

CHAPTER 8

ANIMAL HUSBANDRY, DAIRY & FISHERIES

8.1 The animal husbandry sector comprises of (i) Department of Animal Husbandry; (ii) Dairy Development; (iii) Fisheries and (iv) Veterinary Education & Research.

8.2 Rajasthan is the largest State with an area of 3.42 lakh Sq.Kms and accounts for 10.4% of the total area of the country. The animal population of the State as per the 1997 census is 543.48 lakh, which gives a ratio of almost 1:1.59 with human population in the State. The details of livestock population since 1951 are given below:

(No. in lakhs)

Item	1951	1961	1972	1977	1983	1988	1992	1997
Cattle	107.87	131.36	124.70	128.96	135.04	109.16	116.67	121.58
Buffalo	30.45	40.19	45.92	50.72	60.43	63.40	77.75	97.56
Sheep	53.87	73.61	85.56	99.38	134.31	99.13	124.91	143.12
Goat	55.62	80.52	121.62	123.07	154.80	125.93	152.85	169.36
Camel	3.41	5.70	7.45	7.52	7.56	7.21	7.46	6.68
Others	3.99	3.71	3.53	3.94	4.36	4.18	4.82	5.16
Total	255.21	335.09	388.78	413.59	496.50	409.01	484.46	543.48

Source : Livestock Census.

8.3 In Rajasthan, Animal Husbandry is not merely subsidiary to Agriculture but is a major economic activity, especially in the arid and semi-arid areas, providing much needed insurance against frequently occurring scarcity conditions. Next to crop production, Animal Husbandry is the most important activity in Rajasthan which is closely interwoven with agriculture and plays an important role in the rural economy by providing employment and stabilising the households income. Income from live stock accounts for 30 to 50% of the rural household income, with wide variation in region and households.

8.4 Livestock management is labour intensive with a high concentration of women contributing to it. This sector therefore not only provides livelihoods, it is also an integral part of life of rural society, directly benefiting women & families.

Present Position of Livestock Population and Its Contribution to Development of Rajasthan

8.5 Livestock population of Rajasthan, as per 1997 Livestock census is 5.43 crores. Rajasthan has around 7% of the countries cattle population. The significance of Animal Husbandry can also be seen by the fact that it contributes 19% of the State gross domestic product, over 10% of total milk production, 40% of total mutton production and 42% of wool produced in the country, besides 35% of the drought power of the nation.

Development Constraints

- Low productivity, across all species inspite of the large numbers of Livestock, is a major development constraint facing the sector. Almost 60% of all cattle

and about 80% of buffaloes are non-descript and have very low milk and work output. Growth in milk production is extremely slugging.

- Low productivity, tiny stock holding and shrinking of common grazing lands over a period of time has widened the gap between demand and supply of fodder. The situation is further aggravated by the increasing population of unproductive cattle.
- Breeding of cattle takes place almost at random, as no scientific development or organised human intervention reaches over 10% of the breedable females. The AI Centres now cover less than 10 percent breedable female cattle and buffaloes. Unselected bulls used for AI leads to progenies with virtually no genetic progress from generation to generation. And the poor quality services with less than 30% conception rates together with the lack of coverage and zero genetic progress renders large investments in breeding of cattle and buffalo, infructuous.
- Extension support to Agriculture production was organised as sine quo non when planned increases in agriculture production were initiated in early fifties. Though it started off well during the first five year plan, extension services degenerated and became restricted to services by Department of Animal Husbandry, by the end of the Third plan. While reasonably effective extension network evolved in the crop production section nation wide, no such effort was made in the Livestock Sector. Absence of well conceived extension support system in the live stock sector has undermined the pace of development in the sector in different plans.

8.6 Therefore, accelerating livestock sector development in Rajasthan needs to be planned on priority.

Animal Husbandry

Major Achievements During Ninth Plan Period

8.7 Some of the major achievement attained during Ninth Five Year Plan are as under:

- 125 new veterinary hospitals and 400 new sub centres were established in farflung areas to provide facilities to the rural mass
- Rajasthan State Livestock management training institute was established to provide technical and HRD training to the all cadre officers.
- An autonomous body "Rajasthan Livestock Development Board" was established to resolve the breeding input (LN2 and frozen seaman, purchase & supply system, training of AI inseminators procurement repair & maintenance of equipments necessary for breeding activities and strengthening of infrastructural facilities of the AI centre frozen semen production centre & calf rearing station).
- Presently 6 veterinary hospitals are functional being managed by Gram Panchayats / NGOs.
- 16th Livestock census was conducted by the Revenue Board.
- National Project for Cattle and buffalo development was submitted to GOI under 100% CSS which has been accorded financial approval from GOI.

- Breeding policy for cattle and buffalo was revised. The stress is given on preservation and conservation of indigenous breeds and cross breeding of non-discript animal and that too only on demand.
- 47th All India Livestock and Poultry Show was organised
- Deptt. of Sheep & Wool has been merged with the Deptt of Animal Husbandry Deptt.
- Drug License was given by the Competent authority to the Biological production Laboratory.

8.8 The estimated milk, meat, egg and wool production in the State achieved upto 2000-01 is given in the following table :-

Year	Milk Production in '000 Tonnes	Eggs Production Million Nos.	Meat Production In '000 Tons	Wool Production in Lakh Kg.
1985-86	4146	196.58	17.29	160.36
1986-87	4168	208.93	17.57	181.00
1987-88	3911	213.72	18.95	165.00
1988-89	4035	225.00	19.30	170.00
1989-90	4217	230.00	21.50	162.00
1990-91	4339	280.00	23.50	160.00
1991-92	4474	317.00	24.00	164.64
1992-93	4586	349.20	25.50	167.39
1993-94	4958	395.70	27.34	170.79
1994-95	5103	400.00	29.00	173.00
1995-96	5449	420.00	32.00	176.00
1996-97	5873	450.00	37.00	180.00
1997-98	6487	480.00	37.00	185.00
1998-99	6923	525.00	42.00	188.00
1999-00	7260	540.00	45.00	191.00
2000-01 (Proposed)	7527	550.00	50.00	196.00

Source : Directorate of Animal Husbandry

Goals and Objectives for Tenth Plan

8.9 The objective for Animal Husbandry are :

- Prompt community participation
- Improvement of out reach services
- Increases in the income of the people engaged in animal husbandry.
- Promotion of Livestock industries in the State.
- Active participation of the local breeders.
- Shift from veterinary health care to breed improvement.
- Enabling the small producer to participate in the process of Globalisation, to gainfully participate in the process of growth and modernisation of the livestock sector.

Strategy for Tenth Plan

- Use of the national and global , "market pull to provide the energy and impetus for sectoral growth.
- Promote institutions and establish mechanism to ensure quality consciousness, encourage research and innovations, and enhance sector level efficiency in

production, procurement processing and marketing of all livestock products particularly through value addition

- The state is endowed with vast livestock populations having wide genetic diversity suitable for milk, meat and fibre production. Therefore there is need for conservation of the valuable germ plasma for genetic improvement and efficient production
- Research & development wing should make efforts for minimising the large and expanding gap between feed and fodder resource availability and demand.
- Breeding management through restructured AI programme comprising of input generation and delivery system.
- Camel is an essential & asset of the desert economy and is a very good source of drought power all over the State for short distance transport of human as well as goods. It also plays an important role in the economic development of weaker section of the society. Therefore, it is proposed to encourage the breeding of quality animals.
- It is proposed to ensure active participation of non government organisations in the livestock development programmes.
- For educating the Animals Owners regarding modern scientific methods of livestock management, extension activities need to be strengthened.

Allocation for the Tenth Five Year Plan & Annual Plan 2002-03

8.10 Under Tenth Five Year Plan an amount of Rs. 4671.66 lakhs would be spent on various activities and Rs. 450.00 lakhs for Annual Plan 2002-03. Details are as under :-

Tenth Five Year Plan

Extension and Training :

8.11 In the year 1990-91 training cell was created to organise systematic training programmes for the farmers, inservice veterinarians and para veterinary staff. Human resource development and training are the essential component for the successful productivity per unit time by optimum utilization of available resources and adoption of scientific methods of animal management.

In service training

8.12 At present there is no provision for the specialised training of inservice veterinarians at centres of excellence in the country. It is necessary to impart training to working veterinarians in the field at regular interval. For Tenth Five Year Plan a provision of Rs. 25.00 lakhs has been proposed. While for Annual Plan 2002-2003 there is no provision.

Farmers Training / Progressive Livestock Breeders Training :

8.13 Short duration (3 days) training programmes for the women's farmers would be organised to train about 20,000 dairy farmers in the plan period (4000 every year) with a focus on weaker section. Trained farmers will be provided refresher training i.e. twice two days each after four month interval of first (3 days) training for three days training daily expenses for actual to and for will be Rs. 150 where as for refresher training it is Rs. 100/- for each. Total Rs. 350/- will be paid to each farmer and Rs. 50/- per farmer to Trainers. Training material stationary and

other expenses will be Rs. 100/- for each trainee. For Tenth Five Year Plan period excluding Annual Plan 2002-03 a provision of Rs. 100.00 lakhs has been proposed.

Extension and Media Support

8.14 At present the department has very old and obsolete material for the organisation of departmental exhibitions at various occasions for the presentation of departmental activities. Very little work has been done to replace the material made during 9th plan period. Therefore it is proposed that the exhibition material that is over 10 years old may be replaced with new ones during this plan period. A provision of Rs. 50.00 lakhs has been proposed for Tenth Five Year Plan. During 2002-2003 there is no provision for this purpose.

Development of Infrastructural Training Facilities

8.15 The building and essential infrastructural facilities of training institute have been built at Jaipur and Ajmer (Raj. Livestock management Training Instt. Jaipur and State poultry training institute Ajmer) with world bank assistance under Agriculture Development Project for imparting regular training to the officers and staff the building of institute and its hostel is complete, other essential facilities will be created during this five year plan 2002-07. A provision of Rs. 0.50 lakhs are required for the year 2002-03. While Rs. 17.50 lakhs are proposed for the Tenth Five Year Plan period.

Management Information & Evaluation System

8.16 For effective feedback system and periodic assessment of the progress of different departmental activities, it is most essential to have close evaluation and monitoring system. All the schemes are required to be monitored as per there objectives.

8.17 Periodic feedback through quarterly review reports and printing of Annual report and essential prescribed monthly progress report Performa's, Breeders cards. Health cards AI receipts are required to be printed. A provision of Rs. 20.00 lakhs has been made for Tenth Five Year Plan. But during 2002-03 there is no provision for this.

Improvement of Cattle Fairs.

8.18 The state is organising ten state cattle fairs at different areas. there is a wide scope to develop these fairs for the attraction of tourist. There is a need to provide adequate facilities for the incoming animals and animal owners on the fair ground . On these cattle fair grounds, capital works for proving enough drinking water animal shelters, fodder stores etc. are required to be developed. A provision of Rs. 40.00 lakhs has been proposed for Tenth Five Year Plan. During 2002-03 there no provision for this purpose.

Calf Rally & Milk Yield Competition

8.19 Cross breeding programme is now getting momentum. Even the livestock owners of rural area have started getting their cows inseminated with exotic bull semen or pedigreed indigenous bull semen. Often it is observed that most of the livestock owners who being illiterate and belong to socio economically weaker section they hesitate to adopt improved management and feeding practices for the

cross bred animal, which result in to low productivity. Therefore, it is propose to organise calf rally and milk yield competition in the villages, district, level to demonstrate the effect of better management & feeding practices among these cross bred animal. So that the livestock owners can see with their own eyes and try to adopt improved practices. Rs. 100.00 lakhs has been proposed for Tenth Five Year Plan while there is no provision for the year 2002-03.

Veterinary Service and Animal Health

Establishment of Veterinary Polyclinics

8.20 There are at present 12 polyclinics in the state. It was envisaged to establish polyclinics at all the district head quarters. At polyclinic specialised Veteran care is being provided under one roof. These clinics are equipped with diagnostic aids as x-ray, clinical laboratory and there are facility to treat complex animal disease & infertility problems by the subject matter specialist. For strengthening the activity of polyclinics Rs. 19.00 lakhs are required for the year 2002-03 and Rs. 195.00 lakhs for the Tenth Five Year Plan period.

Epidemiological Cell

8.21 For strengthening the activities of the forecast of the different communicable diseases Rs. 4.50 lakhs has been proposed for the Annual Plan 2002-03 and Rs. 22.50 lakhs for Tenth Five Year Plan.

Disease Diagonostic Lab

8.22 For the prompt diagonosis of the different diseases, department has district labs, regional labs, and state level labs. For strengthening the activities of these laboratories Rs. 3.00 lakhs are proposed for the eyar 2002-03 and Rs. 45.00 lakhs for the Tenth Five Year Plan.

Biological Products Unit (BP Lab)

8.23 This institute is producing veterinary vaccines for the Prevention of infection and contagious animal disease. Strengthening & expansion of this unit is essential to produce quality vaccines using the latest advanced technology is necessary during the 10th plan period. Now it is proposed to start manufacturing of Tissue culture vaccines to become self sufficient in this regard. For strengthening the laboratory a provision of Rs. 450.00 lakhs has been proposed for Tenth Five Year Plan while Rs. 70.00 lakhs is proposed for Annual Plan.

Strengthening of Nutrition lab

8.24 It is most essential to strengthening the existing facilities of nutrition lab so that through advance technology analysis of samples of feed and fodder can be done. For strengthening of the lab Rs. 1.00 lakhs has been proposed for Annual Plan 2002-03 while Rs. 15.00 lakhs has been proposed for Tenth Five Year Plan.

Veterinary Hospital Facilities.

8.25 The state is lagging far behind the recommendation of National commission on Agriculture regarding animal health cover. At present there is one veteran for each 15970 animal, whereas the NCA recommendations is of 5000 animals. There is great demand from the public to establish Veterinary Hospitals in

the rural areas of the state. At several places the building have already been constructed by the local people that are lying unused . In some of the areas of the state there is no veterinary hospital with in a radius of 20 KM. which make the veterinary services to inaccessible. With the increase in the number of improved breeds of cattle demand for veterinary service is going the considerably increase. Presently 1386 Veterinary Hospitals, 12 Polyclinics, 22 Class-I Hospitals 285 Dispensaries, 1727 Sub Centres are working for the breed improvement/health prophylactic activities etc. To make then strengthen Rs. 131.80 lakhs has been proposed for the year 2002-03 and Rs. 1556.96 lakhs for Tenth Five Year Plan period.

Veterinary Camps.

8.26 Due to large distances and inadequate health facilities a large number of cattle breeders are unable to bring their cattle to the health facilities. As a result most of the health centres remain under utilised. To optimise the services of the existing staff and expaend health coverage it is proposed that each veterinary hospital would hold atleast two camps in its jurisdiction every month in villages which are beyond 8 km radius and where no veterinary service is otherwise available. In these camps besides the treatment of sick animals, infertile animals would also be examined and proper treatment and advice would be given to make such animals cyclic and reproduce. These camps are becoming very popular now a day. An amount of Rs. 30.00 lakhs for Annual Plan and Rs. 150.00 lakhs for Tenth Five Year Plan has been proposed.

Private Veterinary Services.

8.27 For better management of the 6 private veterinary hospitals Rs. 4.50 lakhs has been proposed for the year 2002-03 and Rs. 22.50 lakhs for the Tenth Five Year Plan.

Systematic Control of Disease

8.28 For the control of different outbreaks in different species this unit requires to be strengthen, for which a provision of Rs. 28.00 lakhs has been proposed for the year 2002-03 and Rs. 150.00 lakhs for the Tenth Five Year Plan period.

Cattle & Buffaloe Development

Procurement Of Semen Testing Equipment

8.29 Before distribution of semen to AI centers from the district supply unit, it is desirable to test its motility to ensure quality. Unfortunately in Rajasthna the testing microscopes have not been provided at each district HQ. Now it is planned to procure microscopes for which a provision of Rs. 25.00 lakhs has been made in Tenth Five Year Plan but not in Annual Plan 2002-03.

Strengthening of AI Infrastructures :

8.30 The integrated cattle Development programme was initiated in the year 1991-92. to extend the AI & veterinary health cover in the remote villages by starting sub centres of existing Vety. Hospitals. The cryocane purchased in this schemed requires 10% replacement every year. For Tenth Five Year Plan an

amount of Rs. 150.00 lakhs has been proposed. But during Annual Plan 2002-03 no amount is kept for this purpose.

Procurement & Distribution of Better Germplasm

8.31 For breed improvement almost 50% success would depend on the provision of natural service through pedigree bulls because this is still the first choice among farmers. The department would procure bulls of proven pedigree of Tharparkar, Rathi, Kankrej, Gir etc from the breeding farms within the country and distribute free of cost to Gaushalas, Gopals and panchayats who would maintain them and charge service fees from the farmers. Thus the Government intervention would be limited to initial capital cost only. It is estimated that in addition to the bulls reared at our farms, annual requirement would be to the order of about 50 bulls (both cow and buffalo) every year. For Govt. farms parent stock of Goat, Sheep and pigs are required. An amount of Rs. 80.00 lakhs has been proposed for Tenth Five Year Plan. But during Annual Plan 2002-03, no provision has been proposed for this purpose.

Monitoring Cell for Cattle Dev.

8.32 For the success of any programme it is essential to have the close monitoring of developmental activities. Department is having old model vehicle, required to be changed. Some hired vehicles are also required. Old vehicles of the department would be surrendered time to time, as a replacement. A provision of Rs. 110.00 lakhs has been proposed for Tenth Five Year Plan but during Annual Plan 2002-03 no amount is posed for this purpose.

Gopal Programme (Intensive Cattle Development)

8.33 For 80 working Gopals, Rs. 3.00 lakhs for incentives for castration and calf born has been proposed while for Tenth Five Year Plan Rs. 40.00 lakhs has been proposed for replacing cryocanes etc.

Strengthening of Cattle Breeding Farm

8.34 For breed improvement almost 50 percent success would depend on the provision of natural service through pedigree bulls because this is still the first choice among farmers. The department would provide indigenous bulls of proven pedigree and distribute in Non AI reachable areas. Rs. 3.00 lakhs has been proposed for the year 2002-03 while Rs. 15.00 lakhs are proposed for the Tenth Five Year Plan.

Institutional Arrangement of Supplies

8.35 For the departmental Veterinary Institutes Rs. 50.00 lakhs has been proposed for the year 2002-03 while Rs. 550.00 lakhs has been proposed for Tenth Five Year Plan period for purchase of Cryocanes,, Medicines, Machinery-Equipments, Travis, Sheath etc. This will help in strengthening of breed improvement activities.

Poultry Development.

8.36 The egg production during last 10 years has doubled. The poultry farming provides excellent job opportunities not only to the entrepreneurs but also the

weaker section of the society. The sector however needs promotion and support through extension and input services besides technical guidances. Intensive poultry development block Ajmer require to be strengthened. Rs. 6.60 lakhs has been proposed for the eyar 2002-03 while Rs. 35.50 lakhs has been proposed for the Tenth Five Year Plan for the Poultry Development in the State.

Disaster management

8.37 Recurrent droughts and resultant migration malnutrition are adversely effecting, reproduction and production of animals. To meet natural calamities like drought, flood earthquake etc., department has to remain alert all the time. Some contingencies are required for relief works for disaster management. An amount of Rs. 20.00 lakhs has been proposed for Tenth Five Year Plan. But during Annual Plan 2002-03, no amount is proposed for this purpose.

Construction of 4th Floor HQ

8.38 At the Chairmanship of Chief Secretary it has been decided to start construction at 4th floor at Head Quarter building of Animal Husbandary Deptt. A provision of Rs. 95.00 lakhs has been proposed for the Tenth Five Year Plan. But no amount is proposed for Annual Plan 2002-03.

Sample Survey for Estimation of Livestock Products

8.39 For sample survey for estimation of livestock products like milk goat meat egg & wool Rs. 35.00 lakhs has been proposed for the eyar 2002-03 and Rs. 175.00 lakhs for Tenth Five Year Plan.

Livestock Census

8.40 Rs. 12.80 lakhs has been proposed for the year 2002-03 and Rs. 64.00 lakhs for Tenth Five Year Plan for the livestock census in Rajasthan.

Research and Development

8.41 Through New technology like Multi Ovulation Embryo Transfer (MOET) and Open Nucleus Breeding System (ONBS) with the involvement of selected Goshalas the research work can be done to get better Germplasm for breed improvement. Therefore a provision of Rs. 40.00 lakhs has been proposed for Tenth Five Year Plan.

NGO collaboration projects

8.42 For privatisation of Animal husbandry activities different NGOs are coming to take up the developmental projects where only manpower of the department is required to be utilised. Rs. 20.00 lakhs has been proposed for this proposed for Tenth Five Year Plan.

Sheep Development

8.43 Rajasthan has 171 lac sheep population which provides about 42% Wool and 40% mutton production. Western Rajasthan prone to droughts leads constant migration in search of food. Hence it is essential to develop sheep husbandry in Rajasthan. A provision of Rs. 75.00 lakhs has been proposed for Tenth Five Year Plan for this purpose.

Rajasthan Agriculture University, Bikaner & MPUAT Udaipur,

Veterinary Education and Research (Animal Husbandry)

Research

8.44 The responsibility of Animal Husbandry, Veterinary Education and Research and fisheries are entrusted to RAU, Bikaner & Maharana Pratap University of Agriculture & Technology, Udaipur in the State. A state livestock breeding strategy needs to be evolved to meet the requirement of milk, meat, egg and livestock products and to enhance the role of drought animals as a source of energy for farming operations and transport. Major thrust will be on genetic up-gradation of indigenous / native cattle and buffaloes using proven semen and high quality pedigreed bulls and by expanding artificial insemination network to provide services at the farmers' doorsteps. Following are the important thrust areas of research in the field of Veterinary & Animal Science, dairy technology and fisheries.

Livestock research -

8.45 There is need for research on conservation and improvement of indigenous germplasm of Tharparker and Rathi Cattle, Surti Buffaloes, Gir cows, Deogarhi and Parbatsari goats and magra, Chotla, Mawari, Sonadi sheep etc.

Diary Technology Research -

8.46 Indigenous and traditional dairy and food products - technology standardization and packaging. By-product utilization and development new foods.

Fisheries & Limnology Research -

8.47 Studies on bio-diversity including survey of ichthyofauna and other aquatic organisms contributing to the aquatic bio-diversity.

8.48 To work out nutritional requirement of local commercially important fishes for formulating ideal fish diet to promote intensive fish culture.

Education

8.49 In view of current needs of the State, syllabus has been re-oriented to include new disciplines viz. Veterinary Biochemistry, Livestock Product Technology and Epidemiology and Preventive Veterinary Medicine. In order to cater to the employer needs, new courses viz. Veterinary Ambulatory Clinic, Vety. Laboratory Diagnosis, Vety. Epidemiology and Computer Applications and Biostatistics have been included. However, as per VCI norms, there are deficits in respect of equipments, and facilities in various departments of the College. One time financial requirement is required to make up the deficiencies of equipments and facilities. Significant infrastructure additions have been made under ADP, namely - Teaching Clinical Complex, Animal Biotechnology laboratory, Central Laboratory and Faculty House. These facilities need to be strengthened through equipment and work force. Other facilities requiring strengthening are Library, Internship Programme, Field Practical Mobility, Disease Investigation facility, PG Programmes, Internship stipend and PG Stipend.

8.50 A provision of Rs.352.04 lakhs & Rs.193.50 lakhs has been proposed for Tenth Plan and Rs.70.00 lakhs & Rs.39.00 lakhs for Annual Plan 2002-03 for these Universities.

Fisheries Development

8.51 Rajasthan possess a large area of inland water bodies which offer potential for development of both intensive and extensive system of culture based fisheries. From the available fresh water resources in the state 3.30 lakh ha. of inland water sheets in the form of reservoir (1.2 lakh ha.) tanks, and ponds (1.8 lakh ha.) and rivers (0.30 lakh ha.) have been identified for capture cum culture fishery management. Beside there exists 0.04 lakh ha. brackish water bodies and perennial flowing system, 214 KM. Indira Gandhi Feeder Canal and about 500 KM under I.G.N.P. in north west Rajasthan.

8.52 About 60% out of 3.30 lakh ha. of inland water sheet of various forms and sizes is situated in south and western part, 30% in the eastern part of the state and remainder 10% exists in north western part of the state. Identified water bodies exist in different agro-climatic conditions, therefore, biosphere vary in size from few hectares to twenty thousand hectares. They also vary in productivity.

8.53 The main objectives of the fisheries development programme are as follows:

- Enhancing biological productivity of reservoirs to get optimum production per hact. to meet out the increasing demands of the growing population.
- To raise nutritional standard of masses.
- To generate employment opportunities and additional source of income in rural areas.
- To improve the socio-economic conditions of the traditional fishermen.

Strategy

8.54 In view of likely rise in domestic demand of fish in India and easy supply of fish to non-vegetarian population of the state, efforts to enhance fresh water fish production through aquaculture needs to be consolidated. In general, development strategy and thrust areas would be as under;

8.55 Setting up of hatcheries in private sector, training of fish farmers, greater stress on credit facilities, strengthening of input supply and fish marketing infrastructures in selected areas, adoption of modern techniques for increasing productivity and diversification to fresh water/ brackish water aquaculture in IGNP area and other suitable areas have been identified as important areas for taking up new programmes/schemes for development of fisheries in the state.

8.56 Major emphasis was laid to increase fish seed and fish production. Besides, specific emphasis was also given to promote the welfare of SC/ST people and person living below the poverty line. The threshold hold levels are given below:

S.No.	Item	Annual Progress		Tenth Plan
		2000-01	2001-02	
1.	Fish Seed Production (Million)	231.00	235.00	350.00
2.	Fish Production (M. Tonns)	12.14	13.00	22.00

8.57 An amount of Rs. 351.56 lakhs has been proposed for the Tenth Five Year Plan & Rs. 63.92 lakhs for Annual Plan 2002-2003.

8.58 The details of scheme which will be implemented in a Tenth Plan & Annual Plan are as below :-

- Fish seed Production
- Development of Fresh Water Aquaculture
- Fisheries Extension Education & Training
- Group Accident Insurance scheme for active fisherman
- Direction & Administration
- Fishermen Welfare Schemes

Dairy Development

8.59 A token provision of Rs. 0.01 lakhs has been kept for Tenth Plan & Annual Plan 2002-2003.