Report
of the Subgroup on
Animal Husbandry Economics & Statistics
for
XI Five Year Plan

CONTENTS

EXECUTIVE SUMMARY

Four sets of recommendations are suggested in the report. They are as follows :

•General

a) Set up a new Directorate of Livestock Economies & Statistics (DLES) with four Divisions- Statistics; Sample Design, Planning & Marketing, Monitoring & Evaluation and GIS Mapping and Integrated Information System.

b) All types of field data being collected under various schemes must be computerized, analyzed and disseminated.

c) It should be made mandatory for the organised sector of Dairy, Meat processing and Poultry to supply the available information on a regular basis.

d) Recommendations to the State Governments.

a) Compulsory Registration of all types of livestock at the village level – fallen Hides & skins

b) Village level institutions, Panchayats, vets, AI centers etc., should be strengthened.

c) Municipal Corporations should be required to collect and provide all the data regarding organized /un-organised slaughter houses falling under their jurisdiction.

•Getting Higher Growth Rate

1. **To get higher growth rate, exploiting full export potential by** salvaging male calf of buffalo on the model of.the Hindagro being practiced in Uttar Pradesh.
2. **Improve quality :**
   a) By SriLanka model of Chicken in Poultry, which bans poultry slaughtering on road side/ in the presence of public and provides the service slaughterhouses for them.

   b) By adopting the model of **"Dynamics Dairy Industries"** being carried for the production of clean milk.

3. Rendering and Carcass utilization plants should be strengthened.

4. The contribution of the Livestock sector is highly under estimated because of underestimation of its products/ sub-sector or because of non –inclusion. This should be improved.

5. Feed & Fodder Authority of India should be constituted.

6. Complete mapping **of Livestock resources in** 190 districts specially advanced in livestock **of India.**

7. Minimum Support price for milk and egg may be fixed.

•Livestock Census Scheme

1. Livestock Census should be kept, continued and strengthened on a quinquennial basis under the aegis of present set-up of Department of Animal Husbandry, Dairying and Fisheries with the State agencies of Animal Husbandry.
2. The collection of data under Livestock Census should be made mandatory.
3. Publicity for Livestock Census is to be given due importance and funds for them should be provided in the scheme itself.
4. Data collection cost provided in the present scheme at the rate of Rs.3.50 per Household, should be increased to minimum of Rs. 15 per Household.
5. It is proposed that AH –people / skilled local persons/ qualified youth capable of being trained/ trained personals of AH field like AI personals etc. should be engaged for survey for recognition of breed.
6. Some amount of post enumeration checks should also be provided in the scheme.
7. The coming 18th Livestock Census should aim its conduction through computer intensive technology only.
8. The schedule of livestock should be modified so as to catch the real ground situation with regard to all types of animals including poultry especially broilers and made them scanning friendly.

•Integrated Sample Survey Scheme:

1. T*he scheme should be continued* with 100 % provision for staff salary.
2. To strengthen collection process and increase accountability in collection of livestock data, A*n office of livestock statistics at each district having all infrastructure and the staff of data collectors, supervisors and field officers headed by Assistant Director (Livestock Statistics) should be created*.
3. *Data collected, henceforth, must be put on computer.*
4. The aims of ISS Scheme should be broadened to encompass within it all statistical activities related with livestock sector.

•Input Surveys

1. It should be part of Livestock Census Scheme and must be run in the inter – Census period.
2. It should be aspired for all types of animals and may be carried out in animal specific regions of India for different categories of rearing farmers.

3. Along with quantity of inputs, its value –actual or imputed should also be collected in order to facilitate the planners at arriving cost of production of important products. besides cost of rearing.
4. Many pilot studies for each animal type are needed to make the specific animal–Input Surveys operational in the field. Sufficient funds in LC Scheme should be kept for doing such studies.

•Co-ordination/ Collaboration with Org. engaged in Livestock Statistics

1. National Sample Survey Organisation (NSSO):

NSSO should conduct, at an interval 5 years, a survey on livestock instead of current practice of its being done at a 10 years interval..

2. Central Statistical Organisation (CSO):

The livestock sector is highly underestimated because of underestimation and non –inclusion of items. Steps may be taken to improve the same.

In Economic Census, CSO should capture the unorganized sector of meat production and *Halwais*, creameries, dairy products processing units by refining/ readdressing the employment based definitions of enterprises (OAE, NDME & DME) of unorganized sector enterprises from production viewpoint

3. Directorate of Economics and Statistics (DES):

Mechanism to update the list of market centers for collection of price data of livestock products by Directorate needs further strengthening. *There is also need to include more centers for collecting the Price Data and more livestock items for which collection of prices are needed.* The newly recommended DLES will work in liaison with the existing DES in this respect.

4. Director General of Commercial Intelligence & Statistics (DGCIS)

Current practice is that Director General of Commercial Intelligence & Statistics (DGCIS) is holding its data collected from computer operated centers till it does not get also all the data from all the centers including those that are manually operated. The condition should be improved.

5. Institute of Applied Manpower Research

Number of livestock training centers, manpower trained in livestock work, number of para –technician with gender and qualification breakups should be collected by the *Institute of Applied Manpower Research and ICAR.*

6. NABARD

Institutional credit data upto district level should be compiled and made available by NABARD.

7. Livestock Insurance

The scheme should be extended all over the country and for all animals including poultry,

Budget Requirement:-

Total budget requirement will be 1444 crores during 11th five year plan with broad breakup as Livestock Census- Rs.710 Crores, The ISS Scheme- Rs. 134 Crores and for moderate coverage of Livestock Insurance-Rs. 600 crores

1. INTRODUCTION

1.1 Planning Commission constituted a subgroup on Animal Husbandry Statistics on July 12, 2006 with following as its members

(i) Dr. P.C. Bansil, Chairman
Director, Techno –Economic Research Institute
– J7, Saket, New Delhi –110017.

(ii) Shri Arun Saxena, Member
Advisor (Statistics), Department of Animal Husbandry, Dairying and Fisheries
Gate no 32, First Floor, JLN Stadium New Delhi –3

(iii) Dr. D.K.Jain, Member
Principal Scientist (Dairy Economics)
Incharge Computer Centre, NDRI, Karnal –132001

(iv) Dr. Pratap Birthal, Member
Senior. Scientist and National Fellow, National Centre for Agricultural Economics & Policy Research,
IASRI Campus, Library Avenue, PUSA, New Delhi –12.

(v) Dr. Mrithyunjaya, Member
National Director, NIAP, ICAR,
Krishi Anusandhan Bhavan, PUSA, New Delhi –12. Tel. 25848772

(vi) Sri S.K.Chakravarty, Member
Dy. Registrar General, Office of RGI,
2A –Maansingh Road, New Delhi.

(vii) Dr. K.V.Rao Member
DG and CEO, National Sample Survey Organisation,
Ministry of Statistics and Programme Implementation, Sardar Patel Bhavan, Parliament Street, New Delhi. Tel . 23742026

(viii) Dr.C.L.Dudhich Member
Sr. G.M. NDDB,
Anand, Gujarat.

(ix) Dr, Vishnu Kant Srivastava Member Secreatry
Director, Department of Animal Husbandry, Dairying and Fisheries
Gate no 32, First Floor, JLN Stadium New Delhi –3

1.2 The terms of reference of the Sub –group are :

1. To review the existing machinery and systems for estimation of animal husbandry statistics (including animal byproducts) and suggest measures for improvement of data collection method and timely estimation.
2. To suggest the statistics required on categories of various livestock production system, pattern of use of livestock products, their prices spread in various marketing system and value additions at different levels of processing and marketing. Also suggest studies required for collection of these statistics/ information.
3. To suggest measures required to build a continuous monitoring system in regard to various livestock development programme.

4. To suggest measures for incorporation of information technology in animal husbandry programme.

1.3 In order to give better representation on the counts of terms of reference the following persons were also co –opted as Member of the Subgroup

1) Dr. S.D. Sharma Director IASRI, Library Avenue, PUSA, New –Delhi
2) Prof. Praduman Kumar, Agro-Economist, Ex- IARI
3) Shri Sunil Jain, Director –RGI Office, M/o Home New –Delhi.
4) Dr. Janardan Yadav Director, CSO, New –Delhi.
5) Shri Girish Chandra, Joint Director, CSO, New –Delhi.
6) Shri Naresh Kumar, Joint Director, CSO, New Delhi.
7) Shri GC Manna Director –NSSO, SP Bhavan New –Delhi.
8) Shri Ram Kripal Director –NSSO SP Bhavan New –Delhi.
9) Shri Vidya Prakash Director-NSSO, SP Bhavan New –Delhi.
10) Dr.HVL Bathla, Head Sample Surveys, IASRI, PUSA, New –Delhi
11) Dr. C.Shekhar Sahaukar Deputy Advisor (AH) P.Commission, New –Delhi.
12) Shri S.K.Lohani, Director- M/o Food processing, New Delhi.
13) Dr N.G.Hegde, Vice President BAIF Research Development Foundation
14) Smt. Ratna Chaudhary Dy. Director, DES, M/o Agriculture, New Delhi
15) Dr. A.P.Sachdev, Director Blue Cross consultants
16) Shri Nand Lal Director –AHS, DAHDF, New -Delhi
17) Dr. Chandramani Sharma, Deputy Director, AHS, DAHDF, New –Delhi

1.4 The Subgroup met seven times and discussed the matter.

Date	**Venue**	**Time**
25/7/06	Room No.8, Gate no32, First Floor, JLNehru Stadium, New Delhi –3.	10 –30 to 13 -00
3/8/06	Room No. 119, Yojna Bhavan, Sansad Marg, New Delhi. –1.	11 –00 to 16 –00.
10/8/06	Room No. 134, Yojna Bhavan, Sansad Marg, New Delhi. –1.	11 –00 to 16 –00.
17/8/06	Room No. 134, Yojna Bhavan, Sansad Marg, New Delhi –1.	10 –00 to 14 –30.
23/8/06	Room No. 119, Yojna Bhavan, Sansad Marg, New Delhi. –1.	11 –00 to 16 –00.
04/09/06	Room No. 134, Yojna Bhavan, Sansad Marg, New Delhi –1.	11 –00 to 16 –00.
18/09/06	Room No. 134, Yojna Bhavan, Sansad Marg, New Delhi –1.	11 –00 to 16 –00.

1.5 The Subgroup benefited by the presence/ address of Dr. V.V.Sadamate Advisor (Agriculture) Planning Commission. He guided the group on the subjects transfer of technology (TOT), Self Help group, potentiality of AH intervention to change the face of nation, Krishi Vigyan Kendra (KVK) at district level, strong service delivery system, sensitization of local credit institutions for micro –level support, response time in retrieval mechanism of data/ statistical system, and GIS mapping with special programmes for 190 most promising districts.

2. INCRESING ROLE OF LIVESTOCK IN THE NATIONAL ECONOMY

India possesses the largest livestock population in the world. According to the 2003 Census data, the country had 485 million livestock population and 489 million poultry population, having the second highest number of cattle (185 million), the highest number of buffaloes (97 million), the third highest number of sheep (61 million), the second highest number of goats (124 million), the sixth highest numbers of camels (632 million), the fifth highest numbers of chickens (457 million) and the third highest number of ducks (33 million) in the world.

Livestock Sector has been playing an important role in Indian Economy and is an important sub –sector of Indian agriculture. The contribution of livestock to GDP decreased from 5.22% in 1999 –00 to 4.36% in 2004-05 at current prices. According to CSO estimates, gross domestic product from livestock sector at current prices was about Rs. 935 billion during 1999-00, (about 21% of agriculture and allied GDP). This rose to Rs. 1239 billion during 2004-05 with 22% share in agriculture and allied GDP. But the share of livestock in the plan allocation hovered at around 7 per cent of the agricultural out lay

Table 2.1: Percentage Contribution of Livestock Sector to Agriculture and Total in terms of GDP

Year	GDP at Current Prices (Rs. In Crores)			% contribution of Livestock to		Plan outlay (Rs. Cross)		
	Livestock Sector	Agriculture Sector	Total at factor Cost	Agriculture GDP	Total GDP	Agriculture	Livestock	% share of livestock in Agri.
1999-00	93485	454061	1792292	20.6	5.22	8796	670	7.6
2000-01	103012	457214	1930184	22.5	5.34	7577	510	6.7
2001-02	108838	487398	2097446	22.3	5.19	9097	601	6.6
2002-03	108000	468546	2255574	23.1	4.79	7655	476	6.2
2003-04	114370	534689	2543396	21.4	4.50	9436	629	6.7
2004-05	123873	556146	2843897	22.3	4.36	4643	302	6.5

This sector plays an important and vital role in providing nutritive food, rich in animal protein to the general public and in supplementing family incomes and generating gainful employment in the rural sector, particularly among the landless, small, marginal farmers and women. As many as 60% of the families who own milch animals are landless, marginal or small. Major part of livestock population is concentrated in the marginal/small size of holdings. But the quality of animals held by them is poor. Crossbred cattle and quality buffaloes with this class is rather small.

The development of animal husbandry has been envisaged as an integral part of sound system of diversified agriculture. With its large livestock population, India has vast potential for meeting the growing needs of teaming millions, particularly in respect of

livestock products such as milk, eggs, meat and wool. This sector provides animal proteins and various types of raw materials for industrial use.

Bullock power still continues to be the main source of draught power in agricultural operations and transport of agricultural products to nearby markets and is likely to remain so for a long time to come. Besides, cattle, camels and donkeys are also other important effective draught animals. Further, agricultural production programmes get valuable organic manure provided by livestock. Biogas production based on dung is an efficient non –conventional energy source for domestic cooking and lighting.

Gender equity is more pronounced in livestock sector as women participation is 71% of the labour force while it is only 33% in crop farming. About 10 million families in India are engaged in sheep, goat, rabbit and pack animals rearing, fur skin processing, fiber wool handling and meat production. Livestock indeed is considered as an important economic activity that can help to alleviate poverty. Livestock production systems are based on low cost agro by products as nutritional inputs, using traditional technologies. The spectacular growth of livestock products especially milk, meat, eggs and poultry meat is, however, attributed to the initiatives taken by Government through its schemes, the organized sector and the rising demand for these products in response to rising incomes in urban and rural areas. It has been observed that with increasing income, demand for cereals is decreasing. While Green Revolution was supply driven, Livestock Revolution is demand driven. With ever increasing demand for livestock products, its impact on agricultural economy becomes immensely important.

In dynamic times of today, one cannot take comfort in the past. The role of knowledge or intellectual capital in Policymaking and Research is well appreciated. Right answers to any issue will depend on reliable database, hence there exists importance of statistics. As suggested above, with the livestock sector assuming an important role in the national economy, one needs to improve the present state of livestock statistics further. Although considerable resources have been directed toward collecting and disseminating information on basic crops, little attention has been given to collecting, disseminating and analyzing livestock and livestock product data. They have to meet the challenges of New Economy, the Global Economy or what we would call the “Knowledge Economy”.

Our task in this Sub-Group on Animal Husbandry Statistics is thus quite important. Reliable and timely data is not only a key input for informed planning and decision-making by various participants, but also for effective government policymaking and administrative decision-making. There is an urgent need to collect a comprehensive data of the livestock sector through the application of modern Information Technology. In view of the growing importance of livestock sector in India, it is essential to have reliable statistics on various facets of this sector for various policy formulation purposes. Major heads on which data need to be collected and analyzed are given in the table: (3.1)

3. DATA REQUIREMENT

It is important to note that there is obviously a need for further strengthening the Statistical System to get comprehensive database for further development of livestock sector. The basic requirement of data relates to number and productivity of livestock and the economics of the production from livestock enterprises of different sizes. Besides, different types of related statistics/ information are also needed for scientific livestock development programmes. This includes information on rearing, animal husbandry practices, feed and fodder, impact of individual inputs on productivity, impact of a developmental scheme on the productivity, production and practices, input and output relationships in milk production, substitution possibilities as means of lowering costs and increasing the returns; balanced nutritional feed for different animals, prices of animals – breed wise, requirement and consumption of various livestock products, cost of production of milk, egg etc.

Table 3.1 –Major heads on which data needs to be collected

1	Numbers :Cattle, Poultry, Piggery, small ruminants, sheep, goats	10	Draught Power
2	Productions: Livestock Products	11	Foreign trade
3	Consumption of livestock products	12	Economics of Livestock
4	Breeding	13	Demand/Supply of major livestock products, Loss at production & post production stage
5	Feed and Fodder	14	Employment
6	Diseases	15	Livestock Credit Programmes
7	Livestock Health Care	16	Prices
8	Marketing	17	Apiculture and Sericulture
9	Processing of Livestock products	18	Hides & Skins

Similarly, for any scheme such as Livestock Insurance, basic data on the productivity of animals, their life span, mortality rate and general health services available are needed. For the development of a good system of marketing of livestock products, the need for basic data are the prices received by the producers and the prices paid by the consumers etc. The data on prices of livestock sold in major markets/ fairs need to be collected. Thus, there is an urgent need to further develop a proper system of collection of information and creation of database for livestock sector during the Eleventh Plan.

3.1 Sources of Livestock Data

Although available data are quite scanty, there are number of sources which supply varied types of information at varying scale. Discussions on each of the important sources of data are given in subsequent sections/ sub-sections. Suggestions to improve them as to meet present days needs of the fast growing sector of the economy are also mentioned. The Integrated Sample Survey and Livestock Census are the Schemes of Department of Animal Husbandry, Dairying and Fisheries (DAHDF) giving important livestock statistics, they are, therefore, discussed in subsequent sections instead of sub-sections. Important sources

that are primarily collecting/ compiling livestock data for a wider coverage on a regular basis are:

(a) Department of Animal Husbandry, Dairying and Fisheries (LC.& ISS Schemes)
(b) National Sample Surveys (NSSO)
(c) Central Statistical Organization (CSO)
(d) Directorate of Economics and Statistics (DES)
(e) Director General of Commercial Intelligence & Statistics (DGCIS)

There are a large number of organizations/ institutions that are collecting livestock data in some way or the others. They can also be made use of for collecting livestock related data in order to fill gaps as listed below.

Ministry of Agriculture
Indian Agricultural Statistics Research Institute
M/o Rural Development
M/o Food processing Industries
National Dairy Research Institute
National Agricultural Bank of Rural Development (NABARD)
National Dairy Development Board (NDDB)
Directorate of Marketing and Inspection (DMI)
National Co –operative Development Corporation (NCDC)
Indian Council of Agricultural Research (ICAR)
Animal Sciences Institutes of ICAR
National Center for Agricultural Economics and Policy Research (NCAP)
Agricultural & Processed Food Products Export Development Authority (APEDA)
Agricultural Universities & Animal Sciences & Fisheries Universities
Indian Dairy Association
Food Processor's Association of India
Agro –Economic Research Centers
Poultry Federation of India
National Egg Co –ordination Committee
Compound Livestock Feed Manufacturers Association (CLFMA)
Ad-hoc/ pilot surveys conducted by the different organizations and experimental stations
Periodic returns / reports from State Departments of AH
Institution of Applied Manpower Research
Central Leather Research Institute (CLRI)
Central Sericulture Board
State Livestock Development Boards
State Dairy Federations

3.1.1 National Sample Survey Organisation (NSSO):

This is the only source, which provides on regular basis information regarding quantity and value of consumption of various livestock products – both for rural and urban areas. Consumption of food out of the household is not included. There is a need of improvement in this respect. Some special surveys have also been conducted by NSSO on livestock. Thirty-Second round (1977-78) gave a comprehensive database on cattle mortality and various other indicators. The 48^{th} and 59^{th} rounds provide information on ownership of animals by size of landholdings.

NSSO also conducts a survey, at an interval of 10 years. Since Livestock has become an important area and occupies a definite place in the national economy. NSSO should repeat such surveys at an interval of five years instead of 10 years duration. In the case of dairy units in unorganized sector, these surveys should also include, apart from the regular items that are collected, the average quantity of milk handled per day across different seasons and its conversion ratios into different dairy products, Fixed investment on business premises, machinery, equipment utensils, quantity of various dairy products manufactured per month/ year and Casual/ permanent labour employed in various manufacturing operations and per unit price of dairy products marketed across different seasons. It should also include meat estimates from the unorganized sector.

3.1.2 Directorate of Economics and Statistics (DES):

The Directorate brings out a weekly bulletin of wholesale prices and retail prices of selected commodities. This includes various livestock products collected at selected market centers. The Directorate of Marketing and Inspection has come up with the web –site www.agmarket.nic.in under Department of Agricultural Co –operation (DAC) with the provision made of feeding the data by APMC on online daily basis. Mechanism to update the list of market centers for collection of price data of livestock products by Directorate should be further strengthened. *There is need to include more centers for collecting the Price Data and more livestock items for which prices are needed to be collected*.

3.1.3 Central Statistical Organisation (CSO):

Central Statistical Organisation (CSO) provides annual data regarding the value of output from livestock sector under the various heads like Milk Group; Meat Group –meat, beef, mutton, pork, poultry, meat products, by-products, hides and skins, and other by products; Eggs; Wool –hair & bristles; Dung –dung fuel and dung manure; Silk worm cocoons and honey. As already mentioned, all items like draught power etc. should be included and underestimated items accurately assessed.

All calculations are based upon the survey/ ratio-based production estimates coming from various sources including those of the Department of Animal Husbandry, Dairying and Fisheries. There is, therefore, the need of providing reliable estimates where such survey mechanism is available and updating the ratios by conducting of special studies on regular basis where survey mechanism is not available/ feasible.

CSO conducts Economic Census to capture the unorganized sector. This can be used as a frame for producing meat estimates, *if we include meat-producing units also in the census*. Employment based definitions of enterprises given as own account enterprises (OAE), non –directory manufacturing enterprises (NDME) and directory manufacturing enterprises (DME) for the enterprises of unorganized sector should be refined for meat producing units as their relative behavior from production view point should be more or less within a fixed range. *Similarly the frame of Halwais, creameries, dairy products processing units across rural and urban areas of different States should also be collected under economic census*.

The Annual Survey of Industries (ASI) of CSO should collect information on statistics related with dairy and meat processing industries which may help the planners to arrive at cost of processing of products and also imput the conversion ratios of the milk and meat products giving idea of value addition made.

In the Index of Industrial Product, CSO may examine the possibility of including of items of livestock products like *ghee*, butter etc.

3.1.4 Other Organizations :

a. The data on financial front in respect of livestock sector is very weak. There are several banks and insurance companies. There is a need to compile all such under one umbrella of Banking System. *Institutional Credit data upto district level should be compiled and made available by NABARD.*

b. Number of livestock training centers, manpower trained in livestock work, number of para –technician with gender and qualification breakups should be collected by the *Institute of Applied manpower research and ICAR.*

c. Director General of Commercial Intelligence & Statistics should computerize all its centers for which manually data is being collected. Moreover, whatever data is being collected through computer, system should be developed to release them immediately.

4. LIVESTOCK PERSPECTIVES

Sustained rise in per capita income and urbanization are fuelling rapid growth in demand for animal food products. The factors underlying demand growth have been quite robust in the recent past, and are unlikely to subside in the near future. Growth in demand is likely to be widespread cutting across class and regional distinctions. Demand for animal food products is income elastic and the low-income households with rise in their income will spend more on them. Though urbanization would continue to be the main driver of demand growth, rural areas will not lag behind. Besides, the world trade in livestock products has also been increasing fast, implying opportunities for increasing exports.

Expanding demand creates an immense scope for fostering rapid growth in livestock sector. Livestock production has been growing faster than crop production and the momentum is likely to continue. The demand-driven growth in livestock production will enable millions of poor to escape poverty trap, as the distribution of livestock is more equitable as compared to land. The poor have sufficient labour of low opportunity cost and are capable of producing at a lower cost. A growing livestock sector will also contribute towards women empowerment as women contribute nearly 70 percent of the labour use in livestock production.

Nevertheless, there is an apprehension. Small livestock producers are constrained by a lack of access to markets, inputs and technology to expand their scale of livestock production and improve productivity. Inadequate public infrastructure and lack of institutional support (credit, insurance and extension) act as barriers for the poor to participate in production and marketing. Thus, there is a danger that large commercial producers may displace poor livestock producers. Globalization also poses a threat. There is an imminent threat of cheap imports of animal food products from countries that heavily subsidize livestock production and exports. Further, the food safety standards and regulations are becoming stringent both in domestic and global markets.

The extent to which growth in livestock production can be accelerated would depend on how technology, institutions and policies address constraints facing the livestock sector. In the past, growth in livestock production was largely number-driven. This may not sustain in the long run and may stress our natural resources. The future growth should come from improvements in productivity. This will require overcoming feed and fodder scarcity and improvements in delivery of animal health and breeding services. Technology will be a key driver of growth and concerted efforts will be needed to generate and disseminate yield-enhancing and yield-saving technologies.

Public spending in livestock sector as a proportion of the value of sector's output has fallen considerably over the last two decades. This needs to be increased to re-energize the sector. Markets for live animals and their products are under-developed and dominated by informal traders who often exploit producers. There is a need to strengthen linkages between production and markets through institutions such as cooperatives, producers' associations and contract farming. This will also help improve value addition to livestock products, which has been quite low. Institutional support in terms of credit and insurance is meager and needs to be strengthened. Further, the governments and industry should prepare producers for a quality-driven competition in the domestic as well as global market.

4.1 Getting higher growth rate.

If livestock potential is to be fully exploited and necessary steps taken as detailed below, the sector can give a growth rate of around 7%.

1. **Exploit fully export potential:** (a) Salvaging male calf of buffalo – we have the example of the Hindagro model practiced in Uttar Pradesh, on the principle of backward rearing integration to get good male calf buffaloes (b) We do not have enough of broiler dressing and processing plants, which meet world food standards. Only five plants in India are approved, which can process only two to three percent of total broiler production in the country.
2. **Control of Animal diseases coupled with adequate feeding** can give a 20% increase.

3. **Improve quality :**
   a) SriLanka model of Chicken, Poultry, which bans poultry slaughtering on road side/ in the presence of public and provides the service slaughterhouses for them. Also adopted by Delhi Government. should be implemented at All India level.

   b) The production of clean milk through export oriented units should be encouraged to give it major boost by adopting the model of **"Dynamics Dairy Industries"** being carried out in the **Baramati District of Maharashtra** and also the **NESTLE** model at **Moga**.

   c) Production of organic milk

4. **Rendering and Carcass utilization plants** should be activated and upgraded.

5. The **contribution** of the Livestock sector is **highly under estimated** because of either non –counted items or underestimated items.:

   Not Counted:-

   a) Draught power is not counted in the value of livestock sector. It provides the energy of 60% of the cultivated area, hauls 14 million carts and saves over Rs. 40 thousand crores of petroleum. – Examples are BCRDF, Kamdhenu, Bullock drawn Tractors and CIAE Bhopal implements.
   b) Milk of Camels and Donkeys, which is a highly valuable product, is not counted.

   Underestimated:-

   c) Meat production; by-products of the slaughter houses –animal fat, bone meal, hooves, gelatin, hides and skins; wool and honey are highly under estimated.

   d) Cow dung and urine have medicinal value. Gaushalas can be developed as new factories. The value of Dung is underestimated. Moreover bio-gas potential of over 12 million plants, vermicompost and poultry droppings are not counted/ underestimated.

6. **Feed & Fodder Authority of India:**

Attempts should be made to constitute **Feed and Fodder Authority of India** (FAI) in order to assess and meet the short and long-term feed and fodder requirement of the country. Efforts should also be made to develop a *"feed grid"*.

7. Complete **mapping of Livestock resources in** 190 districts having high potential with intensive development programmes will enable us to achieve higher growth rate by providing additional production and leadership.

8. To ensure adequate and remunerative prices for dairy and poultry industries, **minimum support prices** for milk and egg may be fixed.

5. LIVESTOCK CENSUS SCHEME

The **Livestock Census Scheme** is a Centrally Sponsored Scheme of the Department of Animal Husbandry. It was taken over in September 2002 along with unfinished work of 1997 census from the Directorate of Economics and Statistics on the recommendation of subgroup of Animal Husbandry Statistics of 10th five year plan. The Scheme, however, is quite old. The first time it was conducted in 1919-20. It is designed to be conducted after every five years. The 17th Livestock census was conducted with reference date of **15th October 2003** when all the states had counted livestock finally.

5.1 Review of 17th Livestock Census:

Livestock Census are being conducted quinquennially in the country since 1919-20 with ever increasing scope, content and coverage. So far 17 such censuses have been conducted. The Department of Animal Husbandry in the states have been the nodal authority for conducting the livestock census, data processing and preparation of state specific reports. The Directorate of Economics and Statistics in the Department of Agriculture and Cooperation as in-charge of this activity, conducted up to 16th Livestock Census. Consequent upon transfer of this work to the Department of Animal Husbandry, Dairying & Fisheries on behest of the Planning Commission, the 17th census was conducted by this Department. The status paper on Livestock Censuses given at Annexure –II summarizes the progress achieved during 10th five-year plan in respect of 17th Livestock Census. For maintaining five year cycle, the seventeenth census should have been conducted in 2002. However, due to procedural delay and other reasons in transfer of the work to Department of Animal Husbandry, Dairying & Fisheries from Department of Agriculture & Cooperation, the census could be conducted in 2003 with reference date 15th October. However all efforts were made to compensate the delay by early release of the census results. Besides, there were some unique features in seventeenth census towards all-round improvement in the census work. Some important ones are:

a) All states and union territories conducted it simultaneously (except for some minor variations due to climatic and some other unavoidable circumstances). In all previous censuses there were always some exceptions.
b) The entire census operation was managed by the Department of Animal Husbandry of the respective states. However, in some states data collection agency was different from the Animal Husbandry Departments of the States.
c) Breed wise data were also collected for the first time by most of the states. In few states breed wise could not be collected due to various reasons including inexperience and lack of trained enumerators and supervisors.
d) The data were collected on socio-economic status of livestock owners.
e) The provisional results were released within nine months after the completion of fieldwork. The detailed results giving district wise livestock and poultry population were released in the form of thirty reports (One All-India report, twentyeight state reports and one report on UTs) were released within 13 months after the completion of field work.

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5.2 Problems Encountered in Conduct of 17th Census:

Some of the problems mentioned by states and also by data users etc were as under:

1. There was no time for proper planning and execution of the census work.
2. The funds were released after the census had been conducted by most of the states/UTs. The state conducted the census with their own finances with the assurances that funds will be provided by the Centre.
3. There was insufficient training at various levels especially for identification of breeds.
4. The schedule size was very big and there is need to cut short the schedule by deleting some of the information being collected and not tabulated or the information does not relate to livestock sector. The redesigning of schedule is also needed to make it simpler and scanning friendly.
5. The field problems are different in most of the NE States and hilly regions. There are needs for different field data collection norms for payment of honorarium at different level than those of plain areas.
6. For collection of breed wise data there should be extensive training by experts.
7. Many times, it is found that data is not easily collected from big dairy and poultry farms in the absence of any mandatory mechanism.
8. Data collection cost provided in the scheme was Rs.3.50 per Household, which is a very low remuneration.
9. Data collection is difficult task without proper publicity. The funds were not provided for it in the scheme.
10. The component of post enumeration checks was not existing in the scheme/

5.3 Recommendations for Livestock Census:

1. Livestock Census should be kept, continued and strengthened on a quinquennial basis under the aegis of present set-up of Department of Animal Husbandry, Dairying and Fisheries with the State agencies of Animal Husbandry.
2. The collection of data under Livestock Census should be made mandatory. *It will also empower the data collectors to get the data from the organized sector on livestock.* The rapid urbanization is bringing difficulties in collection of data. The cost of collection of data is increasing day by day. Even at times, the data/ information is not shared with the data collectors leading to several gaps in data of livestock sector. A legislation in this regard could prove to be a help.

A Registration System of Animals at Panchayat/ Municipal level should be worked out like the one for birth and death registration –system, which may be used for automatic generation of identifiable statistics. It may be made mandatory by introduction of fixing of electronic chip/ ear tag on animals. It should record all the particulars of birth and death of big animals like cattle and buffalo, where breed becomes an important component of developing them for the definite purposes. The parents' breed particulars should also be recorded. The record will give lot of vital statistics in terms of its mortality, birth rate, death rate, sex ratio.

Regulating the trading (buying and selling) of animals by making it compulsory to register its sale/ purchase at Panchayat/ Municipal Committee level. The information at the time of registration should contain species/ breed of animal, age/ sex of animal, date of sale/ purchase, price of animal, address / place to which the animal has been sold. These data could be used to generate migration statistics and price structure statistics of live animals.

We have the example of Himachal Pradesh, where the Himachal Pradesh Assembly passed the State Panchayati Raj (Amendment Bill) providing for the mandatory registration of cattle. A new section has been inserted in the bill to make the head of every family provide details of cattle owned to the pradhan or secretary within a period of one month from the enforcement of the amended act. The Gram Panchayat will register the cattle and maintain the records. It will be duty of the panchayat to assist the officials engaged by the Animal Husbandry Department for applying appropriate identification marks on each cattle and identifying stray cattle within its jurisdiction. The owner of the stray cattle will be liable to pay a fine of Rs. 300 at the first instance and Rs. 500 for subsequent offences. **…**

3. Publicity for Livestock Census is to be given due importance and funds for them should be provided in the scheme itself.
4. Data collection and printing of schedule cost provided in the present scheme at the rate of Rs.6.80 per Household should be increased to minimum of Rs. 15 per Household with the provision that collection cost of Rs. 3.50 per HH should be necessarily increased by at least Rs. 5.00.
5. It is proposed that AH –people / skilled local persons/ qualified youth capable of being trained/ trained personals of AH field like AI personals etc. should be engaged for survey for recognition of breed. The data collectors should be trained extensively in identification of breed characteristics by involving Breeders and concerned scientists like those from NBAGR and other such organizations.
6. Some amount of post enumeration checks should also be provided in the scheme, which was not a component in the 17th Livestock Census.
7. The coming 18th Livestock Census should aim its conduction through computer intensive technology only. Data of Livestock Census should be scanned the moment it is collected and validated by immediate supervisor. For this, infrastructure of RG Office may be used. Supplementary software of all types like –verification, validation, howler checking for outliers statistics, work file creation, tabulation and publication should be kept ready well in advance and before the scanning of data in order to make faster publication of results.
8. The schedule of livestock should be modified so as to catch the real ground situation with regard to all types animals including poultry especially broilers and made them scanning friendly.

6. INPUT SURYES

Input Surveys are important for Animal Husbandry Statistics. Improvement of Livestock or their products can be ensured/ achieved predominantly by better feeding and scientific breeding apart from protecting them from various difficulties and diseases. These inputs for rearing animals in better way are captured during input surveys as they assess their consumption in terms of quantity per unit specific animal falling under specific class of age, sex, use and under given household characteristic. These surveys give planners/ users an insight to the existing problem and to building solutions for the same. Moreover, cost of production of various animal products can also be arrived at by the elements being collected in input surveys Planning Commission has also stressed the need of such surveys in the past.

6.1 Recommendations for Input Surveys

a) It should be part of Livestock Census Scheme and must be run in the inter –Census period.
b) It should include all types of animals. Since it cannot run for all the animals throughout India on a continuous basis, the region may be carved out for each type of animal so that inputs in rearing the animal type could be obtained from those regions for different categories of rearing farmers.
c) Along with quantity of inputs, its value –actual or imputed should also be collected.
d) The input surveys should provide estimates of cost of production of certain important products like milk, egg, and meat along with cost of rearing of animal type, and capital as well as assets, its depreciation of such animal and assets. This will include cost of cattle shed, feed store, silo pit, tube well/ bore well/ hand pump, harvester, sickles, chaff cutter, feed grinding mill, wooden tray, baskets, buckets, ropes, chains, milk cans, spade, weighing balance/ equipment, cycle and bullock cart, cost on veterinary & health care, cattle insurance, repair charges for buildings and equipment, electricity consumption,, fuel, water, training and labour cost of bringing fodder, chaffing fodder, preparing feed, grazing animals, health care, providing water, milking and cleaning animals & shed. These should also be collected apart from usual inputs of feed and fodder and interest on capital.
e) Many pilot studies for each animal type will be needed to make the specific animal–Input Surveys operational in the field. Sufficient funds in Livestock Census Scheme should be kept for doing these studies.

7. INTEGRATED SAMPLE SURVEY SCHEME

The **Integrated Sample Survey Scheme** is a Centrally Sponsored Scheme of Department of Animal Husbandry having expenditure on salary shared between Centre and State on 50:50 matching basis. In case of UTs except Pondicherry, 100% Central assistance is being provided to all of them. Pondicherry does not take any grant on salary under the Scheme from the Centre. It is now a central sector scheme from January 2006. **It runs throughout India round the year.**

The broad objectives of the scheme are to collect data for the following:

1. Estimates of livestock numbers by species-season-wise, State-wise.
2. Estimation of productivity/average yield per animal (in respect of milk, eggs, wool and meat).
3. District level estimates of production of milk and eggs including average yield per animal.
4. Products utilisation pattern at production stage.
5. Animal Husbandry practices.
6. Estimation of cost of production per unit milk and eggs in the selected districts and other ancillary information

7.1 Review:

There is a tremendous improvement in tenth five year plan period about the achievements over them where we stood at the time of its planning. At the time of formulation of X five-year plan, the estimates were available upto 1998–99. The estimates of 1999–00 and 2000–01 were just provisional ones. The table giving summary of IX five year plan period, at that time was like this:

Table 7.1.1: Production of Major Livestock Products MILK, EGG, & WOOL during 9th five year plan (1997-98 to 2001-02) at the time of formulation of 10th five year plan**

Items	Year	1997-98	1998-99	1999-00*	2000-01*	2001-02**
Milk	(million tonnes)	71.9	75.2	78.1	81.0	85.0
Egg	(billion number)	28.6	29.6	31.5	32.4	33.6
Wool	(million Kgs)	47.1	47.9	48.7	47.6	48.7

* Provisional ** Target

There was a backlog of *three years estimates not being available in final forms* **at the time when the formulation of the tenth five year plan** was taking place. Moreover, no estimates of meat were available at national level. In fact, *even till 2003, there were no meat production estimates available at national level*. Around this time, Government of India (GOI) through its Committees of Secretaries (COS) at Central Statistical Organisation has found the need of the institution of a system for compiling reliable estimates of meat, and make them available within a proper time frame, as it is one of the *emerging activities in the economy of the country* Department could get the data/ estimates prepared/ compiled and published in the year 2004 after holding series of meetings of Technical Committee of Direction for improvement of Statistics in Animal Husbandry (TCD) at All India level *away from Delhi in various State Headquarters* and could finally release the estimates for registered sector from 1998-99. Still the estimates of meat production from unregistered sector are not available at national level as there are several other pr-

-oblems related to collection of data and methodology and not the one that of compilation as was the case for registered sector. Now, we are having back -logs cleared and have some idea about futures also:

Table 7.1.2: Production of Major Livestock Products Milk, Egg, Meat* & Wool during (1999-00 to 2005-06) at the time formulation of current 11th five year plan**

Items / Year	Milk (million tonnes)	Egg (billion number)	Wool (million Kgs)	Meat* (million tonnes)
1999-00	78.3	30.4	47.9	1.91
2000-01	80.6	36.6	48.4	1.85
2001-02	84.4	38.7	49.5	1.92
2002-03	86.2	39.8	50.5	2.11
2003-04	88.1	40.4	48.5	2.1**
2004-05	90.7	45.2	44.5	2.21
2005-06**	94.6	46.1	45.3	2.2**

** Provisional * meat from registered sector only

The estimates for the year 2004-05 had been published and are available on website. The tentative estimates for 2005-06 are ready and preparations for its approval from Technical Committee of Direction for Improvement of Animal Husbandry Statistics (TCD) is in progress.

For the first time, meat estimates of registered sector from 1998-99 to 2002-03 were published in the year 2004.

Refresher Training Courses for the States and UTs [-of Tamil Nadu, West Bengal, Andhra Pradesh, Gujarat, Daman & Diu, Chattishgarh, Maharashtra, Goa, Orissa, Uttar Pradesh, Kerala and all the North Eastern States except Meghalaya and Mizoram] were organized at their Headquarters or places where respective States/ UTs enumerators could take part in good numbers and can interact in their own/ known languages.

Special studies on data gaps on meat production from unorganized sector, input survey for buffalo and cost of production of milk are given to Tamil Nadu, Andhra Pradesh and Maharashtra respectively.

The 2004-05 was a busy period for the scheme to provide IT Solution to all the States/UTs. clearing off the old pending works of providing estimates of milk, egg and wool for the years of 1999-00 to 2003-04 and compiling & finalizations of estimates of meat production from registered sector from 1998-99 to 2002-03.

The Egg and Dung utilization pattern was also tabulated from 1999-00 to 2001-02 and was given to CSO. The copy is being enclosed here for introspection in the Annexure –I. It clearly shows that utilization statistics can be tabulated at national level also but to get national level estimates, some more efforts are still required.

A status paper on structure, review of the scheme is given in the Annexure –I.

7.2 Problems and Suggestions for improvement of ISS Scheme:

1. The States Hq. are now not the centers of processing because the States are generally big and to save on TA and DA, States have rightly posted the data collectors under the district administrative authorities of the ranks of Deputy Directors or Joint Directors. These Animal Husbandry (AH) administrative authorities are controlling many AH schemes and are virtually the representative of the Director of AH of the State in the given District. Consequently, enumerators are often deployed to the work of different priorities that are away from data collection or compilation. Even the Joint Director (Statistics) at State Headquarters, at times, is feeling himself helpless in getting their instructions carried out because immediate administrative heads at the district are nullifying his instructions. It is therefore, strongly, recommended that each district should have an Assistant Director (Livestock Statistics), having sufficient background for collection of livestock statistics as their pre –requisite qualification. Under him all the enumerators and their supervising officers are to function. *The AD(LS) of each district should be given an office with all computer and internet facilities available so that they can take active part in reporting the data to States Hq and Center/ DLES* at DAHDF. Their professional queries need immediate attention and should be solved by State Hqs or/ and by center, the moment it is asked* for so that data collection may go on smoothly. He will report to Joint Director (Statistics) of State Headquarter and will work in close co –ordination with the administrative head of the district. *Such Statistical Cell at all Districts (SCD) under AH department is to be created, strengthened and managed.*

2. The Scheme is working on a continuous data collection mechanism. **The survey is carried out round the year & throughout the country**. Data collectors go to the villages in each month of the year for collection of data by camping there. The scheme is designed salary based, where 50% salary is met from Center and rest is to be borne by States. Under this format, States do try to minimize the expenditures by not filling the required vacancies, keep many enumerators stagnating, keeping channels of promotion blocked and getting persons from other departments of the state on deputation. Even at times and in some places personnel from statistics background are not employed. Those already employed for livestock work are selected as enumerators. *Government of India (GOI) should go for funding 100% salary to employees of ISS Scheme and recommend the States/UTs Directors/ Secretary (Animal Husbandry) to create cadre for them* so that their unpredictable transfers from one stream/ ministry to other stream/ ministry should not take place easily. Frequent transfers/ change in nature of jobs are detrimental to the objectives of the scheme.

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* DLES is used for Directorate of Livestock Economics and Statistics, which is proposed as an upgraded office of currently running office of Animal Husbandry Statistics Division of DAHDF. Earlier it was referred as "Center" in the existing ISS Scheme which is being used here also to refer the same. Detail about the proposed DLES is given in section 8.

3. *The scheme should be continued* as it generates important database on a regular basis by the scientific approach through the dedicated staff of state/UTs animal husbandry departments. The machinery that has evolved over the years, for this work, can be further strengthened to get better results.

4. Assistant Director [AD(LS)] at district level as discussed in point 1 needs slight elaboration in terms of its functions. The AD(LS) will be responsible for collection of quality data, its verification and validation through supervision and scrutiny, and putting it on computer media/ network the moment it is validated. He will also maintain the computer system of his office, which should facilitate the data collectors and supervisors to put their data on the computer system immediately after validation. He will also co–ordinate with the other agencies like municipal bodies/ panchayats, market regulating bodies, registration officers of livestock with the help of administrative heads of the district and Director AH of the State so that the collection of quality data with timeliness adhered could be carried out without any difficulty or break.

5. The aims of ISS Scheme should be re–defined. It should be broadened to encompass within it all statistical activities related with livestock sector. The office of AD(LS) at district level should take care of these requirements. Their staff, if available, may be used for those statistical schemes also say like Livestock Census even if funding pattern for such schemes allows outsourcing the job to outside agencies.

6. State Directors AH hardly get time to review the work related to Statistics. This invariably leads to accumulating work at DAHDF, resulting in unnecessary delays. The solution lies in strengthening the scheme for developing a built in mechanism through which *"Continuous monitoring and mid–term appraisal for mid –course correction"* should take place at appropriate times on regular basis at each State/UT level. The ISS Scheme should have a fixed calendar of its activities for such administrative congregations meant for reviewing the scheme on regular interval. Periodical administrative meetings of Director (AH) of the States should contain the agenda specifically devoted to ISS Scheme where *Director(AH) should review the progress and ensure timely processing of the data.*

7. There is, the need of putting all data,–old and the current ones, into a retrieval mechanism, which should be available to the user as and when required. The user, then, can cull out the information in their desired formats. State Head quarters Statistical Cell should be strengthened by a component of the scheme converting all old statistical *–data into computer friendly media and development of mechanism for retrieval of all such and other current data* in desired formats mostly needed by users. The representative "users groups" should be identified at each State/UT level and their needs consolidated for keeping the system upgraded and updared.

8. The office of Assistant Director (LS) of each district should be provided sufficient numbers of computers and set up of inter–net connectivity depending upon their need. All the enumerators, data collectors, supervisors and officers engaged in Statistical activities should be encouraged to enter their data. In case of bulk and/ or old those the data can be got entered through outsourcing.

9. At least *once in five years, the Center (i.e. DLES) should participate in imparting refresher training course to enumerators/ supervisors/ data collectors/ data tabulators at a place where maximum number of primary workers engaged in data collection work of the States/UTs can take part and they could get their training in their own/ known languages.* Such refresher training course should also have wider aims as discussed in the sub –section 9.4 of section 9 devoted to the Research, Studies. Refresher Training and Data Storage & Retrieval.

8. DIRECTORATE OF LIVESTOCK ECONOMICS AND STATISTICS

As discussed in the previous pages, an increasing need is felt for not only improving qualitative and quantitative aspects of livestock data system, but also analysis of the same. For a proper coordination of all the aspects of livestock economic and statistical activity and guide the Ministry on all policy matters, the existing statistical division may be upgraded into a Directorate of Livestock Economics and Statistics (DLES) with the primary responsibility to :

1. Have a team of experts fully qualified in Livestock Economics and Statistics to advise the Ministry in all policy matters relating to Livestock. They should also undertake follow up studies once Census Results are out.

2. Take necessary action to organize and improve the data system – Livestock Census Input Surveys and Integrated Sample Survey for the Estimation of the number of various livestock and production of Major Livestock Products, viz., Milk, Eggs and Wool in the States/ UTs and create a suitable data warehouse/ storage and retrieval system with the help of all States and UTs.

3. It will serve as a store/clearing house for all types of livestock statistics and conducting various types of surveys studies.

4. Publish available data collected under various schemes and available with the various public/private organizations and disseminate the same.

5. It should have an independent cell to monitor and evaluate all the existing schemes being run by the Department.

6. W.T.O and Livestock – will serve with database support/ mechanism in helping to watchdog on issues relating to W.T.O.,

7. Establish a channel of communication and coordination with all the State Governments and the Public/Private organizations – both national and international – dealing with Livestock.

8. Encourage development of the Livestock Economics/Statistics discipline at the University Level, by creating a separate Department of Livestock Economics and Statistics in the Veterinary Colleges.

9. Sponsor Research Studies in various aspects of Livestock so as to fill the existing information gaps and be able to serve the Ministry as a think tank.

10. Bring out a monthly periodical –Livestock Situation in India covering various aspects of the livestock sector and publishing research articles on livestock.

In order to carry out these onerous responsibilities, the Directorate should have the following four Divisions ;

1. Statistics –Collection, Compilation and Publication
2. Sample Design, Planning & Marketing;
3. Monitoring & Evaluation
4. Integrated Information System.

Quantifiable/ Identifiable deliverables of DLES

- Data storage, warehouse and retrieval processes
- Monitoring the Livestock Sector through Developmental Indices/ Price, studies and surveys;
- Execution of Integrated Sample Surveys and Livestock Census;
- Projections & forecasting and advanced statistics;
- Implementation of Livestock Insurance;
- Equipping the States/UTs;
- Creations, updations, upgradations of the publications and equipments;
- Develop the structures for trouble shooting mechanism and more accountability for increasingly becoming difficult task of data collections;
- Long term objective :

  By guiding/ co-ordinating all Statistical Activities related with Livestock, it will generate resources and such other forces that will generate in various universities/ veterinary colleges, the development of this discipline in much systematic way.

9. RESEARCH, STUDIES, TRAINING & DATA STORAGE & RETRIEVAL SYSTEM

9.1. A large number of surveys are being conducted regularly for estimation of major livestock products and also the cost of production studies, but there are gaps both in coverage as well as to the less important products and by-products. However these data are needed for the estimation of value of output from this sector. Some of the gaps in basic studies of livestock sector, which need immediate attention are:

i. Estimation of production and yield rates of livestock products like the other meat products, hair, pig bristles, bones, skin, hides, guts, horns, hoofs etc.
ii. Estimate of seed, feed and waste
iii. Production estimates of dung especially of small animals and droppings of birds etc.
iv. Estimation of losses of various livestock products at production stage
v. Estimation of animal draught power
vi. Production estimates of poultry meat and broiler production
vii. Marketing of sericulture products and price spread
viii. Estimation of hides and skins
ix. Estimation of production of apiculture
x. Quick estimates of milk and egg

To develop **methodologies** for various parameters as listed above, research studies need to be undertaken and a sum of about Rs.100 lakh will be required for the same.

9.2 Data gaps in methodology adopted under Integrated Sample Survey Scheme (ISS) need to be improved Under the changing scenario, the emphasis has been by the government to implement the cross breeding programmes in states to increase the production and quality of different livestock products and hence with the importance new breed coming up, there is need to assess their performance, we will need additional information as follows information need to be collected under these surveys :

a- Breed –wise milk yield of different species viz cattle, buffalo, goat
b- Information on egg production from commercial poultry farms
c- Breed –wise wool yield from various centers or farms like sheep and wool extension centers, wool shearing centers and sheep breeding farms
d- Information on broiler production and poultry meat.

There is a need for reappraisal of methodology being used under ISS Scheme.

9.3 There are also many subjects, where the studies could be undertaken, apart from those that are mentioned under 9.1. Some of these are

i. Conversion ratios of milk & milk products and cost of conversion- like the ratios of conversion of milk into ghee, butter, etc., and cost of such conversion
ii. Estimates of area and production of cultivated fodder under various fodder crops.
iii. Estimates of green fodder from agro –forestry, grazing lands, forest areas etc.
iv. Production of roughages and concentrates.
v. Migration details of animals.

vi. Delineation of dairy zones and estimating milk production potential
vii. Economic analysis of dairy farming for dairy zones
viii. Economic evaluation of farming system
ix. Marketing of milk, milk products and other livestock products
x. Demand and supply analysis of milk and milk products
xi. Estimates of feed availability and requirement
xii. Studies on price behavior of milk and milk products.
xiii. Development of model for cost determination of milk and milk products
xiv. Impact of WTO policies on trade of dairy and livestock products.
xv. Concurrent evaluation of the schemes
xvi. The economic data for breeds

To fill up data gaps, studies should be conducted by involving or through various institute or organizations of repute and/or commodity specific institutes of ICAR.

9.4 Strengthening the Animal Husbandry Statistical Unit in States/ UTs for the creation of robust Statistical Systems, refresher training for the enumerators, tabulators, supervisors and creation of purposive bonds between them and their indigenous resources available in the forms of institutes of repute/experts/ resource persons in the field of Animal Husbandry Statistics is very essential. Funds should be provided for carrying out such refresher course and seminars at least once in three to five years.

9.5 There is a need to create, update, upgrade the data storage and retrieval systems with the help of data producers and data users in the computer friendly systems. For doing so *a co-ordination committee of data users* be created at each State/UT level along with Director (AH) of the State/UT and these committees be coordinated by DLES. The funds for this part should also be provided in the scheme.

10. BUDGET REQUIREMENTS FOR ELEVENTH FIVE YEAR PLAN

1. 18th Livestock Census in 11th Five Year Plan

The budget that may be required by the 18th Livestock Census is Rs. 409 Crores.

Table 10.1.1 Components of 18th Livestock Census and estimated funds required

Srl. No.	Items	Units	Average Rate (in Rs.)	Budget Requirement (in cr.)
1	Enumeration			
2	Primary Tabulation			
3	Supervision			
4	Post Enumeration Check			
5	Contingency			
6	Printing			
7	Scaning/ Data Entry			
	Sub-total –1	**/ HH**	**15**	**574**
8	Instruction manual printing			
9	One day training at district level			
10	One day training at state level			
	Sub-total –2	**Per head**	**180**	**47**
11	Publicity			
12	Input Surveys			
13	Data processing & Tabulation			
	Sub-total –3	**Per State**	**13500000**	**47**
14	Softwares			
15	Tabulation at the Center			
16	Reports Generation			
17	Committees and Dissemination			
	Sub-total –4	X	-	**42**
	Grand Total	X		**710**

The Scheme requires Rs.710 Crores for its execution in 11th five year plan.

2. Integrated Sample Survey Scheme and DLES in 11th Five Year Plan

The DLES will require strength of

Srl. No.	Name of Post	Scale
1	Head of DLES –HAG (one)	(HAG)
2	Advisors – SAG (four)	(SAG)
3	Directors/ Joint Directors (J.Adm.Grade)	14300-400-18300
4	Deputy Directors (Senior Time Scale)	10000-325-15200
5	Assistant Directors (Junior Time Scale)	8000-275-13500

For all these, the upgraded DLES will require around six crores more than what is currently being required by the existing Animal Husbandry Statistics Division, necessitated because of additional staff.

The following components are needed for ISS Scheme mant for strengthening the statistical system of Livestock Statistics.

1. Salary

2. Strengthening data communication & processing solutions for the Districts and States Hqs. Statistical cells.

3. Studies, Research, Training and Integrated Information System

The ISS Scheme will require around Rs. 134 Crores for its execution in 11th five year plan.

3. Livestock Insurance in 11th Five Year Plan

Budget requirement for livestock insurance scheme will depend upon coverage of scheme in terms of geographical area and types and species of animals. However, for moderate coverage of the scheme, it will require around Rs. 600 crores.

Total budget requirement will be Rs.1444 crores during 11th five year plan..

11. RECOMMENDATION –HIGHLIGHTS

A. General

1. Change the name of the sub-Group to Animal Husbandry Economics & Statistics.

2. Set up a new Directorate of Livestock Economies & Statistics (DLES) with five Divisions- Statistics; Sample Design & Planning: Monitoring & Evaluation and GIS Mapping, Integrated Information System and Publication.

3. All types of field data being collected under various schemes must be computerized, analyzed and disseminated.

4. It should be made mandatory for the organised sector of Dairy, Meat processing and Poultry to supply the available information on a regular basis.

5. Recommendations to the State Governments.

    a- Compulsory Registration of all types of livestock at the village level – fallen Hides & skins This should be on the pattern of Himachal Pradesh Government where *the Assembly had passed the State Panchayati Raj (Amendment Bill) providing for the mandatory registration of cattle.* Due to OIE's recommendation also, in the wake of bird flue ingress, registration of poultry farms for giving information of birth and death of its birds is becoming essential.

    b- Village level institutions, Panchayats, vets, AI centers etc., should be strengthened.

    c- Municipal Corporations should be required to collect and provide all the data regarding organized /un-organised slaughter houses within its jurisdiction.

B. Getting higher growth rate.

1. **Exploit fully export potential:** (a) Salvaging male calf of buffalo – we have the example of the Hindagro model practiced in Uttar Pradesh, on the principle of backward rearing integration to get good male calf buffaloes (b) We do not have enough of broiler dressing and processing plants, which meet world food standards. Only five plants in India are approved, which can process only two to three percent of total broiler production in the country.
2. **Control of Animal diseases coupled with adequate feeding** can give a 20% increase.

3. **Improve quality :**
    a. SriLanka model of Chicken, Poultry, which bans poultry slaughtering on road side/ in the presence of public and provides the service slaughterhouses for them. Also the policy adopted by Delhi Government. should be implemented at All India level.

b. The production of clean milk through export oriented units should be encouraged to give it major boost by adopting the model of **"Dynamics Dairy Industries"** being carried out in the **Baramati District of Maharashtra** and also the **NESTLE** model at **Moga**.

c. Production of organic milk

4. Rendering and Carcass utilization plants should be activated and upgraded.

5. The contribution of the Livestock sector is highly under estimated because of either non – counted items or underestimated items.:

Not Counted:-

a- Draught power is not counted in the value of livestock sector. It provides the energy of 60% of the cultivated area, hauls 14 million carts and saves over Rs. 40 thousand crores of petroleum. – Examples are BCRDF, Kamdhenu, Bullock drawn Tractors and CIAE Bhopal implements.
b- Milk of Camels and Donkeys, which is a highly valuable product, is not counted.

Underestimated:-

c- Meat production, by-products of the slaughter houses, hides and skins, wool and honey are highly underestimated.

d- Cow dung and urine have medicinal value. Gaushalas can be developed as new factories. The value of Dung is underestimated. Moreover bio-gas potential of over 12 million plants, vermicompost and poultry droppings are not counted/ underestimated.

6. Feed & Fodder Authority of India:

Attempts should be made to constitute **Feed and Fodder Authority of India** (FAI) in order to assess and meet the short and long-term feed and fodder requirement of the country. Efforts should also be made to develop a "feed grid".

7. Complete mapping **of Livestock resources in** 190 districts specially advanced in livestock **of India** will give higher growth rate by providing additional production and leadership.

8. To ensure adequate and remunerative prices for dairy and poultry industries, minimum support price for milk and egg may be fixed.

C Livestock Census Scheme

1. Livestock Census should be kept, continued and strengthened on a quinquennial basis under the aegis of present set-up of Department of Animal Husbandry, Dairying and Fisheries with the State agencies of Animal Husbandry.
2. The collection of data under Livestock Census should be made mandatory.
3. Publicity for Livestock Census is to be given due importance and funds for them should be provided in the scheme itself.
4. Data collection cost provided in the present scheme at the rate of Rs.3.50 per household, should be increased to minimum of Rs. 15 per household.
5. It is proposed that AH –people / skilled local persons/ qualified youth capable of being trained/ trained personals of AH field like AI personals etc. should be engaged for survey for recognition of breed. The data collectors should be trained extensively in identification of breed characteristics by involving Breeders and concerned scientists like those from NBAGR and other such organizations.
6. Some amount of post enumeration checks should also be provided in the scheme, which was not a component in the 17th Livestock Census.
7. The coming 18th Livestock Census should aim its conduction through computer intensive technology only. Data of Livestock Census should be scanned the moment it is collected and validated by immediate supervisor. For this, infrastructure of RG Office may be used. Supplementary software of all types like –verification, validation, howler checking, work file creation, tabulation and publication should be kept ready well in advance and before the scanning of data in order to make faster publication of results.
8. The schedule of livestock should be modified so as to catch the real ground situation with regard to all types of animals including poultry especially broilers and made them scanning friendly.

D. Integrated Sample Survey Scheme

1. T*he scheme should be continued* with 100 % provision for staff salary.
2. To strengthen collection process and increase accountability in the collection of livestock data, a*n office of livestock statistics at each district having all infrastructure of converting the collected data into computer friendly media and the staff of data collectors, supervisors and field officers headed by Assistant Director (Livestock Statistics) AD(LS) having sufficient expertise in livestock statistics collection should be created*.
3. *Data collected, henceforth, must be put on computer the moment it is validated by the first supervisor* so that its processing becomes faster and its maneuverability gets increased.
4. The aims of ISS Scheme should be broadened to encompass within it all statistical activities related with livestock sector. The present schedule of Integrated Sample Survey Scheme should be revised by involving subject specific and/or commodity specific institutes of ICAR/IVRI and/or other institutes of repute. Deficiency of information on Broilers production and meat production from unorganized sector in the schedule should be removed.

E. Input Surveys:

1. It should be part of Livestock Census Scheme and must be run in the inter –Census period.
2. It should cover all types of animals, but since it cannot run for all the animals throughout India on continuous basis, the region may be carved out for each animal type so that inputs in rearing the animal type could be obtained from those regions for different categories of rearing farmers.
3. Along with quantity of inputs, its value –actual or imputed should also be collected in order to facilitate the planners for arriving at cost of production of certain important products like Milk, Egg besides cost of rearing.
4. Many pilot studies for each animal type will be needed to make the specific animal–Input Surveys operational in the field. Sufficient funds in Livestock Census Scheme should be kept for undertaking these studies.

F. Co –ordination/ Collaborations with organizations engaged in Livestock Statistics:

1. National Sample Survey Organisation (NSSO):

NSSO conducts, at an interval of 10 years, a survey on livestock. Since Livestock has become an important area and occupies a definite place in the national economy, the NSS should repeat such surveys at an interval of five years instead of 10 years duration. It should also include meat estimates from unorganized sector and dairy farms during such surveys.

2. Central Statistical Organisation (CSO):

The livestock sector is highly underestimated because of underestimation of many such livestock commodities like honey, meat, dung etc. and non –inclusion of items like draught power. Steps may be taken to improve the same.

CSO conducts Economic Census to capture the unorganized sector. This should also be used for enumerating the meat producing units besides meat shops. The employment based definitions of enterprises given as own account enterprises (OAE), non –directory manufacturing enterprises (NDME) and directory manufacturing enterprises (DME) for the enterprises of unorganized sector should be refined or readdressed for meat producing units for their relative homogeneous behavior from production view point

The above economic census enumeration should also take into account the h*alwais, creameries, dairy products processing units, if it is already not taken care of.*

3. Directorate of Economics and Statistics (DES):

Mechanism to update the list of market centers for collection of price data of livestock products by the Directorate needs further strengthening. *There is also need to include more centers for collecting the Price Data and more livestock items for which collection of prices are needed.* The newly recommended DLES will work in liaison with the existing DES in this respect.

4. Director General of Commercial Intelligence & Statistics (DGCIS)

Current practice is that Director General of Commercial Intelligence & Statistics (DGCIS) is holding its data collected from computer operated centers till it does not get also all the data from all the centers including those that are manually operated. Whatever data is being collected through computer system should be developed to release them immediately without waiting for the data collected from manual centers, which should also be computerized..

5. Institute of Applied Manpower Research

Number of livestock training centers, manpower trained in livestock work, number of para – technician with gender and qualification breakups should be collected by the *Institute of Applied Manpower Research and* ICAR.

6. NABARD

Institutional credit data upto district level should be compiled and made available by NABARD.

7. Livestock Insurance

The scheme should be extended all over the country and for all animals including poultry,

Annexure –I

Status paper on Integrated Sample Survey Scheme

The **Integrated Sample Survey Scheme** is Centrally Sponsored Scheme of Department of Animal Husbandry having expenditure on salary shared between Centre and State on 50:50 matching basis. Except for Pondicherry, 100% Central assistance is being provided to all of them. Pondicherry does not take any grant on salary under the Scheme from the Centre. **It runs throughout India round the year.**

1. The broad objectives of the scheme are to collect data for the following:

1. Estimates of livestock numbers by species-season-wise, State-wise.
2. Estimation of productivity/average yield per animal (in respect of milk, eggs, wool and meat).
3. District level estimates of production of milk and eggs including average yield per animal.
4. Products utilisation pattern at production stage.
5. Animal Husbandry practices.
6. Estimation of cost of production per unit milk and eggs in the selected districts and other ancillary information

2 Structure of machinery & Staff in ISS Scheme :

(a) TCD Committee :

An expert committee namely "Technical Committee for Direction for Improvement of Animal Husbandry and Dairying Statistics" is working for a long time. Advisor (Statistics), Dept. of Animal Husbandry & Dairying and Director, Indian Agricultural Statistical Research Institute (IASRI) jointly heads the Committee. The members of the Committee are heads of selected Statistical Organizations / Departments at the Centre and States, and all the State Directors of Animal Husbandry. Secretary, Department of Animal Husbandry, Dairying and Fisheries and Animal Husbandry Commissioner always remain the source of guidance for this Committee. They, invariably, address such meetings, reviews the progress and always take active part. in streamlining the views and contributing to make system improved further. The Committee is a forum, where all-important decisions are taken during the course of the Scheme for their better and improved implementation. It also goes through and approves estimates of production of milk, egg, wool and meat and reviews progress of implementation of the scheme of Integrated Sample Survey for the estimation of Major Livestock Products.

(b) Staff at States/UTs:

As per EFC of 10th F.Year Plan the structure of staff of ISS Scheme is as follows :

At the State Hqs		Norms as per EFC of X F –Year Plan
1.	Joint Director (Head of Statistical Cell)(Rs.12000-375-16500)	One for each State (except for the smaller States like Goa, North-Eastern States)
2.	Dy.Director (Rs. 10000-325-15200)	One for each smaller States and UTs & Two to four for bigger States
3.	Research Officer/S O/Statistician (Rs.8,000-275-13,500)/-	One for each smaller State/UT, Two to four for bigger States.
4	Statistical Investigator/ Inspector/Assit. (Rs. 5,500-175-9,000)/-	Two for each smaller States/UT, Three to six for bigger States (Out of these some may be posted at the Divisional level)
5.	Computer/Data Entry Operator (Rs. 4,500-125-7,000)/-	Two for each smaller States/UT, Three to six for bigger States (Out of these some may be posted at the Divisional level)
At the field level		
6	Enumerator (Rs. 4,500-125-7,000)/-	Two per district in the States (Plus one reserve for every 5 to 8 enumerator) 4 to 8 in UTs depending upon the size
7	Inspector (Rs. 5,500-150-8,000)/-	One for every 6 to 8 enumerators
8	Field Officer (Rs. 6,500-200-10,500)/-	One for smaller States/UTs Two to four for bigger States

The present staff –strength status as obtained from states/UTs is as follows :

S.No.	Staff Structure in ISS Scheme	Entitilement at All India	Sanctioned * at All India by States/UTs	Vacant* at All India in States/UTs
	At the State Hqs			
1	Joint Director (Head of Stat -Cell)	19	6	3
2	Dy.Director	64	9	1
3	RO/SO/Statistician	92	24	5
4	SI/ Inspector/Assistant	120	76	17
5	Computer/Data Entry Operator	120	31	7
	At the field level			
6	Enumerator	1392	431	69
7	Inspector	232	26	6
8	Field Officer	64	21	3

* As per latest (july 2006)

(c) Sampling Design, Estimation procedures and Coverage :

A stratified multi-stage sampling design has been adopted for the sample surveys. Under this, a sample of 15% of the villages will be selected from each State/UT, for complete enumeration of livestock population. Of these 15% villages, 5% will be selected in each season, i.e., summer (1st March to 30th June), Rainy (1st July to 31st October) and Winter (1st November to end of February). The number of villages to be selected will be allocated to each Stratum (e.g. district) according to its livestock population. From these selected villages a representative sample of 10 villages per stratum will be further selected for collection of detailed information for estimation of milk, egg, wool and meat at the stratum level. The selected villages will constitute the first stage sample unit, whereas the selected households in the selected villages will be the second stage sampling units. The animals selected from the selected households will be the third or ultimate stage-sampling unit.

One round will be of one-month duration. Four rounds in one season and three seasons in one year are surveyed. The seasons, as detailed above, are defined as

Summer- 1st March to 30th June
Monsoon: 1st July to 31st October
Winter: 1st November to 28/29th February

For finding yield rate household, selected as per the plan of the scheme, is visited to get accurate yield rate from or for the animal selected.

After getting estimates of numbers (X), [in case of Milk "Animals in MILK"; in case of Egg production "Number of Layers"; in case of Wool "Sheep Shorn" and in case of meat production "animals slaughtered"] and yield rate (y), they are multiplied appropriately and are summed over for finding the estimates of the concerned State. Annual State estimates are obtained from the constituent strata seasonal estimates. The schematic model of production (P) is

$$P = X\,y$$

The estimates of the production are worked out season- wise on the basis of the average yield per animal (as worked out on the basis of the sample surveys) and estimated number of animals. The number of animals are estimated on the basis of the current population of animals collected under the complete enumeration done in the first round of each season and corresponding number of animals (in the sample villages) as per last livestock census. The total number of animals in the district or State is estimated by using ratio estimates.

Under the ISS Scheme, data on number of other items other than major livestock products are also collected like:

- Use of dung
- Consumption of green fodder, dry fodder and concentrate for cows and buffaloes.
- Utilisation of milk –consumed, kept for conversion, sold etc.
- Consumption of henfeed.
- Utilisation of eggs –consumed, sold, damaged etc.

Their compilation at national level is missing, though States are coming up and are giving tabulations for utilization statistics of milk, egg and dung at production stage.

3. Components of the Scheme, financial allocation and financial achievements:

The Scheme is being implemented in all the States/ UTs. In tenth five year plan, the scheme has three components. They are Salary, IT Solution and Special studies and training in methodologies. The IT Solution is further subdivided into three sub parts

(a) Providing Hardware and Software to States/ UTs
(b) Providing Hands on Training of Computer to States personnel
(c) Development of Common Software and providing the same to States/UTs

Table 3.1 : Financial Allocation in ISS Scheme –Component wise and Central & State Share

(Rs. In Crore)

Srl No.	Components	Central Share	State Share	Total
1	Salary	23.15	21.49	44.64
2	IT Component-Hardware & software	3.66	3.10	6.76
3	IT Component-Common Software Development	0.30		0.30
4	IT Component-Computer Trg	0.17		0.17
5	Special studies & Trg in methodologies	1.16		1.16
	TOTAL	28.44	24.59	53.03

PATTERN OF FUNDING

The pattern of funding for different components of the Scheme is as follows :

I. Salary Component : 50:50% to States and 100% to UTs.
II. IT Component (Hardware & Software) : 50:50% to States other than NER,100% to NER States and Uts.
III. IT Component (Common Software Dev) : 100% by Centre
IV. IT Component (Computer Trg) : 100% to States at the rate of 3 persons at State HQ and 1 person for each district of the State
V. Special studies & Trg. Methodologies: 100 % by Centre.

The financial allocations as per EFC for the years during the plan were :

Table 3.2 : Financial Allocation in ISS Scheme–Component wise and Year Wise

(Rs. In lakhs)

Srl No.	Components	2002-03	2003-04	2004-05	2005-06	2006-07	Total
1	Salary	385	408	466	493	564	2316
2	IT Component-Hardware & software		211	155			366
3	IT Component-Common Software Development		23	23			46
4	IT Component-Computer Trg						0
5	Special studies & Trg in methodologies		30	24	29	33	116

Table 3.3 : Financial Allocation & Expenditures in ISS Scheme–Component wise and Year Wise

(Rs. In lakhs)

Srl No.	Year	As per EFC allocation	BE	RE	Actual
1	2002-2003	385.00	600	400	385.90
2	2003-2004	672.00	450	500	495.84
3	2004-2005	668.00	750	776	780.32
4	2005-2006	522.00	639	694	589.55
5	2006-2007	597.00	500	-	445.96*
	TOTAL	2844	2939	2370	2697.57

** upto july 2006*

The component of providing Common Software and strengthening the Center through providing IT solution remained untouched because of late installation of computers in the States as they were waiting 50% matching share/ concurrence from their respective Governments. The Center of Animal Husbandry Statistics at the Department of Animal Husbandry, Dairying and Fisheries could not be strengthened for IT –Solution with the procurement of a server based system/ technology because in the wake of coming Common Wealth Games 2010, the Division is likely of its being shifted to some other place from present position of Jawahar Lal Nehru Stadium, where it moved from Krishi Bhavan just during 2004. Since Common Software Development is to come and take place only after computers are installed in all the States, it also remained untouched. Moreover, at times, it is also felt that the ISS –sample design needs a re –look because it is quite old thereby leading to inhibitions to proceed further in this direction of developing a common software and providing the same to States/UTs.

The following table shows release during the year 2002-2006.

Table 3.4 State-wise release during 2002-03, 2003-04, 2004-05 and 2005-06 under the ISS Scheme.

(Rs. in lakh)

Sl. No	States/Uts	Release in 2002-03	Release in 2003-04	Release in 2004-05	Release in 2005-06
1	2	3	4	5	6
A.	**States other than NER**				
1	Andhra Pradesh	11.00	8.71	29.61	19.85
2	Bihar	15.70	17.60	35.70	14.19
3	Chhattisgarh	5.50	7.53	16.54	3.13
4	Goa	6.00	6.00	5.50	4.88
5	Gujarat	28.30	29.29	50.43	61.23
6	Haryana	11.50	13.64	28.62	15.00
7	Himachal Pradesh	15.70	17.85	26.49	15.68
8	Jammu & Kashmir	1.00	25.68	19.56	12.00
9	Jharkhand	5.50	3.15	20.99	6.02
10	Karnataka	26.00	30.98	46.97	43.77
11	Kerala	42.34	29.00	42.04	46.00
12	Madhya Pradesh	16.00	20.34	44.32	24.98
13	Maharashtra	10.40	25.00	49.45	14.82
14	Orissa	15.30	22.42	35.75	12.00
15	Punjab	0.00	11.25	15.95	9.00
16	Rajasthan	33.00	34.93	57.72	64.11
17	Tamil Nadu	14.30	21.50	35.47	20.95
18	Uttar Pradesh	38.46	33.16	75.12	57.49
19	Uttarnchal	0.00	0.00	10.77	13.73
20	West Bengal	22.00	23.00	30.39	18.94
	Total Head 3601	**318.00**	**381.03**	**677.39**	**477.77**
B	**NER States**				
21	Arunachal Pradesh	3.50	3.97	4.75	3.50
22	Assam	5.40	34.33	2.12	7.36
23	Manipur	4.00	4.81	2.97	2.25
24	Meghalaya	5.10	6.72	6.766	2.35
25	Mizoram	13.20	17.47	23.43	21.00
26	Nagaland	3.60	2.47	10.00	16.05
27	Sikkim	1.60	3.47	4.75	5.52
28	Tripura	4.50	5.97	20.21	3.08
	Total Head 2552	**40.90**	**79.18**	**74.996**	**61.11**
C	**Uts**				
29	A& N Islands	5.50	7.00	9.02	9.00
30	Chandigarh	4.30	5.00	6.82	7.50
31	Dadra & Nagar Haweli	1.70	3.00	1.85	2.05
32	Daman & Diu	1.50	3.38	2.27	2.65
33	Lakshdweep	3.50	5.56	4.66	4.80
	Stat. Cell at Center				14.67
	Total Head 2403	**16.50**	**23.95**	**24.62**	**40.67**
34	Delhi	10.50	10.36	3.31	10.00
35	Pondicherry	0.00	1.32	0.00	0.00
	Total Head 3602	**10.50**	**11.68**	**3.31**	**10.00**
	Grand Total	**385.90**	**495.84**	**780.32**	**589.55**

Table 3.5 Release made for Refresher training course and Studies

(Rs. In lakh)

YEAR 2005-06	
Breakup on refresher trg. during 05-06	Rs. In Lakhs
Tamil Nadu	1.25
West Bengal	1.00620
Andhra Pradesh	1.0350
Gujarat	1.34618
Chattishgarh	0.70
Maharashtra	0.78578
Orissa	0.70
UP	1.1
Kerala	1.2
Assam	1.08
Sub- total 1	10.20316
Break up on STUDIES during 05-06	
AP Study Input Survey (I Instalment)	2.97
TN Meat Study (I Instalmnt)	1.50
Sub-Total 2	4.47
Grand Total Stat HQ (2005-06)	**14.67316**
YEAR 2006-07	
TN Meat Est Study (II Instalment)	1.46
Approved Karnataka Ref.Training Course	1.00
Study to Maharashtra on Cost of Milk Production	0.99
Sub- total (spent in 2006-07)*	**3.45**

* upto July 2006

Table 3.6 Release made for components of ISS Scheme against their allocations

(Rs. In Crore)

Srl No.	Components	As per EFC	Expenditures*
1	Salary	23.15	23.09
2	IT Component-Hardware & software	3.66	3.55
3	IT Component-Common Software Development	0.30	
4	IT Component-Computer Trg	0.17	0.16
5	Special studies & Trg in methodologies	1.16	0.18
	TOTAL	28.44	26.98

* Upto July 2006

Table 3.7 Release Made to States/ UTs for IT Solution under the ISS Scheme

(Rs. In lakhs)

States other than NER (ONER)	Year of Rel.	u/IT Hard	u/IT C-Trg	u/IT Total
1	2	3	4	5
Andhra Pradesh	2004-05	14.62	0.58	15.2
Bihar	2004-05	22.17	0.9	23.07
Chhattisgarh	2004-05	10.84	0.42	11.26
Goa	2004-05	0.59	0.14	0.73
Gujarat	2004-05	15.7	0.63	16.33
Haryana	2004-05	12.46	0.49	12.95
Himachal Pradesh	2004-05	8.66	0.34	9
Jammu & Kashmir	2004-05	9.76	0.38	10.14
Jharkhand	2004-05	11.92	0.47	12.39
Karnataka	2004-05	16.78	0.67	17.45
Kerala	2004-05	9.76	0.38	10.14
Madhya Pradesh	2004-05	26.49	1.07	27.56
Maharashtra	2004-05	21.1	0.85	21.95
Orissa	2004-05	18.4	0.74	19.14
Punjab	2004-05	11.37	0.45	11.82
Rajasthan	2004-05	19.48	0.78	20.26
Tamil Nadu	2004-05	18.4	0.74	19.14
Uttar Pradesh	2004-05	39.96	1.64	41.6
Uttaranchal	2004-05	9.21	0.36	9.57
West Bengal	2004-05	11.92	0.47	12.39
Total ONER –3601		**309.59**	**12.50**	**322.09**
NER States				
Arunachal Pradesh	2003-04	1.18	0.29	1.465
Assam	2003-04	29.33	1.00	30.33
Manipur	2003-04	1.18	0.29	1.465
Meghalaya	2003-04	1.18	0.29	1.465
Mizoram	2003-04	1.18	0.29	1.465
Nagaland	2003-04	1.18	0.29	1.465
Sikkim	2003-04	1.18	0.29	1.465
Tripura	2003-04	1.18	0.29	1.465
Total NER –2552		**37.59**	**2.995**	**40.585**
UTs				
A&N Islands	2004-05	1.18	0.14	1.32
Chandigarh	2004-05	1.18	0.14	1.32
D.& N. Haveli	2003-04	1.18	0.14	1.32
Daman & Diu	2003-04	1.18	0.14	1.32
Lakshadweep	2003-04	1.18	0.14	1.32
Stat cell at HQ				
Total UTs w.out legislation -2403		**5.9**	**0.7**	**6.6**
Delhi	2003-04	1.18	0.14	1.32
Pondicherry	2003-04	1.18	0.14	1.32
Total UTs with legislation –3602		**2.36**	**0.28**	**2.64**
Grand Total		**355.440**	**16.475**	**371.915**

4. Physical achievements:

The estimates of year 2004-05 had been published and are available on website. The tentative estimates of 2005-06 are ready and preparations for its approval from Technical Committee of Direction for Improvement of Animal Husbandry Statistics (TCD) is on its way.

For the first time, meat estimates of registered sector from 1998-99 to 2002-03 were published in the year 2004.

Refresher Training Courses for the States and UTs [-of Tamil Nadu, West Bengal, Andhra Pradesh, Gujarat, Daman & Diu, Chattishgarh, Maharashtra, Goa, Orissa, Uttar Pradesh, Kerala and all the North Eastern States except Meghalaya and Mizoram] were organized at their Headquarters or places where respective States/ UTs enumerators could take part in good numbers and can interact in their own/ known languages.

Three studies were also given out to one for each to the State of Andhra Pradesh, Tamil Nadu and Maharashtra. Since impetus has taken in the scheme only after September 2005 on the components of "Special Studies and Training in Methodology", this component could do much progress only in the later part of the scheme only.

The 2004-05 was a busy period for the scheme to provide IT Solution to all the States/UTs. clearing off the old pending works of providing estimates of milk, egg and wool for the years of 1999-00 to 2003-04 and compiling & finalizations of estimates of meat production from registered sector from 1998-99 to 2002-03.

The Egg and Dung utilization pattern was also tabulated from 1999-00 to 2001-02 and was given to CSO. The copy is being enclosed here for introspection. It clearly shows that utilization statistics can be tabulated at national level also but to get national level estimates, some more efforts are still required.

Table 4.1 Statemenmt showing percentage Utilisation of Egg and Dung during 1999-2000.

Sl. No	States/UTs	Egg Utilisation (%)				Dung Utilisation (%)		
		Hatched	Consumed	sold	Damaged	Manure	Dung Cake	In other ways
1	2	3	4	5	6	8	9	10
1	Andhra Pradesh					70.02	16.31	13.67
2	Arunachal Pradesh	68.86	26.18	4.96		99.80		0.20
3	Assam							
4	Bihar	20.90	23.35	55.01	0.74	39.69	59.03	1.28
5	Delhi					23.51	59.51	17.43
6	Goa							
7	Gujarat	19.20	56.43	23.97	0.40	83.74	14.67	1.59
8	Haryana	12.87	41.73	44.23	1.17	83.31	13.72	2.97
9	Himachal Pradesh					91.17	4.50	4.34
10	Jammu & Kashmir					47.00	48.00	5.00
11	Karnataka	28.90	44.50	18.91	7.69	84.45	12.67	2.88
12	Kerala	2.63	78.88	18.24	0.25			
13	Manipur							
14	Mizoram	39.84	25.90	32.04	2.22	85.03	-	14.97
15	Maharashtra	15.00	52.00	32.00	1.00	67.30	17.10	15.60
16	Meghalaya	15.05	30.54	52.15	2.26	96.28	0.77	3.04
17	Madhya Pradesh							
18	Nagaland							
19	Orissa	10.90	35.10	53.50	0.50	86.94	11.65	1.41
20	Punjab					52.54	46.65	0.81
21	Rajasthan					70.35	27.18	2.47
22	Tamil Nadu	16.29	61.99	20.72	1.00	80.96	11.93	7.11
23	Tripura							
24	Uttar Pradesh	4.62	46.90	46.98	1.50	51.35	45.14	3.51
25	Uttarnchal							
26	West Bengal	2.50	62.00	35.00	0.50	32.30	60.70	7.00
27	Sikkim							
	UTs			0.50				
28	A& N Islands							
29	Pondicherry	19.70	72.06	8.24	0.00	67.80	21.05	11.15
30	Lakshdweep							
31	Daman & Diu							
32	Dadra & Nagar Haweli							
33	Chandigarh	0.19	5.67	93.88	0.26	57.00	43.00	0.00

Table 4.2 Statemenmt showing percentage Utilisation of Egg and Dung during 2000-01.

Sl. No	States/UTs	Egg Utilisation (%)				Dung Utilisation (%)		
		Hatched	Consumed	sold	Damaged	For Manure	For Dung Cake	In other ways
1	2	3	4	5	6	8	9	10
1	Andhra Pradesh					68.00	18.61	13.39
2	Arunachal Pradesh	68.86	26.18	4.96		99.80	0.00	0.20
3	Assam							
4	Bihar	21.60	12.88	64.04	1.48	50.12	48.13	1.75
5	Delhi					22.83	68.75	8.42
6	Goa							
7	Gujarat	23.88	55.18	20.82	0.12	86.50	12.31	1.19
8	Haryana							
9	Himachal Pradesh					84.80	7.67	7.53
10	Jammu & Kashmir							
11	Karnataka	30.34	44.35	18.63	6.68	85.23	11.22	3.55
12	Kerala	2.97	75.80	20.95	0.28	1.15	79.95	18.90
13	Manipur							
14	Mizoram	42.87	25.74	29.76	1.63	83.90		16.10
15	Maharashtra	17.00	51.00	31.00	1.00	68.50	16.30	15.20
16	Meghalaya							
17	Madhya Pradesh							
18	Nagaland							
19	Orissa	20.87	36.78	41.92	0.43	85.95	12.71	1.34
20	Punjab					49.34	49.91	0.75
21	Rajasthan							
22	Tamil Nadu	16.45	61.35	21.20	1.00	86.66	8.83	4.51
23	Tripura							
24	Uttar Pradesh	4.27	44.74	49.76	1.23	54.15	42.86	2.99
25	Uttarnchal							
26	West Bengal					40.94	50.95	8.11
27	Sikkim							
	UTs							
28	A& N Islands							
29	Pondicherry	18.70	74.95	6.35	0.00	66.38	21.99	11.63
30	Lakshdweep	6.34						
31	Daman & Diu							
32	Dadra & Nagar Haweli							
33	Chandigarh	0.17	6.60	92.97	0.26	67.40	32.60	0.00

Table 4.3 Statemenmt showing percentage Utilisation of Egg and Dung during 2001-02.

Sl. No	States/UTs	Egg Utilisation (%)				Dung Utilisation (%)		
		Hatched	Consumed	sold	Damaged	For Manure	For Dung Cake	In other ways
1	2	3	4	5	6	8	9	10
1	Andhra Pradesh	0.22	0.78	98.67	0.33	68.49	18.22	13.29
2	Arunachal Pradesh	68.86	26.17	4.97		99.80		0.20
3	Assam	24.06	13.77	61.09	1.09	71.23	11.00	17.77
4	Bihar	15.63	26.24	55.69	2.44	48.74	50.12	1.15
5	Delhi							
6	Goa							
7	Gujarat	25.02	55.05	19.06	0.87	88.68	10.39	0.93
8	Haryana	12.87	41.73	44.23	1.17	83.31	13.72	2.97
9	Himachal Pradesh							
10	Jammu & Kashmir							
11	Karnataka	31.32	42.81	20.32	5.55	85.24	13.07	1.69
12	Kerala	5.81	71.96	21.80	0.43	76.36	2.14	21.50
13	Manipur							
14	Mizoram	39.81	25.14	33.67	1.38	84.00		16.00
15	Maharashtra	14.00	50.00	35.00	1.00	69.40	15.60	15.00
16	Meghalaya							
17	Madhya Pradesh							
18	Nagaland							
19	Orissa	25.40	28.40	45.69	0.51	86.52	12.17	1.31
20	Punjab							
21	Rajasthan							
22	Tamil Nadu	16.62	61.45	20.93	1.00	81.07	13.17	5.76
23	Tripura							
24	Uttar Pradesh							
25	Uttarnchal	4.79	60.36	34.05	0.80	83.37	15.85	0.78
26	West Bengal							
27	Sikkim							
	UTs							
28	A& N Islands							
29	Pondicherry	18.67	69.55	11.78		59.77	27.94	12.29
30	Lakshdweep							
31	Daman & Diu							
32	Dadra & Nagar Haweli							
33	Chandigarh	0.70	5.97	92.54	0.79	66.30	33.70	0.00

5 Review of the existing schedule for ISS Scheme:

Sub-Group went through the ISS Schedules* Village Schedule –I, II, LPS 1.1, 1.2, 2.1, 3.1 and 4.1, which is meant for collecting data for finding out production of major livestock products Milk, Egg, Meat and Wool. The Sub-Group felt that some necessary changes should be made to make it more appropriate in the context of present time.

*Reference: Report of the Technical Committee of Direction for improvement of Animal Husbandry & Dairying Statistics March 1989 pages 95-129.

- Distribution of area as per name of fodder crop to be collected instead of one entry against the fodder crops.

- Developmental indices/ infrastructure data given in Village Schedule –I like number of ICDP, Intensive Poultry Development Projects etc are to be collected elsewhere say in a district schedule having complete coverage of the district and hence they should be deleted from here. These District Schedule could take into account all kinds of infrastructure details on the one hand and may also record the selection process of primary stage unit (psu) for ISS survey. It will reflect transparency and completeness in the work.

- Item II of Village Schedule –I should be reconstructed as per the 18th Livestock Census formats.

- Village schedule –II for complete enumeration may also be either redesigned for the listing for farms/ organized/ commercial units or separate schedules should be framed for them like the one for recognized slaughter houses or poultry units

- For Meat estimation, separate frame work from District schedule onwards should be recreated and hence column in Village Schedule –II meant for number of animals slaughtered for different animal types should be deleted.

- For getting AI conception rates and success rates, some data should be collected in Village Schedule –II. Therefore, number of calves born due to AI in last season, Number of times AI was attempted to get them, Number of animals are impregnated by AI done during last season and number of attempts done to get them impregnated should also be collected for each HH.

- Randomization process in in Schedule LPS 1.1 should be simplified and extended so that selection of HouseHold (HH) for yield rate can be arrived at by simpler means and the newer practices, such as rearing buffalo and cows separately by households, should not pose problem in non –availability of yield rate for a particular animal type.

- For milk yield rate sheep, camel, donkey, yak and mithun also are required to be added and therefore, it needs total frame creation for them in Village Schedule II, LPS 1.1 and the main schedule collecting their yield rates.

- The Utilisation of milk in Schedule 1.2 data on "sold as milk product" should also be collected.

- LPS 2.1 should be modified to give the estimates of Broilers.

- In Schedule 4.1 other products coming out from slaughter houses should be added.

- For Milk, flush and lean period should be studied and accordingly its animals in milk estimation should be refined.

Annexure –II

Status paper on Livestock Census

The **Livestock Census Scheme** is a Centrally Sponsored Scheme of the Department of Animal Husbandry. It was taken over in September 2002 along with unfinished work of 1997 census from the Directorate of Economics and Statistics on the recommendation of subgroup of Animal Husbandry Statistics of 10th five year plan. The Scheme, however, is quite old. The first time it was conducted in 1919-20. It is designed to be conducted after every five years. The 17th Livestock census was conducted with reference date of **15th October 2003** when all the states had counted livestock finally.

1 Objective of the scheme:

The estimates of numbers or counts of livestock are very important because livestock is important from viewpoint of development of any economy in general and that of India in particular. Apart from this importance and its general usages for policy and scheme's formulations, Census is also an important component in any procedure of sampling methodology as it updates the frames. Estimation through sampling procedure, does not give the correct values, if it is done using the old frames. So, always, it is imperative on our part for such schemes as of ISS i.e. Integrated Sample Survey Schemes to conduct Census and apply the updated frames to find out improved estimates through sample surveys during inter census ional period.

2 Salient features and coverage of 17th Livestock Census:

The states of Bihar, Himachal Pradesh, West Bengal and UT of Dadra and Nagar Haveli have not conducted the 16th Livestock Census. In the 17th Livestock Census, these states conducted Census. Till 1992, the census was collecting data on two platforms 1st on crossbred and 2nd on desi. The first time, in 1997, the breeds amongst crossbred were identified and data were collected accordingly. In some states, even different desi breeds were also identified

The National Statistical Commission, in its report, suggested that data should also be collected on the type of Household (HH). Therefore, the HH is to be classified as pertaining to (1) SC, (2) ST, and (3) Others. It must also be recognized from which source it is earning the most of its livelihood or what is the mainstay of its income in coded form. They are (1) from Livestock; (2) from Agriculture; (3) from Livestock and Agriculture both; and (4) from neither Livestock nor Agriculture.

In 17th L C, for every village, identification particulars, particulars about availability of veterinary medical facility and market facility, fishery statistics and the information in respect of accountability are collected besides stray cattle, Livestock in transit, involved in-trade movement or in fairs during the period of enumeration, wandering herds of cattle, goats and camels in the village in which they encamp on the day of reference.

The reference date of 17th Livestock Census was 15.10.2003 and time was sunrise. It collected the following items.

1.Identification details, Veterinary facility, Market facility, Items of facility available for fishing for each village/ city and administrative statistics for accountability.
2.Livestock data age-group wise, HH type wise, breed wise for cattle
3.Livestock data age-group wise, HH type wise, for
- 3.1 Bovines
- 3.2 Sheep, Goats,
- 3.3 Horses & Ponies, Mules, Donkeys, Camels
- 3.4 Pigs, Dogs, Rabbits

4.Poultry data age-group wise
- 4.1 Fowls
- 4.2 Ducks

5.Agricultural Implements and Machinery broad category wise, HH type wise.
6.Fishery Statistics in respect of numbers of persons age-sex wise, HH type wise and other related statistics on possession of boats and other related devices of fishing

3 Physical achievements of 17th Livestock Census:

The 17th Livestock census was conducted throughout India with reference date "October 15, 2003" with slight departure in the case of Tamil Nadu (reference date –20/08/04) and Madhya Pradesh (Feb –2004). Provisional results were out in July 2004, whereas Statewise, districtwise, Rural Urban results on number of animals -use wise, age wise and sex wise were out in January 2005 in 28 volumes –one for each State and one for all the UTs combined. The results on breed wise population is out in July 2006 and distribution of owners by social class is only awaited. As per 17th Livestock Census India has 485 million populations of livestock and 489 million poultry population given in the following tables.

Table 3.1 Livestock Population as per 17th Livestock Census

Livestock	**Population (000)**		%increase/decrease
Year:	**1997**	**2003**	
Crossbred cattle	20099	24686	***22.82***
Indigenous cattle	178782	160495	***-10.23***
•Total Cattle	**198881**	**185181**	***-6.89***
Buffaloes	89918	97922	***8.90***
Yaks	59	65	***10.17***
Mithuns	177	278	***57.06***
•Total Bovines	**289035**	**283446**	***-1.93***
Sheep	57494	61469	***6.91***
Goats	122721	124358	***1.33***
Pigs	13291	13519	***1.72***
Horses & Ponies	827	751	***-9.19***
Mules	221	176	***-20.36***
Donkeys	882	650	***-26.30***
Camels	912	632	***-30.70***
•Total Livestock	**485385**	**485002**	***-0.08***

Table 3.2 Poultry Population as per 17th Livestock Census

Poultry	Population (000)		%increase/decrease
Year:	1997	2003	
Fowls	315428	457399	***45.01***
Ducks etc.	32183	31613	***-1.77***
•Total Poultry	**347611**	**489012**	***40.68***

4. Financial outlay and achievements:

Since 1998-99, the scheme has become a 100% center sponsored scheme. The Government of India has released Rs. 2829.36 lakhs during 9th Plan for conduct of 16th livestock Census. In 10th Plan, it was transferred to the department of Animal Husbandry in September 2002. It could not get its budget provision till 2002-03 but the department could manage to release Rs. 294.43 lakhs to all the states for the scheme during 2002-03 for 17th Livestock census after adjusting some other schemes. In the year 2003-04 an amount of Rs.261 lakhs was released as a first instalment of grants –in –aid to the states and UTs for printing of schedules while pursuing actively clearance of EFC of the scheme pertaining to 10th Five year Plan with a proposal of around 120 Crores (EFC approved for 117.59 Crores) having components of

1. Printing of schedule
2. Training
3. Enumeration and data collection
4. Supervision
5. Tabulation
6. Printing of results
7. Contingency

Releases made during the 10th Five year Plan Period in respect of 17Th LC were as follows:

Table 4.1 Budget allocated & Expenditure made under 17th L C

Year	Budget Allocated	Expenditure (In Rs. Crores)
2002-03	**NA**	**2.99**
2003-04	**4.00**	**31.48**
2004-05	**58.39**	**69.36**
2005-06	**5.00**	**2.51**
2006-07	**5.00**	**Nil***

* upto July 2006

4.2 Pattern of funding

The 17th Livestock Census of 10th five year plan permits Animal Husbandry Department of State/UTs Governments/ Administration to engage the staff of other Schemes/ other Departments/ unemployed youths of sufficient skill as per the following rates:

Table 4.2.1 Rates of 17th Livestock Census as per its EFC

Srl. No.	Items	Units	Rate(in Rs.)
1	Enumeration	Per HH	3.50
2	Tabulation	Per HH	0.75
3	Supervision	Per HH	1.50
4	Contingency	Per HH	0.35
5	Printing	Per HH	0.70
	Sub-total –1	**/ HH**	**6.80**
7	One day training at district level	Per head	40.00
8	One day training at state level	Per head	55.00
	Sub-total –2	**Per head**	**95.00**

The total money that was allocated in its EFC was Rs. 117.59 crores.

5. Review of existing proposed schedule for 18th Livestock Census:

The Sub-Group had gone through the content of the proposed 18th Livestock Census schedule* and discussed it. In order to improve it further, the following suggestions are made by the Sub-Group.

- In the two schedule system of 18th Livestock Census, in the first village schedule the case of "animals yes/ no", should also record the redundant information of approximate number of animals for checking it at the time of the detail schedule.
- Similarly, for Poultry, the data on Broilers –Yes/No and Layers –Yes/No should also be collected in the village schedule.
- "Engaged in fishing activity" should be termed as "engaged in fishing" and in case it is yes then "inland Yes/No" & "marine Yes/ No' should also be collected.
- Reconstituted "Information on Fisheries" under the head of inland, marine and aquaculture should be done like:
    - Inland Fish
        - Items19 –25
    - Marine Fish
        - Items 29 to 38
    - Aquaculture
        - Items 39 to 47.

* Reference:- Document under circulation to the States/UTs by Technical Advisory Committee of 18th Livestock Census of DAHDF

- In the case of AI, facility available to village may be classified on the following counts:
    - door to door type/ mobile type
    - Stationery type.
- Fodder Availability in terms of area under different type of fodders should be captured at each village/ ward level.

- Besides the meat shops in the village, number of meat producing units falling under un – organized sector should also be collected for different types of categories. The category of meat producing unit can be defined.
- Number of milk processing units under unorganized sector should also be collected.
- Pattern of Economic Census of Own Account enterprise (OAE), Non-directory manufacturing enterprise (NDME) and Directory manufacturing enterprise (DME), should be suitably be refined/ redefined for fixing the categories of meat producing units falling under un-organized sector by the same names or by different names.
- "Livestock markets existing for the Village –Yes/ No", "if Yes then which animal type is traded most". --- should also be collected.
- "Number of feed mills of poultry type and animal type in the village/ ward" should also be collected.
- "Number of wool collection center" should also be collected.
- Under occupation, poultry, fishing may be added.
- For the age of cattle, buffalo, male and female; the age should be classified as 0 to 3 months and then 3 months to one year in place of the age group "less than one year".
- "Caste" word should be replaced by "category" as SC/ ST etc. are category.
- Schedules for organization like Gaushala/ farm/ Commercial dairies etc. should be added.
- Layers and broilers segregation should be done for improved poultry.
- While doing so in the case of broilers, number of crops in a year should also be recorded.
- In the case of breed of others type, name of breed (local/ standard) should also be collected and recorded.
- List of breeds that are not finding place in the schedule like Goats –Pashmina, Alpine, Sannen, should be added.
- There is need to extend the list of breeds so that large number of animals should not be counted under non –descript, which may arise due to consideration of only those descript breeds that have arisen from allowing classification on rigid phenotypic characteristics for the breeds.

Annexure –III

Status paper on Livestock Insurance

Rearing of livestock such as cattle, buffaloes, sheep, goats, pigs, poultry etc. not only provides a subsidiary income to the families but also is a source of protein in the form of milk, eggs and meat. The importance of livestock sector is evident from the value of output it provides as its contribution to the National economy. From practical experience is has been established that in the time of exigencies like drought and other natural calamities, it is the livestock which comes to the rescue of the vast sections of rural population. However, there is no mechanism in place in the country to compensate the farmers and landless labour in the event of loss of the animals. The livelihood of a farmer will be at stake when his milch animal (crossbred or indigenous cow or buffalo) dies due to disease, accident etc. Similarly any epidemic can wipe out a flock of sheep or poultry birds. Deaths due to natural calamities like floods, earthquakes, drought, snowfall etc.add to the misery of the farmer.

There was an acute need for protecting the farmers and landless labours against losses which they have to incur resulting from untimely death of livestock owned by them. Further, it would be difficult for the Government to persuade the farmers to go in for genetic up-gradation of their cattle through cross breeding or acquisition of high yielding milch animals unless sufficient incentive is provided by way of insurance. Department has formulated a new scheme for Livestock Insurance to be implemented during the last two years of 10^{th} Five Year Plan and first two years of 11^{th} five years on a pilot basis in 100 districts of the country.

'National Project for Cattle and Buffalo Breeding (NPCBB), having the objective of bringing about genetic up-gradation of cattle and buffaloes by artificial insemination as well as acquisition of proven indigenous animals, is implemented through State Implementing Agencies (SIAs) like State Livestock Development Boards(LDB). In order to bring about synergy between NPCBB and Livestock Insurance, the latter scheme will also be implemented through the SIAs. Almost all the states have opted for NPCBB. In states which are not implementing NPCBB or where there are no SIAs, the livestock insurance scheme will be implemented through the State Animal Husbandry Departments.

The Scheme has started in the month of March 2006 on pilot basis, its results are yet to come. Wherever the Livestock Development Boards are there, the scheme is functioning there through them, but where such boards are not there, the Animal Husbandry Departments are the implementing agencies. The scheme is restricted to high yielding variety of cows and buffaloes. The 50% of premium cost is borne by rearing farmers, rest 50 % and administrative charges like putting tags etc. are borne by Government of India.

Only around six months have passed. Results are yet to come and then only it can be assessed what extent scheme had remained successful to.

List of 100 districts to be covered under Livestock Insurance Scheme

Name of the State	S.no.	District
Andhra Pradesh	1	Prakasam
(8)	2	East Godavari
	3	West Godavari
	4	Krishna

Name of the State	S.no.	District
Andhra Pradesh	5	Guntur
	6	Chittoor
	7	Karimnagar
	8	Nalgonda

Arunachal Pradesh	9	Lohit
(2)	10	Lower Dibang Valley
Assam	11	Barpeta
(2)	12	Jorhat
Bihar	13	Patna
(5)	14	Samastipur
	15	Muzaffarpur
	16	Rohtas
	17	Begusarai
Chhatisgarh	18	Raipur
(2)	19	Durg
Gujarat	20	Sabarkantha
(6)	21	Banaskantha
	22	Mahesana
	23	Kheda
	24	Panchmahal
	25	Surat
Haryana	26	Jhajjar
(5)	27	Jind
	28	Bhiwani
	29	Hisar
	30	Rohtak
Himachal Pradesh	31	Kangra
(2)	32	Mandi
Jammu & Kashmir	33	Jammu
(2)	34	Pulwama
Jharkhand	35	Palamau
(2)	36	Ranchi
Karnataka	37	Bangalore Rural
(4)	38	Kolar
	39	Mandya
	40	Bangalore Urban
Kerala	41	Pallakad
(2)	42	Alapuzzah
Madhya Pradesh	43	Morena
(6)	44	Dhar
	45	Bhind
	46	Bidisha
	47	Ratlam
	48	Shajapur
Maharashtra	49	Ahmednagar
(6)	50	Kolhapur
	51	Pune
	52	Solapur
	53	Sangli
	54	Satara
Manipur	55	Senapati
(2)	56	Ukhrul

Meghalaya	57	Ri Bhoi
(2)	58	East Khasi Hills
Mizoram	59	Aizawl
(2)	60	Champhai
Nagaland	61	Dimapur
(2)	62	Zunheboto
Orissa	63	Cuttack
(2)	64	Jagatsinghpur
Punjab	65	Amritsar
(6)	66	Sangrur
	67	Ludhiana
	68	Patiala
	69	Ropar
	70	Ferozepur
Rajasthan	71	Jaipur
(6)	72	Alwar
	73	Bharatpur
	74	Udaipur
	75	Sikar
	76	Jhunjhanu
Sikkim	77	East Sikkim
(2)	78	South Sikkim
Tamilnadu	79	Salem
(5)	80	Erode
	81	Coimbatore
	82	Namakkal
	83	Vellore
Tripura (1)	84	West Tripura
Uttar Pradesh	85	Bulandshahar
(12)	86	Muzaffarnagar
	87	Aligarh
	88	Budaun
	89	Agra
	90	Barabanki
	91	Moradabad
	92	Meerut
	93	Allahabad
	94	Ghaziabad
	95	Gorakhpur
	96	Azamgarh
Uttaranchal	97	Haridwar
(2)	98	Udhamsingh nagar
West Bengal	99	Nadia
(2)	100	24 Parganas(N)