



3.6 ANIMAL HUSBANDRY

Introduction

Agriculture and Animal Husbandry support the economy of nearly 60 percent of the population. During 2010-11, animal husbandry contributed about 2.58 percent of Gross State Domestic Product (GSDP) and that to the agricultural and allied activities its contribution was 24.80 percent. Being the primary sector, the improvement or changes in the State output depends upon the output of agriculture and allied activities like animal husbandry and fisheries. Animal husbandry comes in handy to the rural community, majority of whom are landless, small and marginal farmers and are also the available workforce for agriculture. Livestock sector

plays a pivotal role in creating sustainable, gainful employment opportunities and supplementing income of small farmers and landless labourers. Moreover, it provides the much needed balanced nutritious food and improves the household's food security. Tamil Nadu contributes 18.27 percent of egg, 8.78 percent of meat and 5.61 percent of milk production and stands second in egg and fifth in meat and eighth in milk production of the country.

Livestock Population

The livestock wealth in the State is impressive. The category wise distribution of livestock and poultry in the State is provided in the Table 3.6.1

Table 3.6.1: Tamil Nadu Livestock Population during the Inter Census Periods

(Lakh Nos.)

Species	17 th Census	18 th Census	% increase/ decrease over 17 th census
Cattle	91.41	111.89	22
Buffalo	16.58	20.09	21
Sheep	55.94	79.91	43
Goat	81.77	92.75	13
Horses and Ponies	0.25	0.06	-76
Donkeys	0.26	0.05	-81
Pigs	3.21	2.84	-12
Total Livestock	249.42	307.59	23
Dogs	27.16	18.40	-32
Rabbits	0.67	0.14	-79
Poultry (backyard and farm poultry)	865.91	1281.08	48

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN

**Table 3.6.2: Species wise Comparison of Breedable Female Population**

(Lakh Nos.)

Species - Cattle	17 th Quinquennial Census	Percent of population	18 th Quinquennial Census (p)	Percent of population
Exotic and crossbred	25.89	62.89	33.77	70.72
Indigenous inclusive of non descript	15.28	37.11	13.98	29.28
Total	41.17	100.00	47.75	100.00
Buffaloes (crossbred)	9.01	-	8.99	-
Grand Total	50.18	-	56.75	-

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN

The total livestock population of the State is 307.59 lakh (2007), accounting to 5.81 percent of the country's livestock population of 5296.98 lakh. Among the livestock, the sheep population in the State has registered the maximum growth. Population of cattle and buffaloes has also increased around 21-22 percent. In case of poultry, 48 percent increase was registered.

From Table 3.6.2, a comparison of 18th quinquennial census with that of 17th quinquennial census indicated a considerable reduction in the breedable female nondescript cattle and an increase in the breedable female crossbred cattle population.

Opportunities and Threats

The special feature of this sector is that the animal husbandry activity is an ancient avocation that has all along been practised by the rural people since time immemorial. With women contributing 75 percent of the total labour force in animal husbandry, it can play a greater role in empowerment of women. Animal husbandry is a sector with a high potential for growth.

Diseases: Though the implementation of crossbreeding in bovines has led to an increase in crossbreds and milk production, the threat of emerging diseases is relevant as productivity and disease resistance are inversely proportional.

Shortage of feed & fodder: Adequate supply of feed and fodder is a critical factor affecting the performance of livestock. The availability of green fodder is extremely restricted to selected areas and seasons. The State is estimated to have a 42.6 percent deficit in green fodder availability.

Lack of basic Infrastructure: Basic infrastructure in veterinary institutions is essential to provide better veterinary services and breeding support. But most of the buildings are in a dilapidated condition and need replacement while some require renovation. Moreover, some of the institutions do not have basic amenities like water, electricity and sanitation.

Lack of marketing arrangements: Animal trading is mostly through shandies that do not even have facilities like water, shelter,



first aid, ramps, etc. As trading is mostly in the control of middlemen, the farmers are not able to reap the real value for their livestock and livestock products during the sale.

Review of the Eleventh Five Year Plan

An outlay of ₹458.70 crore was provided for the sector in the Eleventh Five Year Plan and as against this, the expenditure was to the tune of ₹ 611.98 crore (133 percent). Implementation of schemes like 'Distribution of milch cow and sheep and goat to the poor women at no cost' and schemes under NADP and fodder development under IAMWARM could be the reason for increase in expenditure percentage. The physical target and achievement made during the Eleventh Five Year Plan is given in Table 3.6.3.

During the Eleventh Five Year Plan period, the estimated milk production increased to 68.34 lakh metric tonnes (L.MT.)

and egg production increased to 11514 million eggs. Meat production increased from 268 thousand tonnes to 424 thousand tonnes registering an increase by 158 percent over the target. The per capita availability of milk per day has increased from 219 gram during 2001-02 to 279 gram during 2011-12. During the same period, the per capita availability of eggs per annum has increased from 68 numbers to 171 numbers.

Through the revised Breeding Policy for cattle and buffaloes which provide for crossbreeding of non-descript cattle with Holstein Friesian and Jersey cattle and upgradation of non-descript buffaloes with Murrah buffalo, there is decrease of non-descript cattle population by 18.35 percent and increase in crossbred cattle population by 43.35 percent (from 51.40 lakh to 70.44 lakh). Milk production was increased by improved conception rate by Artificial Insemination (AI) programme

Table 3.6.3: Physical Targets and Achievements - Eleventh Plan – Animal Husbandry Sector

Category	Target	Achievement	Percent of Achievement
Milk production (in L.MT.) (estimated)	57.08	68.34	120.00
Egg production (in million nos.) (estimated)	9787.00	11514.00	118.00
Meat production (in 000' tonnes) (estimated)	268.00	424.00	158.00

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN



Fig.3.6.1: Crossbred Cow



Strengthening the disease monitoring system has led to reduction in outbreaks. In fact, the number of disease outbreaks declined from 315 during 2007-08 to 39 during 2010-11. The major achievement during the Eleventh Five Year Plan was periodical preventive vaccination against Foot and Mouth Disease (FMD). This has drastically controlled the disease outbreak. In fact, the FMD outbreak which was 282 during 2007-08 declined to 11 during 2010-11.

The infrastructure of the Animal Husbandry Department was improved with the assistance from National Bank for Agriculture and Rural Development (NABARD), Rural Infrastructure Development Fund (RIDF) and Emergency Tsunami Reconstruction Project (ETRP). Moreover, up-gradation of 444 sub centres has led to the replacement of paravets with veterinarians in these institutions which have improved the quality in delivery of veterinary services. In

addition, establishment of 51 new veterinary dispensaries and 130 sub centres have expanded the coverage area.

Fodder

Under fodder development, it was observed that the target with respect to physical and financial was achieved fully during the Eleventh Five Year Plan. However, it is estimated that the State still need 100.64 lakh tonnes of green fodder to become self-sufficient. With the introduction of free milch cow/sheep and goat schemes by the government with the anticipated population growth of milch cows/sheep and goats in the next five years, the estimated green fodder requirement is bound to increase.

Control of Diseases

Under control of diseases and healthcare, the following achievements in terms of physical targets were made during the Eleventh Five Year Plan period.

Table 3.6.4: Animal Disease Reduction Incidence - Eleventh Plan

(no. of reported outbreaks)

Diseases/Year	2007-08	2008-09	2009-10	2010-11
Anthrax	19	6	6	15
Black quarter	3	1	2	2
Entrotoxaemia	7	1	0	1
Septicemia	0	0	0	1
Blue tongue	1	2	0	7
Foot and Mouth diseases	282	4	0	11
Peste-des-petis ruminants	3	3	3	1
Sheep pox	0	1	4	1
Total	315	18	15	39

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN

**Table 3.6.5: Control of Animal Diseases - Eleventh Plan**

S.No.	Activities	Target (2007-08 to 2010-11)	Achievement (2007-08 to 2010-11)
1	Vaccinations (in lakh doses)		
	Hemorrhagic septicemia	42.17	55.41
	Black quarter	52.31	58.29
	Ranikhet disease	1117.55	1245.03
2	Livestock Protection Scheme camps (in Nos)	22000	22000
3	Deworming (Sheep & Goat) (in lakhs doses)	740.61	779.93
4	Vaccine production by IVPM (in lakhs doses)		
	Bacterial vaccines	204.92	210.91
	Viral vaccines	746.50	584.38

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN

Poultry

The development of poultry industry is significant in the State. The State accounts for nearly 19.74 percent of the poultry population in the country. There are eight Poultry Extension Centres and two Poultry Disease Diagnostic Laboratories (PDDL) functioning for the poultry development activities. Poultry extension centres are the model farms for the farmers to know about scientific ways of breeding and management. Poultry keeping has attained the status of industry and is more sustainable in many places in Namakkal, Salem, Erode and Coimbatore districts. The poultry keeping has evinced great interest among poultry farmers. Backyard poultry eggs contribute 3.35 percent of the total egg production in the State. There is a good potential for export of eggs, egg products and frozen chicken meat to Gulf countries, Russia etc. At present, there are about 4531 broiler farms, 1080 layer farms and 48 poultry hatcheries in the State.

Twelfth Five Year Plan Objectives

- To usher in 'Second White Revolution' in Tamil Nadu by distribution of milch cows to the poor families, especially, women.
- To consolidate the gains of the previous Plan.
- To further increase the Artificial Insemination coverage from 44.12 percent to 60 percent in cattle and 41.49 percent to 60 percent in buffaloes.
- To increase the conception rate in AI to 48 percent in cattle and 45 percent in buffaloes and calving rate to 46 percent in cattle and 41 percent in buffaloes.
- To strengthen AI delivery system and make AI delivery at doorstep of the farmers.
- Conservation of indigenous cattle breeds like Kangayam, Umbalachery, Bargur and Pulikulam and buffalo breed Toda in their native breeding tracts.
- Strengthening the extension activities.
- Evolving Management Information System for monitoring the breeding activities.



Thrust Areas and Strategies

Artificial Insemination (AI): To increase the conception rate in AI, it is proposed to continue identification of breedable female cattle and buffaloes; Oestrus synchronisation programme, strengthening bull mother farms, progeny testing programme, fixed time AI technique of GnRH treatment between 40 to 60 days after calving and after 7 days using PFF2a and strengthening of semen stations and AI delivery system.

Bringing the landless labourers and marginal farmers especially women farmers into the fold of organised livestock rearing: This will be done by identification of suitable animal husbandry activity based on the agro-climatic conditions, knowledge level and market demand. Formation of SHGs will be encouraged. They will be provided with milch animals, heifer calves, sheep, goats and poultry for their economic upliftment.

Strengthening of Veterinary Services Delivery System: Door step delivery of AI services has made a beginning. However, if the benefits of the services has to reach the rural farmer and door step delivery of all veterinary services has to be contemplated at least in a phased manner.

Strengthening of breeding Services: Inputs will be provided to improve the conception rate further by converting all the static AI centres to static cum mobile centres. At present, distribution of frozen semen straws and liquid nitrogen is not uniform in the State. Some cattle breeding and fodder development units cater only to a single district, while some cater to more than one district which hinders the efficient delivery of breeding inputs to needy places in time. This will be overcome by establishing cattle breeding and fodder development units in each district except Chennai. In addition, online services will be established to provide breeding services to the animals reared by farmers in appropriate time.

Increasing the fodder availability in the State: This will be done by encouraging the farmers owning animals to allocate at least 0.25 acre of land for cultivation of fodder, rejuvenation of village grazing lands, meikal poramboke lands and road side sowing of fodder seeds. SHGs will be encouraged to take up fodder cultivation. Besides these strategies, fodder banks will be established. Silviculture, silviculture and horticulture technologies will be encouraged to rehabilitate the wastelands and increase the biomass production. Feeding of non-conventional feeds like sugarcane tops will be encouraged. Availability of quality concentrate feed will be ensured. In addition, model fodder plots will be developed in the veterinary institutions. In order to utilise available water efficiently and to increase the fodder production, lands of small and marginal farm holdings are being brought under raingun irrigation at 100 percent subsidy and at 75 percent subsidy for other farms.

Improving the Diagnostic services : Upgrading all Animal Disease Intelligence Units (ADIU) and Poultry Disease Diagnostic Labs (PDDL) to Good Laboratories Practices (GLP) standards is a necessity as losses due to mortality of livestock cripple the economy of the farmers. Mobile lab with facility to diagnose all bacterial diseases is essential and has to be expanded to all ADIUs. Further, disease control and monitoring mechanism needs to be strengthened by establishing one ADIU in each district.

Improving the capability of all frozen semen production stations: All the frozen semen stations will be converted to 'A' Grade centres with ISO certificate. The bull strength in these centres will be increased. This will not only meet the requirements of the State but will also earn revenue by way of sales to the needy States.

Providing marketing access and improving cold chain : The livestock products are highly perishable with a low shelf life. Hence, marketing must be devised in such



a way that the farmers get the best prices for their products. This can be achieved by increasing the processing capacity, improving cold chain facilities so that the keeping quality of products is prolonged. Market access will be established for livestock / livestock products through infrastructure, capacity building and establishing linkages like public-private partnership/contract farming so that assured price round the year is ensured for the farmers. Further, for marketing the livestock and livestock products, Livestock Business Centres (LBC) will be established.

Human Resource Development (HRD):

Continuing education is the touchstone of success. The knowledge levels of the staff of the Animal Husbandry Department needs to be updated on the latest techniques in veterinary and animal sciences so that quality services are rendered.

Strengthening of extension services:

Impetus will be given for providing better need based extension services to the rural farmers. Latest extension methods with judicious use of audio-visual aids, online veterinary services with maximum utility of latest electronic aids will be ensured. The concept of strengthening the extension services has to be undertaken. A separate extension wing needs to be formed at the block level and it will be on mobile, provided with extension inputs, chalk out a routine tour programme, villages visit, conduct field level meeting, regular follow up etc., and officers will be calibrated based on the level of adoption by the target villages and farmers.

Technology, Policy and Innovation : A mixture of technology, policy and institutional innovations needs to be combined for sustainable and equitable livestock sector growth. Specific attention will be paid so that the poor can benefit from the emerging opportunities.

Policy and Administrative Measures Proposed / Suggested

- A regulatory authority may be constituted to regulate Non-Governmental Organizations providing AI services, private breeders, private dairies, sale and distribution of frozen semen, AI workers, breeding through natural service, import and export of germplasm from other States as well as other Countries etc.,
- Legislation for the implementation of the bovine breeding policy of the State and to consider adoption of a Bovine Breeding Act and regulate institutions involved in semen production and AI delivery.
- Define Minor Veterinary Services (MVS) provision as envisaged in the Veterinary Council of India Act. AI services may be removed from MVS.
- To use resources judiciously, a mechanism to cull non-productive animals may be drafted.
- Creation of a separate farm services wing employing veterinarians and support services may be considered to achieve the breeding objectives effectively.



Fig.3.6.2: Chaff Cutter



Box 3.6.1: Promoting Backyard Economies for Female Headed Households

The distribution of milch cows to the economically poor families especially, the women headed families brought a positive change in the backyard economy of the rural areas. An evaluation by Department of Evaluation and Applied Research (DEAR) in Dharmapuri, Dindugal, Thanjavur and Thiruvallur districts indicated that 37.50 percent beneficiaries (sample of 88 beneficiaries), were agricultural labourers who were rearing cattle and there was an increase in their average annual income from ₹35,691 to ₹45,833.

Source: Study Report of Dept. of Evaluation and Applied Research, 2012. GoTN

Twelfth Five Year Plan – Programmes/Schemes

Overview of ongoing programmes and projects:

Scheme for “Distribution of milch cows at no cost” being implemented from 2011-12 to improve the milk production in the districts of the State that are deficit in milk production and the village panchayats that do not have co-operative milk societies as of now and to enhance the standard of living of the poor farmers. In this scheme, milch cows are distributed to the poor women



Fig.3.6.3: Goat rearing

beneficiaries at no cost in the rural areas. Under this scheme, about 12000 milch cows of Cross bred Jersey/Cross bred Holstein-Friesian breeds would be distributed each year. Each cow provides additional six litres of milk per day thereby providing an income increase by ₹96 per day.

Scheme for 'Distribution of goats/sheep at no cost' is being implemented from 2011-12 for the benefit of poor living in the

rural areas to enhance their standard of living and empowerment of women. Animals are distributed to destitute women and poor women households to promote their backyard economy. Under this scheme, 4 Goats/Sheep (3 female and 1male) are given at no cost to 1.50 lakh poorest of poor rural landless families per year.

The schemes of Distribution of Milch Cows and Distribution of Goats / Sheep at no cost will provide additional income to the rural farming community and helps in the empowerment of women. Hence, both the above schemes will be continued during the Twelfth Five Year Plan period. The overall monitoring of the scheme is done at the State level by Director of Animal Husbandry and Veterinary Services. Insurance claims are also reviewed on a monthly basis.

Box 3.6.2: Economic Upliftment through Goats

Tmt.Mahamayi, a widow and beneficiary of distribution of sheep/goat at no cost scheme from Adaikaladevan village panchayat, Thanjavur district was able to earn an average of ₹3500 per month by working as non-agricultural labourer and by selling the offsprings of the goats. She will be able to maintain a sustained income even if there is loss of livestock as animals have insurance cover and with that claim she can effect a repurchase.

Source: Study Report of Dept. of Evaluation and Applied Research, 2012. GoTN



Fodder Development Scheme: The scheme is being implemented for augmenting fodder cultivation in the farmers land and to ensure the fodder availability with State fund. This scheme will be continued during the Twelfth Plan period.



Fig.3.6.4: Fodder Development

Kalnadai Padhukappu Thittam (KPT)

Health camps for animal and birds enable the farmers to bring their animals for treatment and animal health care in their own village, thereby, avoiding long distance transportation. The aim is to conduct one camp per village per year, to educate the farmers on care and management of livestock, to encourage unemployed youth to take up livestock farming and to train one Kalnadai Nanban for every village. Currently, KPT is conducted in 5500 villages per annum. This can be extended to 12,000 camps per year. The normal attendance will be 1000 animals per camp. The camp also include bankers, insurance companies and firms supplying animal husbandry inputs, so that farmers get the complete and absolute knowledge on livestock farming.

Renovation of Veterinary Institutions

Most of the Veterinary Institutions are in dilapidated conditions. It is proposed to renovate the existing infrastructure of veterinary institutions and this scheme will be continued during the Twelfth Five Year Plan period.

National Mission for Protein Supplement (NMPS)

Under this scheme four SHGs were selected from each district and each SHG would consists of nine beneficiaries and each SHGs would be provided with 10 goats, feed, shed, insurance, equipments etc, free of cost, thereby facilitating their living standards. The scheme has been implemented in 15 districts. With a view to increase animal protein availability for farmers' family and to maximise economic returns to them, a scheme on promotion of pig development through breeding farms has also been initiated. The piglets produced from the nucleus farm would be supplied free of cost to 10 satellite breeding farms.

New Programmes

Conservation of Indigenous Breeds

Establishment of infrastructure to breed a herd of Kangeyam, Bargur and Pulikulam cows (20 Nos) each for the production of bulls of known pedigree and supply of frozen semen doses has been proposed.



Fig.3.6.5: Kangeyam bull

Bull Production Programme

Bull production programme will consist of strengthening of the bull mother farms, Field Performance Recording Programme and the Progeny Testing Programme. A total of 400 bulls are required



to meet the frozen semen doses in the fifth year and to produce 400 bulls for regular production, a minimum of 800 bull calves are required.

Box 3.6.3: Emergency Mobile Veterinary Service

During the Regional Consultations to discuss about the Twelfth Five Year Plan formulation, the need for emergency mobile veterinary services for animals during sickness was emphasized by farmers and veterinarians. State Planning Commission makes a recommendation that a service similar to 108 ambulance service may be introduced for emergency veterinary services care.

Source : State Planning Commission, GoTN

Strengthening of Bull Mother Farm

A dedicated bull mother farm will be established and herds of Tharparkar and Sahiwal breed of cattle will be built with a minimum of 50 cows each for production of purebred as well as crossbred calves. The cost of procurement of the animal would be ₹0.50 crore and the strengthening of housing would be ₹1.00 crore. The Red Sindhi herd will be upgraded by introduction of new germplasm in the form of proven bull semen, procurement of embryos and introduction of new animals to have a herd of 100 good quality cows. The cost of germplasm and implementation of the programme would be ₹0.41 crore towards special care of the animals, cost of hormones and consumables. The Jersey cow herd will be replaced by cows that would be produced with imported embryos and with offspring produced by inseminating the existing stock with imported semen to build a stock of 50 Jersey cows. The cost of embryo transfer programme would be ₹0.16 crore towards special care of the animals, cost of hormones and consumables. A dedicated bull calf rearing station to raise 100 bull calves at a time will be established. The cost of bull calf rearing station would be ₹1.47 crore.

Strengthening of Semen Stations

Strengthening of the four semen stations by putting in place civil structures, supplying equipment and liquid nitrogen plant are proposed with an outlay of ₹5.00 crore.

Strengthening of AI delivery system

Establishing 128 AI mobile units (one for every three blocks) to provide AI services on call are proposed to improve the coverage and conception rate. The total outlay would be ₹63.39 crore.

Procurement of Liquid Nitrogen Transport Tankers

To ensure uninterrupted supply of liquid nitrogen from liquid nitrogen production stations to the various units in the State, it is proposed to procure two tankers of 10,000 litre capacity. The total outlay would be ₹0.84 crore.

Establishment of New Poultry Research Station at Palladam

With a view to cater to the needs of the poultry farms at Coimbatore, Thiruppur and Palladam areas, a new Poultry Research Station will be established at Palladam at an outlay of ₹2.63 crore.

Establishment of new cattle farms

Cattle farms are essential for development of cattle and a new cattle farm with an area of 700 acres near Eachenkottai, Thanjavur district has been proposed.

Promoting Backyard Family Poultry

a). Desi Bird Rearing Scheme for Rural Women in Backyard System

Under this scheme, totally 4000 beneficiaries will be selected from 20 districts at the rate of 200 beneficiaries per district. Each beneficiary will be given with 12 (10+2) six week old desi chicks and a feeder & waterer and 25 kg. feed without any cost. One day training will be imparted to beneficiaries.



Fig. 3.6.6: Backyard Poultry

b). Rotational Turkey Rearing Scheme for Rural Women in Semi-Intensive System

It is proposed to raise turkeys in villages under semi-intensive system. In this scheme, turkey rearing package will be given to 1000 beneficiaries belonging to 200 SHGs in every year so as to cover 4000 beneficiaries in four years. In the fifth year the package (1000 units) is provided to the State Government farm so as to produce turkey chicks in the next plan period. The vaccination, deworming, medication and health care will be given by the concerned veterinary institutions. The disease investigation and control measures will be monitored by nearest Animal Disease Intelligence Units / Poultry Disease Diagnostic Laboratories. One day training will be given to the SHGs by Veterinary University Training and Research Centre (VUTRC) at free of cost. Day old chicks or hatching eggs will be purchased from Central Poultry Development Organization (CPDO), Bangalore or TANUVAS or private farms. These chicks will be reared up to one month in Government Livestock Farms (GLF) or in the interested private farms on contract basis, so that the cost of one month old chick price should not exceed ₹150/- each.

c) Poultry Hubs in Non – Poultry Areas (Poultry Clusters)

As family poultry plays a crucial role in rural economy and in gender equity, it is proposed to strengthen this micro enterprise by making available all necessary inputs under one umbrella, thereby creating a poultry hub especially in the districts where there is less poultry activity. For this purpose, breeder farms for desi chickens and turkey along with hatchery units and a feed mill exclusively for preparing poultry feed will be established in these districts. Arrangements will also be made for free vaccination and deworming of the birds maintained under family poultry. Further, in order to boost commercial poultry, especially, the broiler production, assistance will be given to the interested progressive farmers to develop their own broiler houses of 5000 sq.ft. capacity @ 25 percent subsidy. These farmers will approach integrating companies for establishing broiler farms.

d) Establishment of Desi Chicken Breeder Flock cum Hatchery Units

This proposal focuses on improving the income level and food security of resource-poor small farmers through rearing of rural poultry. The main constraint in improving the backyard system is lack of quality inputs like day old chicks. It is planned to establish a network of poultry breeding farms and hatcheries located in three districts namely Vellore, Sivagangai and Tirunelveli with low poultry activity for producing day old desi chicks for supplying to farmers.

The concept proposes that the village households will purchase day old chicks @ ₹25.00 from this facility and grow it in their house under scavenging conditions. Birds scavenge in the natural habitat. They attain a weight of one kg in about 16 weeks of age through scavenging and are sold for meat purpose @ ₹160/- per bird of one kg of live body weight.



e) Establishment of Turkey Breeder Flock and Hatchery Unit in Three Districts (To produce 2000 Day Old Poult (DOP) per week)

This scheme focuses on improving the income level and food security of resource poor small farmers through rearing of rural turkey farming. The main constraint in improving the backyard system is lack of quality inputs like DOP. It is planned to establish a turkey breeding farm and hatchery in three districts with low poultry activity for production of Day Old Poult (DOP) for supplying to farmers. The concept envisages that village households will purchase DOP @ ₹60/- from this facility and rear them in their backyard under scavenging conditions. Turkeys scavenge in the natural habitat and little expenditure is incurred on feed, medicine, etc. They attain a weight of 3.0 kg in about 16 weeks of age through scavenging and are sold for meat purpose @ ₹140/ bird of one kg of live body weight.

f) Establishment of Feed Manufacturing Unit (mash feed) Exclusively for Production and Retail Sale of Poultry Feed

In both backyard and commercial poultry rearing, the feed is the major recurring cost that decides the profit margin. Further, different species of poultry require different types of feed based on age and stage of production for which the nutritional requirements differ. In order to obtain optimum production in backyard avocation and small poultry farms, quality feed must be available to the farmers in small quantities afresh. Hence, integration of feed manufacturing facility into the poultry development hub scheme is proposed to provide poultry feed on retail basis to small poultry farmers at nominal cost to boost production and profit.

g) Promotion of Commercial Broiler Units

It is proposed to encourage interested farmers to take up commercial broiler rearing by providing 25 percent subsidy for construction of broiler house in three districts. After constructing broiler house, the farmer will approach the integrator for supply of chicks, feed and medicine. Hundred farmers will be identified in each district and each farmer will be given a subsidy of ₹2.00 lakh for construction of broiler house of 5000 sq. ft. at an estimated cost of ₹8.00 lakh. Through this proposal the broiler production in each district can be increased by 30 lakh birds.

Establishment of Breeder Farm cum Hatchery Unit for Turkey at TAPCO - Trichy: Turkey farming is a prospective micro entrepreneurial avenue and can definitely improve the economic status of small and marginal farmers. Hence, it is proposed to establish turkey breeder farm cum hatchery unit in the TAPCO premises, Trichy to supply quality poults to the interested farmers as availability of poults is the critical bottleneck in promoting turkey farming.

Establishment of Breeder Farm cum Hatchery Unit for Desi-Chicken at TAPCO - Kappalur: It is proposed to promote family poultry by supply of quality desi chicks to needy farmers and resource poor rural women through establishment of breeder farm cum hatchery unit for desi-chicken at TAPCO-Kappalur.

Strengthening of State Government PDDLs: At present, PDDL is functioning at Erode and Andagalurgate to diagnose the poultry diseases and advise the poultry farmers suitably. These lab will be strengthened with feed analytical lab, water analysis lab, provision of vehicle to attend the disease outbreaks, disease diagnostic kits, equipment for the virological and bacteriological work, dead bird disposal pit etc., and to conduct lab tests needed by the egg exporting farmers.



h) Establishment of Certification Lab for Poultry Products intended for Export

For export promotion and retention of the existing potential, the following are essential prerequisites. Poultry diseases concerned with International trade are Highly Pathogenic Avian Influenza (HPNAI), Salmonellosis of zoonotic potential and new castle disease (Ranikhet Disease). As far as HPNAI is concerned, the only solution is setting up HPNAI free establishment with in HPNAI free compartment as per guidelines of World Organization for Animal Health (Formerly Office International Des Epizootics) (OIE) and European Union (EU) norms. The proposal was accepted in principle by Government of Tamil Nadu and Government of India. To sum up, one export inspection and certification laboratory at Namakkal and other two laboratories viz., Food Safety Analytical Laboratory and Referral Laboratory for Poultry Diseases at Madhavaram campus to cater the needs of export promotion as well as indigenous food safety and standard requirements are proposed.

i) Energy from Poultry Waste

Biogas, a clean and renewable form of energy could very well substitute (especially in the rural sector) for conventional sources of energy (fossil fuels, oil, etc.) which are causing ecological–environmental problems and at the same time are depleting at a fast rate. The litter from all layer farms in India's major egg production hub at Namakkal district could generate up to 16 mega watts of power/day, along with 800 tonnes of compost and 10,000 litres of liquid fertilizer as by-products. Poultry manure is the rich source of organic manure. Further, biogas and bio energy can be produced on industrial scale from poultry litter. In addition, APEDA provides financial assistance for this programme. A model plant will be set up for demonstration and application of poultry waste for generation of gas or power at Namakkal.

j) Women Empowerment

a). Women SHGs may be provided with inputs and training for raising fodder seed banks so as to ensure a continuous availability of green fodder. Besides raising fodder seeds, the saplings can also be raised, b). To efficiently deliver doorstep veterinary services, women should be trained in basic veterinary services like first aid, deworming, vaccination, AI, etc, c). Training women on best practices in rearing of livestock, d). Extending provision of distribution of milch animals, sheep and goats at no cost to women headed families, e). Provision of concentrates to heifer calves, f). Rearing of backyard poultry and g). Providing capacity building and aid for preparation of value added products of milk like butter, ghee, khoa, flavoured milk, etc.

Modernisation of Slaughter Houses in Tamil Nadu

The present scenario and the infrastructure facilities available in the slaughterhouses is not sufficient to meet the current demands. To compensate the needs of the public, clandestine slaughter is being carried out unhygienically (road side slaughter) without any proper inspection. Hence, strengthening of slaughterhouses by modernisation/upgradation is essential for hygienic meat production to cater the demands of the domestic meat consumption. The modernisation of slaughter houses requires skilled personnel for slaughter operations for hygienic and safe meat production. Hence, training of butchers, meat workers, entrepreneurs and veterinarians engaged in slaughterhouse will be taken up apart from creation of infrastructure in the slaughter houses.

Heifer Development Scheme at Block Level

Poor nutrition is the major factor for infertility, delayed sexual maturity, malnutrition disorders in animals. Heifer calves, which are future cows, should be maintained in good plan of nutrition so as



to harness the full production potentialities. Hence, it is proposed to select 100 cross bred heifers per block, that are between 6 to 12 months of age belonging to women-headed households and given concentrates @1 kg per day for one year at 50 percent cost.

Animal husbandry in Farm Level Planning

An integrated farm has a judicious combination of agriculture and animal husbandry components. Bringing back the backyard poultry and farm milch animals provide immediate security to the farmer and provide basic nutrition to the family members through milk, egg and meat besides providing regular income for the family. Paucity of labour and mechanization in agriculture slowly eliminated the work animal first and milch animal with poultry. For a large farmer, it deprived organic manure availability, but for a small farmer it wiped away his livelihood supporting cattle. Providing milch animal with organized veterinary health support will be a life support and an aid to uplift the family, work culture, health, organic manure,

renewable energy and regular income. Hence, supply of milch animals to women farmers and small farmers will attract more farmers to come back to farming and provide a life support. The whole psychology of maintaining animal creates an attachment and reduces the unwanted wandering/mobility to urban areas by the human workforce. To utilize the largest young work force, it has been proposed to train Kalnadai Nanban with a view to attach their life with animal, especially a milch animal, so that the family gets daily milk for nutrition, income through milk sale, dung as organic manure/ panchagavya for plant nutrition and protection with direct diversion to organic agricultural production. Establishment of gobar gas units would provide them fuel and energy assistance and at the same time augment the much needed organic manure addition to the farm.

An outlay of ₹1661.07 crore is proposed for Animal Husbandry sector in the Twelfth Five Year Plan and the details are provided in the Table 3.6.6.

Table 3.6.6: Twelfth Plan Outlay - Animal Husbandry Sector

		(₹ crore)
S.No.	Scheme/Programme	Outlay
Ongoing schemes		
1	Livestock Protection Programme	40.39
2	Sub-Centres and other Veterinary Institutions including SCP	5.00
3	Institute of Veterinary Preventive Medicine, Ranipet	47.26
4	Poultry development	1.00
5	Fodder and Feed Development	50.00
6	NADP - Animal Husbandry	100.00
7	Others - Sheep and Wool Development, Horse Breeding, HADP, WGDP, Statistical cell	7.00
8	Free distribution of Milch Cows to Rural Poor Women including SCP	176.00
9	Free distribution of Sheep and Goat to Rural poor women including SCP	865.00
10	IAMWARM Project	25.00
Total - Ongoing schemes		1316.65

**Table 3.6.6: Twelfth Plan Outlay - Animal Husbandry Sector (Contd.)**

(₹ crore)

S.No.	Scheme/Programme	Outlay
New schemes		
11	Cattle and Buffalo breeding - including Strengthening of AI delivery scheme, bull calf rearing station, upgradation of Red Sindhi and Jersey	72.78
12	Control of diseases and health care	61.30
13	Development of meat animals-Open nucleus breeding, survey, evaluation, characterisation and conservation of Trichy black sheep, Pattanam sheep and piggery development	97.65
14	Poultry Development including backyard poultry	24.69
15	Human Resource Development/ Strengthening of Data base	5.00
16	Modernisation of slaughter houses	25.00
17	Export of livestock product	58.00
Total New scheme		344.42
Grand Total - Animal Husbandry		1661.07

The monitorable indicators for the Twelfth Five Year Plan period with respect to milk, egg and meat and for AI are given in the Tables 3.6.7 & 3.6.8

Table 3.6.7: Monitorable Targets for the Twelfth Plan-for Milk, Egg and Meat

S.No.	Year	Milk (000 MT)	Egg (Million Nos)	Meat (000 Tonnes)
1	2012-13	7131	13775	502
2	2013 -14	7285	15068	521
3	2014-15	7441	16481	541
4	2015-16	7601	18021	562
5	2016-17	7765	19718	583

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN

Table 3.6.8: Monitorable Targets for the Twelfth Plan-for AI

(in Lakh nos)

Item	2012-13	2013-14	2014-15	2015-16	2016-17	Total
AI (Jersey, Jersey Cross, HF, HF Cross, Sindhi, Murrah & Graded)	44.50	45.45	46.40	47.35	48.30	232.00
AI (Kangayam & Umblachery)	1.60	1.65	1.70	1.75	1.80	8.50
Total	46.10	47.10	48.10	49.10	50.10	240.50

Source: Dept. of Animal Husbandry and Veterinary Services, GoTN