conducted from 10.02.12 till date in 18 villages in 6 districts viz., Dindugul, Theni, Sivagangai, Madurai, Vellore and Virudhunagar.

13. TAMIL NADU LIVESTOCK DEVELOPMENT AGENCY

13.1 INTRODUCTION

Tamil Nadu Livestock Development Agency (TNLDA) has been established as an autonomous agency to implement National Project for Cattle and Buffalo Breeding (NPCBB) and is functioning since 9.1.2003.

The primary objective of the agency is to bring 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.

The above objective is planned to be achieved through the following activities

- i. Quality control of goods and services in breeding.
- ii. Supply of quality genetic inputs.

- iii. Introduction of quality bulls with high genetic merit for frozen semen production.
- iv. Intensification of Progeny Testing Scheme (PTS)
- v. Identification of elite cows through Field Performance Recording Programme (FPRP).
- vi. Support for acquisition of frozen semen and artificial insemination equipment.
- vii. Streamlining storage and supply of liquid nitrogen.
- viii. Increasing the breeding facilities;
 - Establishing new mobile AI centres by training rural youth and equipping them.
 - Encouraging Door-step delivery of breeding services.
 - Facilitating stationary AI centre to perform mobile AI work by conversion of existing Stationary Artificial Insemination Centre into Mobile cum Stationary Centre.
- ix. Human Resources Development through regular training.
- x. Conservation of indigenous breeds through Milk recording programme Genetic upgradation of Kangeyam Bull.

13.2 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 implemented. In 2011-12 towards procurement of quality inputs for genetic up gradation 6.21 lakh frozen semen straws produced from bulls of superior genetic quality have been purchased and supplied to the Department of Animal Husbandry.

13.3 ACTIVITIES UNDERTAKEN

i. Strengthening of Frozen Semen Production Stations

At District Livestock Farm, Udthagamandalam Farm, laying of farm roads, strengthening of semen collection facilities and establishment of fence around the bull sheds has been taken up at a cost of Rs.98.35 lakh.

At the District Livestock Farm, Hosur, construction of bull sheds, repair works to frozen semen laboratory, construction of isolation shed, purchase and installation of a 82.5KV Generator and change room for staff has been taken up at a cost of Rs.212.38 lakhs.

At that Exotic Cattle Breeding Farm, Eachenkottai construction of cow shed and purchase and installation of a 82.5KV Generator has been taken up at a cost of Rs.63 lakhs.

At the Nucleus Jersey and Stud Farm of the Tamil Nadu Co-operative Milk Producers' Federation strengthening of semen collection yard, quality control laboratory, construction of an isolation shed and store room has been taken up at a cost of Rs.150 lakhs.

ii. Strengthening of semen banks

Civil works were taken up in the semen banks of the Department of Animal Husbandry, Cattle breeding and Fodder Development Unit at Nagercoil, Sivagangai, Dindigul, Ramanathapuram and District Livestock Farm, Udhamandalam and at District Cooperative Milk Producers' Union Trichy, Salem, Coimbatore, Virudhunagar and Kanyakumari.

iii. Embryo transfer programme

The strengthening of embryo transfer laboratory at District Livestock Farm, Hosur and implementation of embryo transfer technology has been taken up at a cost of Rs.50 lakhs.

iv. Strengthening of Artificial Insemination Network in the State by establishing New Mobile Artificial Insemination Centres

a) In 2011-12, 207 rural youth were trained to take up doorstep artificial insemination work and they have been provided with necessary equipment to establish new mobile Artificial Insemination Centres.

b) In 2011-12, 2 retired Veterinarians, 5 fresh veterinary graduates and 7 Livestock Inspectors have been provided with necessary facilities during the year to carry out artificial insemination at farmers' doorstep.

v. Facilitate the conversion of stationary AI centers into stationary cum mobile centers

In 2011-12, facilitation of conversion of 200 stationary AI Centers into stationary cum mobile AI centers of Department of Animal Husbandry has been taken up.

vi. Strengthening and Streamlining of Liquid Nitrogen

To strengthen the Liquid nitrogen storage at the semen bank under the Cuddalore and Villupuram

District Co-operative Milk Producers' Union, steps to install bulk liquid nitrogen storage Silo of 3,000 lit capacity at Cuddalore have been taken up.

vii. Training Programmes

- a) 45 Veterinary Assistant Surgeons of Department of Animal Husbandry and 13 Veterinarians of Tamil Nadu Cooperative Milk producers; Federation were given training at the Central Frozen Semen production and Training Institute, Hesserghetta and BAIF, Research foundation and Training Institute, Pune on Frozen Semen Technology, Quality control and Infertility
- b) 395 Veterinary Assistant Surgeons of Department of Animal Husbandry have been given Refresher training at Veterinary College and Research institute, Namakkal.
- c) 450 Village level workers and Private Artificial Insemination workers have been given training at the National Dairy Development Board, Southern Regional Training Center, Erode.

- d) 300 Livestock Inspectors of Department of Animal Husbandry have been given retraining at Exotic Cattle Breeding Farm, Eachenkottai, Thanjavur.

viii. Strengthening of training centers

In 2011-12 strengthening of the training center at Eachenkottai, Exotic Cattle Breeding Farm, of Department of Animal Husbandry and Thirunelveli District Cooperative Milk producers' Union of Tamil nadu Cooperative Milk producers' Federation have been taken up at a cost of Rs.5 lakh each.

ix. Progeny Testing Scheme (PTS)

The sixth batch of 20 Crossbred Jersey bulls and seventh batch of 25 crossbred Jersey bulls are under progeny testing programme implemented by the Tamil Nadu Cooperative Milk Producers' Federation with the financial assistance from Tamil Nadu Livestock Development Agency. The VIII set of 25 Crossbred Jersey has been initiated.

x. Field Performance Recording Programme (FPRP)

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 cows enrolled, high yielding cows selected are inseminated with proven bull semen and the bull calves born to these cows are selected and reared for semen production in the semen stations. The third set of the programme is being implemented in the milk unions of Coimbatore, Dharmapuri, Erode, Madurai, Salem, Tirunelveli, Thiruchirapalli and Vellore. The IV set of the programme has been initiated.

xi. Conservation of indigenous breeds

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 enrolled, 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 Trichy.

xii. Infertility Camps

During 2011-12, 608 infertility camps have been organized through Department of Animal

Husbandry and Tamil Nadu Co-operative Milk Producers' Federation limited.

13.4 LIVESTOCK INSURANCE SCHEME

The centrally sponsored Livestock Insurance Scheme is being implemented by Tamil Nadu Livestock Development Agency. Under the scheme, 50% of the premium is provided as Government subsidy and balance 50% is collected from the beneficiaries. In 2011-12, the Scheme is being implemented with fund allocation of Rs.500 lakhs in 15 districts viz., Coimbatore, Erode, Salem, Namakkal, Trichy, Thanjavur, Madurai, Dindigul, Thirunelveli, Thiruvannamalai, Cuddalore, Dharmapuri, Krishnagiri, Villupuram and Vellore. A total of 75,032 cattle and buffaloes have been insured during the year.

14. TAMIL NADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY

14.1 OBJECTIVES OF TANUVAS

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

- ◆ To impart quality education to undergraduate, post-graduate and doctoral students in different fields of Veterinary and Animal Sciences, Fisheries Sciences and Food Processing Technology.
- ◆ To carry out research in livestock, poultry and fish 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, poultry and fisheries in the State through extension programmes.

14.2 UNITS OF TANUVAS

The constituent units of Tamil Nadu Veterinary and Animal Sciences University are given below.

Table 20: Constituent Units of TANUVAS

<p>❖ COLLEGES</p> <ol style="list-style-type: none"> 1. Madras Veterinary College, Veperiy, Chennai 2. Veterinary College and Research Institute, Namakkal 3. Fisheries College and Research Institute, Thoothukkudi 4. Institute of Food and Dairy Technology, Koduvalli, Chennai 5. Veterinary College and Research Institute, Tirunelveli 6. Veterinary College and Research Institute, Orathanadu, Thanjavur
<p>• CENTRES OF ADVANCED STUDIES (CAS)</p> <ol style="list-style-type: none"> 1. Veterinary Clinical Medicine, Ethics and Jurisprudence, Madras Veterinary College, Chennai 2. Poultry Science, Veterinary College and Research Institute, Namakkal
<p>▪ CENTRE OF EXCELLENCE</p> <ol style="list-style-type: none"> 1. Centre of Excellence in Animal Biotechnology and Immunology, Madras Veterinary College, Chennai

❖ **RESEARCH STATIONS**

1. Institute of Poultry Production and Management, Chennai
2. Post Graduate Research Institute in Animal Sciences, Kattupakkam, Kancheepuram District
3. Mecheri Sheep Research Station, Pottaneri, Salem District
4. Sheep Breeding Research Station, Sandynallah, The Nilgiri District
5. University Research Farm, Madhavaram, Chennai
6. Institute of Animal Nutrition, Kattupakkam, Kancheepuram District
- TANUVAS Small Ruminants Research Centre, Tirunelveli District

❖ **VETERINARY UNIVERSITY TRAINING AND RESEARCH CENTRES**

- | | |
|---------------|---------------|
| 1. Coimbatore | 9. Dharmapuri |
| 2. Dindigul | 10. Erode |

- | | |
|------------------|-----------------|
| 3. Karur | 11. Madurai |
| 4. Melmaruvathur | 12. Parakkai |
| 5. Cuddalore | 13. Rajapalayam |
| 6. Salem | 14. Thanjavur |
| 7. Tiruppur | 15. Vellore |
| 8. Tiruchy | |

❖ **VETERINARY UNIVERSITY REGIONAL RESEARCH CENTRE, PUDUKOTTAI**

❖ **FISHERIES TRAINING AND RESEARCH CENTRE**

1. Parakkai 2. Thanjavur

❖ **ANIMAL DISEASE LABORATORY, THALAIVASAL**

❖ **LABORATORIES**

1. Animal Feed Analytical and Quality Assurance Laboratory, Namakkal
2. Poultry Disease Diagnosis and Surveillance Laboratory, Namakkal
3. Pharmacovigilance Laboratory for Animal Feed and Food Safety, Chennai

4. Central University Laboratory, Madhavaram Milk Colony, Chennai
5. Leptospirosis Research Laboratory, Madhavaram Milk Colony, Chennai
6. Shrimp Disease Diagnostic Laboratory, Madhavaram Milk Colony, Chennai
7. Bacterial Vaccine Research Centre, Madhavaram Milk Colony, Chennai
8. Viral Vaccine Research Centre, Madhavaram Milk Colony, Chennai
9. Centralised Instrumentation Laboratory, Madras Veterinary College, Chennai
10. Centralised Clinical Laboratory, Madras Veterinary College, Chennai

❖ **FARMERS TRAINING CENTRES**

1. Kancheepuram
2. Theni
3. Thiruvavarur

❖ **KRISHI VIGYAN KENDRAS**

1. Kattupakkam
2. Kundrakudi
3. Namakkal

14.3 ACTIVITIES OF TANUVAS

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

14.3.1 EDUCATION

★ Details of sanctioned students' admission strength for the year 2012-2013 at TANUVAS are furnished below:

Table 21: Students Admission Strength

Courses	Madras Veterinary College, Chennai	Veterinary College and Research Institute, Namakkal	Fisheries College and Research Institute Thoothukudi	Veterinary College and Research Institute, Orathanadu, Thanjavur	Veterinary College and Research Institute Tirunelveli	Institute of Food and Dairy Technology, Kottuvalli	Total
B.V.Sc. & AH	100	80	-	40	40	-	260*
B.V.Sc. & AH (NRI-5; Foreign Nationals – 5 and Kashmiri migrants – 1)	6	5	-			-	11
B.F.Sc	-	-	40			-	40
B.F.Sc (NRI-1 and Foreign Nationals – 3)	-	-	4			-	4
B.Tech. (Food Processing Technology)	-	-	-			20	20
B.Tech. (Poultry Production Technology)	-	-	-			20	20
M.V.Sc	120		-			-	120

Courses	Madras Veterinary College, Chennai	Veterinary College and Research Institute, Namakkal	Fisheries College and Research Institute Thoothukudi	Veterinary College and Research Institute, Orathanadu, Thanjavur	Veterinary College and Research Institute, Tirunelveli	Institute of Food and Dairy Technology, Koduvalli	Total
M.V.Sc. & M.F.Sc. (Foreign Nationals)	5			-	-	-	5
M.F.Sc	-	-	31	-	-	-	31 **
M.Tech (FPT)	-	-	-	-	-	5	5
M.Sc. (Bioinformatics)	10	-	-	-	-	-	10
M.Sc.(Biostatistics)	3	-	-	-	-	-	3
M.Phil in Biotechnology	8	-	-	-	-	-	8
M.Phil in Climate change and Fisheries	-	-	4	-	-	-	4
PG Diploma (Animal Sciences)	30	-	-	-	-	-	30
PG Diploma (Fisheries Sciences)	-	-	6	-	-	-	6
PG Diploma through Distance Education	80 (Online mode at Directorate of Distance Education, Madhavaram)						80
Ph.D. (Veterinary)	98						98
Ph.D. (Fisheries)	-	-	15	-	-	-	15

* 34 seats increased for BVSc degree course from the academic year 2012-13

** 2 seats increased in MFSc from the academic year 2012-13

✎ During 2012-13, 40 students per college will be admitted for B.V.Sc., course in the two Veterinary College and Research Institutes to be established at Orathanadu (Thanjavur district) and Tirunelveli.

✎ The following new courses were started during 2011-12

- a. Undergraduate degree programme
 - ★ B.Tech – Poultry Production Technology
- b. Postgraduate Degree programme
 - ★ Bio-Statistics (M.V.Sc / M.Sc.,)
 - ★ Bio-informatics (M.Sc.)
 - ★ Food Processing Technology (M.Tech.)
 - ★ Climate change and Fisheries (M.Phil.)
 - ★ Wildlife Sciences (Ph.D.)
- c. Postgraduate Diploma Programme (Online)
 - ★ Small Animal Orthopedics
 - ★ Veterinary Ophthalmology
 - ★ Small Animal Dermatology
 - ★ Small Animal Emergency and Critical Care Medicine
 - ★ Feed Manufacturing Technology
 - ★ Commercial Poultry Production
 - ★ Ethno-Veterinary practices
- d. Skill Development Programmes : 18 Nos.
 - ★ Feed Analytical Technician
 - ★ Livestock Farm Manager

- ★ Poultry Farm Manager
- ★ Hatchery Supervisor
- ★ Poultry Farm Supervisor
- ★ Poultry Breeder Farm Supervisor
- ★ Feed Mill Supervisor
- ★ Dairy Plant Assistant
- ★ Laboratory Assistant
- ★ Fish Processing Assistant
- ★ Dairy Farm Assistant
- ★ Turkey Farm Assistant
- ★ Shrimp farming Assistant
- ★ Small Animal Attendant
- ★ Surgery Theatre and Radiology Attendant
- ★ Live Fish Feed Production Assistant
- ★ Milk and Milk Products Quality Control Assistant
- ★ Poultry vaccinator

e. Self Employment programmes : 14 Nos.

- ★ Dairy farming
- ★ Rabbit farming
- ★ Fodder and Fodder seed production
- ★ Preparation of fermented dairy product

- ★ Ornamental Fish Rearing and Breeding
- ★ Japanese Quail farming
- ★ Desi bird farming
- ★ Sea weed production
- ★ Fresh water fish farming
- ★ Livestock farm waste utilization
- ★ Emu farming
- ★ Pig farming
- ★ Sheep farming
- ★ Goat farming

✎ The valedictory function to conclude the year long celebrations of World Veterinary Year-2011 was organized by TANUVAS on 12/12/2011. His Excellency, the Governor of Tamil Nadu and Chancellor of the University, Dr.K.Rosaiah graced the occasion and delivered the Chief Guest address. Three books on "World Veterinary Year Celebrations 2011", "Technology Release 2011" and "Package of Practices on Livestock and Poultry" were released by His Excellency, the Governor and the Chancellor. The Governor honoured 13 outstanding livestock farmers / entrepreneurs trained by

the University. His Excellency also honoured the Best Faculty of TANUVAS in five different categories and 47 faculty members who have completed 30 years of service.

14.3.2 RESEARCH

❖ Sixteen new technologies developed by the University were released to different stakeholders by His Excellency the Governor of Tamil Nadu and Chancellor of the University, Dr.K.Rosaiah on 12.12.2011. They were as follows :

- ✎ Nandanam Guinea Fowl – 1
- ✎ Namakkal Chicken – 1
- ✎ Nandanam Turkey – II
- ✎ CDV Check – Canine Distemper Virus Antibody Test Kit
- ✎ PCR kit for diagnosis of Monodon baculovirus (MBV) in shrimp
- ✎ Agar gel immunodiffusion (AGID) test kit for serological assessment of Anthrax vaccine

- ✎ Chicken Anaemia virus antibody screening by a rapid latex agglutination test kit
- ✎ Flow through technique for diagnosis of Hydatidosis
- ✎ Development of pet food incorporating dry rendered spent hen meal
- ✎ Disposal and utilization of dead birds by aerobic composting
- ✎ SIS-LIVESTAN (Spatial Information System for Livestock Sector in Tamil Nadu)
- ✎ Synbiotic whey drunk cultured with bifidobacteria
- ✎ Anthelmintic incorporated Mineral block (AIM block) for sheep and goat
- ✎ Detection of adulteration of fish meal with leather meal
- ✎ n-3 fatty acid enriched chicken eggs and meat
- ✎ Software on formulating TANUVAS-SMART mineral mixture

- ❖ Under University Plan, 83 Plan Schemes with the financial outlay of Rs.4,861.99 lakhs funded by the Government of Tamil Nadu are in operation for strengthening the infrastructure facilities for higher studies, innovations, research infrastructure and dissemination of knowledge.
- ❖ Forty externally funded research programmes at a total outlay of Rs. 3,550.59 lakhs were sanctioned during 2011-12.
- ❖ During 2011-12, Indian Council of Agricultural Research, New Delhi has sanctioned four schemes namely Pet food processing unit and Model Demonstration unit for processing of milk; preparation of value added dairy products; Freshwater aquafarming (carp production) and Processing of Milk & Milk Products under Experiential learning to the worth of Rs.290.70 lakhs

- ❖ During 2011-12, Department of Biotechnology, New Delhi has sanctioned a scheme on "Translational Research Platform for Veterinary Biologicals" to the tune of Rs. 2,293.77 lakhs
- ❖ Under National Agricultural Development Programme, TANUVAS is implementing the following 10 schemes with a total outlay of Rs. 824.93 Lakhs during the year 2011-12.
 - ↪ Value added dairy food manufacturing unit to maximize the returns from dairy farming;
 - ↪ Novel Diagnostics and Vaccine Delivery System for Emerging and Economically Important Bacterial and Viral Diseases Affecting Small Ruminants;
 - ↪ Strengthening of Frozen Semen Bank at Madras Veterinary College, Chennai;
 - ↪ Developing of Price policy model for milk in Tamil Nadu; Centre for

- polytechnic courses in animal sciences;
- ✎ Popularizing Model Fodder Seed Bank at farmers' field to augment fodder production;
- ✎ Enhancing open water aquaculture production through cage farming; Generating alternative livelihood options for the Coastal Community towards Fisheries Biodiversity Conservation in Tamilnadu;
- ✎ Dissemination of better management practices and Biofloc Technology to enhance SPF *Litopenaeus Vannamei* and *Penaeus Monodon* Shrimp production in Tamil Nadu and
- ✎ Development of vocational training centre towards improving the livelihood of fisherfolk
- ❖ In order to have a Certification Laboratory for export purpose, Agricultural and Processed Food Products Export Development Authority (APEDA),

New Delhi has sanctioned two schemes to strengthen laboratories viz. Animal Feed Analytical and Quality Assurance Laboratory, Namakkal at a cost of Rs.436.23 lakhs and Pharmacovigilance Laboratory for Animal Feed and Food Safety, Chennai at a cost of Rs.555.50 Lakhs.

- ❖ During 2012-13, TANUVAS has proposed the following schemes at a cost of Rs.42.67 lakhs to Government of Tamil Nadu under Part II :
 - ✎ Identification of avian infectious bronchitis virus variants in field conditions and development of a potent inactivated vaccine at a cost of Rs.22.00 lakhs
 - ✎ Establishment of recirculatory aquaculture system at Maritech Research and Extension Centre at a cost of Rs.20.67 Lakhs.

14.3.2.1 AGREEMENTS SIGNED

- With University of Cantabria, Spain to undertake collaborative work in the area of economics and business management.
- With National Meat and Poultry Processing Board, New Delhi to carry out research work on meat and poultry processing
- With Auburn University, USA for collaborative research on pig nutrition, goat breeding and poultry meat quality control.
- With Agricultural and Processed Food Products Export Development Authority (APEDA), New Delhi to modernize and upgrade the Animal Feed Analytical Laboratory at Namakkal for testing of animal / poultry products (Rs.4.36 crores) and also to strengthen the Pharmacovigilance Laboratory for Animal Feed and Food Safety for testing of animal / poultry products for residue monitoring (Rs.5.55 crores).

- With Agri-food and Biosciences Institute, Northern Ireland to take up research on animal health

14.3.2.2 RESEARCH ACHIEVEMENTS IN ANIMAL SCIENCES

a. ANIMAL HEALTH

i. Rapid dot test for diagnosis of cystic echinococcosis in man

Novel dip disc ELISA was a modified form of dot ELISA, easy to perform with high sensitivity and specificity, to diagnose cystic echinococcosis in man without any high cost equipment

ii. Development of lateral flow kit for the diagnosis of bovine brucellosis

Lateral flow kit has been developed for the diagnosis of bovine brucellosis. This diagnostic kit will provide a cheap, highly sensitive, specific tool for the detection of brucellosis in the field itself. It is a pen side kit, hence, suspected cases can be easily and

quickly diagnosed by field Veterinarians and thereby improves animal health and production. It will reduce the cost of importing indirect ELISA kit from other countries.

b. ANIMAL PRODUCTION

i. Homestead Rabbit Farming to Improve the Livelihood of Rural Women SHGs in Tamil Nadu

Fifty three women beneficiaries from Thiruvallur district were trained on rabbit farming. Twenty two rabbit units (one male + five females) were established in order to popularize rabbit meat. Rabbit farming practices and awareness on rabbit meat were popularized among rural women to earn additional income.

ii. Development of low fat fibre enriched Ice cream

Low fat fiber enriched ice cream was produced by incorporating inulin and fructo-

oligosaccharides. Owing to its lower calorific value and low cost of production, ice cream with fructo-oligosaccharides seems to be the ideal choice recommended for production of an acceptable low fat fiber enriched ice cream.

iii. Effect of lactic acid treatment and vacuum packaging on quality and shelf life of poultry meat

Decontamination of poultry meat with 2% lactic acid and vacuum packaging extended the shelf life of chicken carcasses considerably. The results of the study is recommended for the meat processors, entrepreneurs engaged in meat trade.

iv. Empowerment of tribal women and women Self Help Groups through rabbit, poultry and sheep farming in the Nilgiris district

Thirty units of sheep, each consists of two ewe lambs and one ram lamb were distributed to Pania tribal women and women self help group members. Twenty six units of

rabbits each consists of 3 males and 6 females were distributed to members of tribal women and women self help groups. In addition, 225 units of layer birds (665 birds) were distributed to the women self help groups and tribal women. All the beneficiaries of rabbits and poultry units were provided with cages suitable for rearing the respective class of animals. All the beneficiaries were given training on management practices of sheep, poultry and rabbits. The scheme has established 26 units of rabbits, each unit consisting of 9 rabbits, 225 units of poultry and 30 sheep units (3 sheep per unit) during the project period and thus the women were directly benefited.

v. Technologies developed

1. Paneer Pressing Device
2. Curd incubator machine
3. A mobile scalding tank
4. TANUVAS ICAR Pet treat for dog

5. A modified diagnostic test Dip Disc ELISA for diagnosis of hydatidosis
6. Synbiotic ice cream
7. Low-cost progesterone-impregnated vaginal sponge
8. Nested Polymerase Chain Reaction kit, Loop mediated isothermal amplification assay and Latex agglutination assay and Lateral flow kit for diagnosis of hepatopancreatic parvovirus (HPV) infecting the shrimp

14.3.3 CLINICAL SERVICES

TANUVAS is offering clinical services to the pet and livestock owners round the clock. The details are furnished below:

Table 22: Out-patient Cases treated during the year 2011-2012

Description	Hospitals		
	Madras Veterinary College, Vepery, Chennai	Veterinary University Peripheral Hospital, Madhavaram	Veterinary College and Research Institute, Namakkal
Canine	52,506	9,199	7,631
Bovine	7,382	979	3,765
Feline	2,242	214	239
Equine	857	-	62
Caprine/Ovine	2,993	562	2,029
Avian	3,581	772	48
Others	915	127	185
Total	70,476	11,853	13,959

14.3.2.1 Inpatient facilities

- ⊕ In Madras Veterinary College teaching hospital at Vepery, 144 large and 95 small animals were admitted and treated as in-patients for various ailments.
- ⊕ At Veterinary College and Research Institute, Namakkal, 1,150 large animals were admitted and treated as in-patients.
- ⊕ A separate quarantine unit to house animals suspected for rabies is functioning, in both the institutions.

Infrastructure and facilities available

1. Cystoscope
2. Urethroscope
3. Canine Laparoscope
4. Oxygen generator
5. Colour Doppler Ultrasound
6. Rhinoscopy

14.3.3.2 Laboratory services

- **Pharmacovigilance Laboratory for Animal Feed and Food Safety, Madhavaram, Chennai**

This laboratory is involved in analysis of mycotoxins, pesticide and drug residues in animal feed and food. During the period under report, 3,226 samples were analysed for xenobiotic residues.

- **Animal Feed Analytical and Quality Control Laboratory, Namakkal**

A total of 1,577 poultry and livestock progressive farmers from various parts of Tamil Nadu and other states were advised

regarding analysis of feed ingredients and feeds. They were counseled on various problems in feeding practices. During the reporting period, 13,546 samples were tested and 32,863 analyses were carried out at this laboratory.

▪ **Leptospirosis Research Laboratory, Madhavaram**

A total of 3,621 human serum samples and 1,327 animal serum samples from suspected cases were screened by MAT for detection of leptospiral antibody. Out of 3,621 human samples tested, 1,517 (41.89%) were positive. Out of 1,327 animal samples tested, 470 (35.42%) were found positive.

14.3.4 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 Dept. 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 23: Training Programmes Conducted during 2011-2012

Title of the Training Programme	No. of Training Programmes		Beneficiaries				Total
			SC/ST		Others		
	On campus	Off campus	Men	Women	Men	Women	
Dairy farming	84	203	606	1,678	1,388	2,896	6,568
Sheep & Goat farming	71	170	258	3,861	1,422	6,256	11,797
Poultry Farming	60	16	229	191	1,438	477	2,335
Turkey Farming	7	1	17	13	74	21	125
Broiler farming	-	15		232		352	584
Japanese Quail farming	21	4	72	20	386	62	540
Emu farming	2	1	1	14	19	27	61
Pig farming	8	-	31		97	15	143
Rabbit farming	6	-	22	4	87	14	127
Milk and Milk products	13	19	81	191	298	530	1,100
Meat and Meat products	2	2	-	13	30	43	86

Title of the Training Programme	No. of Training Programmes		Beneficiaries				Total
			SC/ST		Others		
	On campus	Off campus	Men	Women	Men	Women	
Home Science	25	11	48	45	400	283	776
Horticulture	9	10	46	8	370	111	535
Integrated livestock farming	18	25	465	393	410	320	1,588
Fish farming	22	15	127	66	247	147	587
Agricultural Engineering	6	4	35	12	200	41	288
Feed and Fodder Cultivation	18	12	100	96	365	128	689
Disease diagnosis and Management	5	23	25	579	131	835	1,570
Breeding problems & its management in crossbreds	16	2	89	48	176	51	364
Production of Value added fishery products	-	5	-	133	1	-	134
Ethno Veterinary medicine	4	9	132	13	269	87	501
Carp farming	3	3	36	31	69	15	151
Ornamental fish culture	2	-	1	-	6	15	22
Composite fish culture	1	-	8	-	-	-	8
Total	403	550	2,429	7,641	7,883	12,726	30,679

- ✎ All the beneficiaries of Tamil Nadu Government Scheme of the Free distribution of Milch cows, Goat and sheep in rural areas are offered free training through TANUVAS peripheral centres on scientific rearing of the same
- ✎ TANUVAS has distributed 7 tonnes of Co4 green fodder, one tonne of mineral mixture, 500 kg milch animal feed, 100 kg of straw block and vaccinated 2,500 poultry birds with oral pellet vaccine against Newcastle disease free of cost to the victims of Thane cyclone affected Cuddalore district.
- ✎ A team of scientists have been deputed to assess the soil condition and consequence of "Thane" cyclone and suggest support measures for raising appropriate fodder crops to sustain livestock farming activity in Cuddalore district
- ✎ TANUVAS is observing Pongal festival season as "Livestock and Fisheries week" at all its constituent units and organised horse adoption schemes, computerised registry of

pet animals, free vaccination camp against rabies, seminar on food processing and value addition etc.

✎ In commemoration of World Veterinary Year 2011, a Science exhibition was conducted at Madras Veterinary College from 29.07.2011 to 01.08.2011 to display the recent advances in veterinary medicine and animal sciences. On 29.07.2011, Hon'ble Minister for Animal Husbandry, Government of Tamil Nadu, inaugurated the exhibition and released the video CD titled "Kokkarakko" for creating awareness about oral pellet vaccine to control Ranikhet disease in desi chicken.

✎ TANUVAS hosted the first ever "All India Inter Veterinary University Sports and Games meet – 2011" in commemoration of World Veterinary Year 2011 to showcase the sporting talents of students in Veterinary Universities all over the country at Chennai from 08.11.2011 to 11.11.2011. A total of 388 students (310 boys and 78 girls) from 8 of 12 Veterinary Universities of India

participated in various events viz. table tennis, shuttle badminton, cricket, football, kabaddi, volley ball and basket ball.

14.4 FUTURE PROGRAMMES

i. Canine Breeding Centre

A Canine breeding centre to teach breeding techniques in dogs is proposed to be established. It will undertake breeding of exotic breeds and native breeds of Tamil Nadu like Rajapalayam, Chippiparai, Kombai and Kanni.

ii. Dual Ph.D.Programme

In collaboration with Virginia Polytechnic Institute and State University, USA, TANUVAS has planned to start Dual Ph.D. programme in the faculty of Veterinary and Animal Sciences.

iii. PG Diploma Course

During 2012-13, two PG diploma courses in Regenerative Medicine and Small Animal

Diagnostic Ultrasound on online mode with an annual intake of 10 students per course will be started.

TANUVAS has planned to start PG diploma in Zoonoses through online and print mode as a continuing education programme.

iv. Centre of Excellence

A Centre of Excellence in Veterinary Clinical Services at Madras Veterinary College, Chennai is to be established to provide state-of-art facilities for conducting research in clinical subjects and train the veterinarians in the state.

v. Regional Livestock Exhibition

TANUVAS will organize "Regional Livestock Exhibitions" during 2012 and 2013 in different parts of Tamil Nadu. The first "Regional Livestock Exhibition" was organized at Srirangam of Trichy district from 24 – 26th February 2012. It will be

organized at Coimbatore, Tirunelveli, Salem, Vellore, Madurai and Villupuram subsequently.

vi. Strengthening of Fresh water / Brackish water Fish Farming

TANUVAS has planned to strengthen the fresh water / brackish water fish farming by establishing Fisheries Centre at Manimangalam at a cost of Rs.146 lakhs and Brackishwater Aquatech Research Centre at Siruseri at a cost of Rs.60 Lakhs during this year.

vii. Quality Fish Seed production

To concentrate on carp seed production and to meet the demand of quality seed production, Regional Fisheries Research and Extension Centre will be established at Barur, Krishnagiri district to the tune of Rs.153 lakhs in this year.

viii. Thrust areas of research

- ❖ Conservation and improvement of Native Germplasm
- ❖ Augmenting milk and meat production and evolving cutting edge technologies for development of novel value added products and quality control
- ❖ Food processing
- ❖ Improving Local feed and fodder resources
- ❖ Development of improved diagnostics
- ❖ Development of immuno-prophylactics and vaccines
- ❖ Control of mastitis
- ❖ Conservation and management of fisheries resources and strengthening fish harvesting and processing technology

The Tamil Nadu Veterinary and Animal Sciences University will continue to strive to undertake research, education and extension programmes intensively and contribute to the development of livestock, poultry and fishery sectors in the state.

15. BUDGET FOR 2012-13

A sum of Rs.814.0345 crores has been provided in the Budget for 2012-13. Out of this, projected revenue expenditure is Rs.714.0334 crores, capital expenditure is 100.0010 crores and loan amount is Rs.1,000.

16. CONCLUSION

Animal Husbandry and Dairying constitutes an important economic activity in Tamil Nadu. This important primary sector activity has the potential to radically transform the rural economy by providing sustainable livelihood opportunities to the unemployed and underemployed rural poor. By implementing a gamut of well conceived programmes, encompassing all the spheres of the Animal Husbandry sector, the Government has ensured that the rural employment and income are boosted along with the growth of this Sector. By modernising and intending Veterinary Services and other facilities, the growth and sustainability of this sector under the dynamic and visionary leadership of the Hon'ble Chief Minister can be assured.

An inclusive approach for development by making socially and economically backward communities and women of the State as important stake holders in the decision making process will fuel the growth of this sector.

T.K.M. CHINNAYYA,
Minister for Animal Husbandry.