

CHAPTER 10

LIVESTOCK AND FISHERIES

India has vast resource of livestock and poultry. The result of the 18th Livestock Census (2007), derived from village level count, has placed the total Livestock population at 529.7 million and poultry birds at 648.8 million. In 2009-10, India produced 112.5 million tones of milk, 59.8 billion eggs, 43.2 million kg wool and 4.0 million tones of meat .The livestock and fisheries sector contributed over 4.07 percent of the total GDP during 2008-09 and about 29.7% to the value of output from total agricultural and allied activities.

Animal Husbandry sector provides large self-employment opportunities. This sector play a significant role in supplementing family incomes and generating gainful employment in the rural sector, particularly among the landless labourers, small and marginal farmers and women, besides providing cheap nutritional food to millions of people. The Animal Husbandry sector not only provides essential proteins and nutritious human diet through milk, eggs, meat, etc. but also plays an important role in utilization of non-edible agricultural by-products. Livestock also provides raw material byproducts such as hides and skins, blood, bone, fat, etc. Livestock are the best insurance against the vagaries of nature like drought, famine and other natural calamities. Animal Husbandry, dairying and Fisheries sector engage 23.68 million persons.

Animal Husbandry, Dairying and Fisheries, is a State subject, the emphasis of the Central Government has been on supplementing efforts of the State Governments in the development of these sectors. Central Government is providing assistance to the State Governments for the control of animal diseases, scientific management and upgradation of genetic resources, increasing availability of nutritious feed and fodder, sustainable development of processing and marketing facilities and enhancement of production and profitability of livestock and fisheries enterprises. The State Governments/Union Territories are advised in the formulation of policies and programmes in the field of animal husbandry, dairy development and fisheries. Main focus of the activities is on (a) development of requisite infrastructure in States/UTs for improving animal productivity (b) preservation and protection of livestock through provision of livestock health care (c) strengthening of central livestock farms and (d) expansion of aquaculture in fresh /brackish water and welfare of fisher folk, etc.

There are 18 Central Livestock Organizations and allied institutions for production and distribution of superior germ plasms to the State Governments for cross-breeding and genetic up gradation of the stocks. Besides, various schemes are being administered by Central Government for development of requisite infrastructure and supplementing efforts of the State Governments in achieving accelerated growth of animal husbandry sector. Central Cattle Development Organizations include seven Central Cattle Breeding Farms, one Central Frozen Semen Production and Training Institute and four

Central Herd Registration Units established in different regions of the country to produce genetically superior breeds of bull calves, good quality frozen semen and for identification of locations of superior germ plasms of cattle and buffaloes.

National Project for Cattle and Buffalo Breeding

A major programme for genetic improvement called National Project for Cattle and Buffalo Breeding (NPCBB) was launched in October 2000 to be implemented over a period of 10 years in two phases of five years each. The NPCBB envisages genetic up gradation and development of indigenous breeds on priority basis. Presently 28 states and one Union territory are participating in the project.

Livestock Insurance

In order to protect the farmers and cattle rearers against loss of their animals due to death and spread awareness about the benefits of insuring livestock, a centrally sponsored scheme of Livestock Insurance was introduced during 2005-06 to 100 selected districts on pilot basis. This scheme has been extended to 300 selected districts covering all states.

Poultry Development

India is among the top five chicken meat producing countries in the World. In 2009-10, India produced 59.8 billion eggs and the poultry meat production stands at about 2.0 Million Metric Tonnes in 2008-09. After the initial boost given by the Central Poultry Breeding Farms to promote poultry farming on commercial lines in the country, the poultry sector has flourished and now about 70% of the production management and marketing is under a highly organized sector. Four Central Poultry Development Organizations (CPDOs) at Bangalore (SR), Bhubaneswar (ER), Chandigarh (NR) and Mumbai (WR) are presently functioning to provide necessary services including training the farmers to upgrade their skills. These CPDOs are entrusted with

- Diversification program: Central Government has started diversification of species as a thrust area under which other species such as Duck (Southern and Eastern region), Japanese quail (Western and Northern region), Turkey (Southern and Western region) and Guinea fowl (Eastern region) have been introduced to boost the poultry industry. Emu farming was started at CPDO (Southern region) as a pilot project for popularizing this bird in India.
- Strengthening of Feed quality monitoring wing: The feed analytical laboratories are concentrating their activities on analysis of various feed/feed ingredients.
- Training Programme.

- Random Sample Tests: The Central Poultry Performance Testing Centre (CPPTC) located at Gurgaon (Haryana) is the lone centre at the national level to test various stocks of poultry available in the country.

Dairy Development

The National Dairy Development Board (NDDB) is a statutory body corporate established by the Parliament as an institution of national importance under the NDDB Act 1987. NDDB promotes plans and organizes programmes for the development of dairy and other agriculture based and allied industries along cooperative lines and also provides assistance in the implementation of such programmes. NDDB is continuously providing technical and financial support to dairy cooperatives in the areas of strengthening cooperative business infrastructure, productivity enhancement, quality assurance and the creation of a national information network. Intensive Dairy Development Programme (IDDP) was launched in Non-Operation Flood, Hilly and Backward Areas' in 1993-94. The main objectives of the IDDP are as (1) development of milch cattle, (2) increasing milk production by providing technical input services, (3) procurement, processing and marketing of milk in a cost effective manner, (4) ensure remunerative prices to the milk producers, (5) generate additional employment opportunities, and (6) improve social, nutritional and economic status of residents of comparatively more disadvantaged areas. The scheme was modified during March, 2005 and also extended to some district of Operation Flood Programme.

Fisheries

Fish production increased from 7.14 million tonnes in 2007-08 to 7.85 million tones in 2009-10. Fishing, aquaculture and allied activities provide livelihood to 14million people in 2008-09. India is the third largest producer of fish in the world and second largest producer of fresh water fish in the world. Fisheries sector occupies a very important place in the socio-economic development of the country. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries and is a source of cheap and nutritious food besides being a foreign exchange earner. Most importantly, it is the source of livelihood for a large section of economically backward population of the country, particularly in the coastal state. Inedible Fish is also a rich source of animal protein for livestock feeding. Fish scales, fishery waste are also a source of organic manure.

National Fisheries Development Board (NFDB) has been set up in September 2006 with its headquarters at Hyderabad to realize the untapped potential of fisheries sector, fish culture, processing & marketing of fish, application of modern tools of research & development for optimizing production and productivity in fisheries. NABARD and banks have played a crucial role in providing credit for marine, inland and brackish water aquaculture production, processing, packaging, preservation, transportation and marketing of fish and fish products, prawn culture etc. It also assists in establishing fish seed hatcheries, development of new ponds or rejuvenation/ expansion of old ponds,

manufacture of ' quality' feed etc. In marine fisheries credit is provided for manually operated and mechanized boats and fishing vessels of different capacities including other inputs like gears, nets etc. The main challenges facing fisheries development in the country include development of sustainable technologies for fin and shell fish culture, yield optimization, infrastructure for harvest and post-harvest operations and landing and berthing facilities for fishing vessels. Fisheries are a State subject and as such the primary responsibility for its development rests with the State Governments. The major thrust in fisheries development has been on optimizing production and productivity, augmenting export of marine products, generating employment and improving welfare of fishermen and their socio-economic status.

Central Institute of Fisheries Nautical & Engineering Training (CIFNET) was established in 1963 at Cochin for organizing suitable fisheries training system at the national level. Subsequently, two units of the Institute were set up at Chennai and at Visakhapatnam. The primary objective of the Institute is to make available sufficient number of trained operatives for fishing vessels and technicians for shore establishments. The Fishery Survey of India (FSI) is the nodal agency for survey and assessment of marine fishery resources of the Indian EEZ with its headquarters at Mumbai. The Institute has seven operational bases at Porbandar, Mumbai, Mormugao and Kochi along the West Coast, Chennai and Visakhapatnam along the east coast and Port Blair in the Andaman & Nicobar Islands. Besides resources surveys, the FSI's work includes monitoring of fishery resources for the purpose of regulation and management, assessment of suitability of different types of craft and gear for deep-sea and oceanic fishing, providing in-vessel training to CIFNET/Polytechnic trainees, dissemination of information on fishery resources through various media to the fishing community, industry, other end users, etc.

The development of Geographical Information System (GIS) has been entrusted to Central Inland Fisheries Research Institute (CIFRI), Barrackpore. Initially satellite imageries were obtained from IRS-1D for post monsoon period from NRSA for assessment of shape and size of the water bodies. Later, it was decided to merge the component of census of inland fisheries with the component on Development of GIS. Under modified methodology, the Geographical Information System (GIS) of the Inland Waterbodies will be developed by CIFRI, Barrackpore, using LISS-III images of resolution 5.8 metre in multiple spectral bands for pre and post monsoon seasons covering the entire country and LISS-IV images in Black & White in two seasons for the States of West Bengal, Andhra Pradesh, Madhya Pradesh and Uttar Pradesh.

Census on Marine Fisheries was launched in 2005 in all the maritime States/UTs to count the men and material involved in the marine fisheries sector. The report of the census was published and released on 26th July, 2006. As per the report, there are 3302 marine fishing villages in all the maritime states/UTs of India and 10 inhabited islands of Lakshadweep with a total population of marine fishers of about 35.75 lakh. For streamlining the catch assessment surveys of marine fisheries, Fishery Survey of India (FSI) acts as an interface between the Ministry and the State Fishery

Departments. FSI is entrusted to collect data with emphasis on biological aspect of species, gear and market studies from markets of Marine States/ UTs by deputing field enumerators on contractual basis. FSI will also reconcile the data received from State Governments and data collected by CMFRI and have interface with CMFRI for scientific and technical guidance regarding catch assessment surveys to be carried out by FSI. Similarly, for streamlining the Catch Assessment Surveys on Inland Fisheries, the Central Inland Fisheries Research Institute (CIFRI) has been entrusted the responsibility of standardization of concepts, definitions and methodology for collecting fisheries statistics and training of staff concerned therewith. The work on supervision, training and data analysis is undertaken by CIFRI.

Highlights:

- The total number of livestock increased from 485 million in 2003 to 530. million in 2007. The number of cattle increased from 185.18 million to 199.08 million, whereas, number of buffalo increased from 97.92 million to 105.34 million, sheep from 61.47 million to 71.56 million and goats from 124.36 million to 140.54 million during the same period. The number of poultry increased from 489.01 million in 2003 to 648.70 million in 2007.
- The most fatal disease causing maximum death varies from year to year. In 2005 the maximum number of livestock died due to 'blue tongue'. In 2006, 2007 and 2009. The maximum number of livestock died due to 'chronic respiratory disease' whereas, maximum number of livestock died due to 'ranikhet (new castle)' in 2008. Besides, more than one lakh poultry died in each of the years 2006 and 2008, because of avian influenza. Number of birds culled in 2008 because of avian influenza was more than 48 lakh.
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- The number of adult male cattle increased from 51.76 million in 2003 to 56.01 million in 2007. Out of total male cattle available in 2007, 4.68% used for breeding only, 79.66% used for 'agriculture and breeding', 9.08% used for 'bullock cart and breeding' and only 6.58% used for other purposes.
- The number of adult male buffalos increased from 5.21 million in 2003 to 6.44 million in 2007. Out of total male buffalos available in 2007, 13.46% used for breeding only, 58.22% used for 'agriculture and breeding', 18.37% used for 'bullock cart and breeding' and only 9.96% used for other purposes.
- The total production of milk increased from 80.61 million tonnes in 2000-01 to 112.54 million tonnes in 2009-10. The production of cow milk increased from 32.96 million tonnes to 47.83 million tonnes, whereas, the production of buffalo milk increased from 43.43 million tonnes to 59.20 million tonnes, and production of goat milk from 3.27 million tonnes to 3.91 million tonnes during the same period. Out of total milk production available in 2009-10, 42.50% were cow milk, 52.60% were buffalo milk and only 3.47% were goat milk.

- The number of egg production increased from 36.63 billion in 2000-01 to 59.84 billion in 2009-10. The maximum 19.40 billion number egg productions were realized in Andhra Pradesh followed by Tamil Nadu with 10.85 billion productions in 2009-10.
- The wool production decreased from 48.4 thousand tonnes in 2000-01 to 43.2 thousand tonnes in 2009-10. The maximum 12.5 thousand tonnes of wool production was realized in Rajasthan followed by Andhra Pradesh with 4.6 thousand tonnes wool production in 2009-10
- The fish catch & landing increased from 5.61 million tonnes in 2000 to 7.72 million tonnes in 2009. The catch of inland fish increased from 2.83 million tonnes to 4.63 million tonnes, whereas, catch & landing of miscellaneous marine teleosteans increased from 1.63 million tonnes to 2.14 million tonnes during the same period.. Out of total fish catch & landing during 2009, 60% were inland fish, and, 27.75% were miscellaneous marine teleosteans.

This chapter contains the following tables:

Table 10.1: Number of livestock and poultry (2003 and 2007)

Table 10.2: Incidence of livestock diseases in India

Table 10.3: Adult male cattle and buffalo with their status (2003 and 2007)

Table 10.4: Production of milk (2000-01 to 2009-10)

Table 10.5: Production of wool and eggs (2000-01 to 2009-10).

Table 10.6: Fish catch & landings-by group of species since 2000.

Table 10.7: Quantity of fish catch by disposition since 2000.