



GOVERNMENT OF MAHARASHTRA

# REPORT ON

MILK, EGG, WOOL AND  
MEAT PRODUCTION  
AND

LIVESTOCK AND POULTRY  
KEEPING PRACTICES IN  
MAHARASHTRA STATE

# FOR THE YEAR 1978-79

STATE OF ANIMAL HUSBANDRY  
MAHARASHTRA STATE  
PUNE-411 001.

GOVERNMENT OF MAHARASHTRA  
DIRECTORATE OF ANIMAL HUSBANDRY,  
PUNE

Report on the Integrated Survey Scheme for estimation of Annual Production of Livestock Products and study of Livestock and Poultry Keeping Practices in Maharashtra State, during the year-1978-79.

## P R E F A C E

The process of planning requires base-line data as well as the data of present status, related to the programmes implemented. The Department of Animal Husbandry is actively engaged in various activities which aim at improving the livestock and increasing their production in the State. The main emphasis is on increase in production of milk, meat, eggs and wool by providing preventive and curative health cover to existing livestock, improvement in their genetic make-up by providing breeding facilities and educating the livestock owners in proper management, feeding practices, etc.

In order to have the proper idea about the present status of the major livestock products and also about the keeping practices etc., the Department has launched an 'Integrated Sample Survey Scheme' since 1970-71. So far, eight Annual Surveys have been undertaken in succession. The present survey report is based on the ninth annual survey in series, as per the revised plan suggested by the Government of India.

The report contains information on milk, eggs, wool and meat production in the State, during 1978-79. It also contains the information about breeding, feeding and management practices followed in livestock and poultry keeping, information about land holding, utilisation pattern of livestock products, mortality rates of livestock, etc.

The success of this survey goes to the staff working in Statistical Survey Section of the Department. We are also indebted to Indian Agricultural Statistics Research Institute, New Delhi, for the guidance given in conducting the survey. The sampling technique was evolved in consultation with that Institute, since beginning.

I hope that the findings of the survey will be useful for planners and workers in Animal Husbandry field and dairying. The important results of the survey are given at the beginning of the Report for convenience of the users.

Place : Pune-1.

Dated : 20.7.1982.

P.D. MOKASDAR,  
DIRECTOR

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(ii)

Some salient results at a glance from the survey, on production of Milk, Eggs And Meat and study of livestock and poultry rearing practices in Maharashtra State, during 1978-79/wool

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Sr. No.	Item	Unit	Figure
1	2	3	4

I. GENERAL INFORMATION:

1. Size of sample observed

i) Number of districts observed	Number	25
ii) Number of villages observed	Number	364

2. Characteristics of villages

i) Having bovine	Percentage	100.0
ii) Having poultry	-do-	97.8
iii) Having sheep	-do-	19.5
iv) Having goats	-do-	95.0
v) Average number of households per village	Number	169

3. Percentage of households rearing

i) Bovine	Percentage	60.0
ii) Poultry	-do-	31.8
iii) Sheep	-do-	1.3
iv) Goats	-do-	28.7
v) No livestock and poultry	-do-	23.7

4. Availability of facility for veterinary first aid

i) Within village	Percentage	4.3
ii) Upto 5 Kms.	-do-	39.9
iii) At an average distance of	Kms.	8.0

5. Availability of Artificial Insemination facilities for animals

i) Within village	Percentage	5.5
ii) Upto 5 Kms.	-do-	38.0
iii) At an average distance of	Kms.	10.0

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6. Average number of bovines per 100 bovine keeper households

		Catt- le.	Buffa- loes.
i) In-milk	Number	40	26
ii) Dry+N.C.	-do-	71	27
iii) Adult males	-do-	144	5
iv) Young stock	-do-	96	32
v) Total-	-do-	----- 351	----- 90

7.a) Households having

i) Irrigated land	Percentage	4.0
ii) Non Irrigated land	-do-	53.4
iii) Both type of land	-do-	14.2
iv) No land	-do-	28.4
b) Average land holding per bovine keeper household	Ha.	3.37

II. MILK PRODUCTION AND BOVINE KEEPING PRACTICES:

1. Size of sample observed

i) Total bovine keeper households for milk recording and detailed study.	Number	6,445
ii) Total bovines for detailed study	-do-	29,265
iii) Total in-milk bovines for milk recording		
a) Cows	-do-	5,277
b) Buffaloes	-do-	1,968

2. Estimated number of bovines in-milk

i) Cows in-milk	Lakhs	16.34
ii) Buffaloes in-milk	-do-	9.32
iii) Cows in-milk to milch cows	Percentage	40
iv) Buffaloes in-milk to milch buffaloes	-do-	56

3. Per day milk production in the State

i) Cow milk	Lakh Kg. (Lakh Ltrs.)	13.8(13.4)
ii) Buffalo milk	-do-	24.9(24.2)
iii) Total-	-do-	38.7(37.6)

1	2	3	4
4.	<u>Annual milk production in the State</u>		
	i) Cow milk	Lakh Kg. (Lakh Ltrs.)	5038.7 (4901.1)
	ii) Buffalo milk	-do-	9103.9 (8855.4)
	iii) Total	-do-	14142.6 (13756.5)
5.	<u>Average daily milk yield per animal in-milk</u>		
	i) Cow	Kg. (Litre)	0.833 (0.810)
	ii) Buffalo	Kg. (Litre)	2.216 (2.156)
6.	<u>Feeding practices of animals</u>		
	i) Cattle kept on grazing alone	Percentage	7.3
	ii) Buffaloes kept on grazing alone	-do-	3.9
7.	<u>Average quantity of feed/fodder fed per day per animal</u>		
	a) Cattle- i) Green	Kg.	8.052
	ii) Dry	-do-	7.015
	iii) Concentrates	-do-	1.991
	b) Buffalo- i) Green	-do-	10.652
	ii) Dry	-do-	7.461
	iii) Concentrates	-do-	1.765
8.	<u>Quantity of dung dropped in cattle shed per day</u>	Kg.	3.172
9.	<u>Annual Mortality in</u>		
	i) Cattle	Percentage	1.0
	ii) Buffaloes	-do-	3.1
10.	<u>Mortality due to</u>		
	a) <u>Diseases</u>		
	i) Cattle	Percentage	61
	ii) Buffaloes	-do-	81
	b) <u>Accidents</u>		
	i) Cattle	Percentage	8
	ii) Buffaloes	-do-	15
	c) <u>Other reasons</u>		
	i) Cattle	Percentage	31
	ii) Buffaloes	-do-	4

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**III. EGGS PRODUCTION AND POULTRY REARING PRACTICES**

**1. Size of sample observed**

i) Households observed for detailed study	Number	13,439
ii) Total number of poultry birds observed		
a) Cocks	Number	5,253
b) Hens	-do-	34,150
c) Pullets	-do-	5,398
d) Cockerels	-do-	8,525
e) Chicks	-do-	41,214
f) Total-	-do-	94,540

**2. Estimated number of layers in the State**

a) Deshi	Lakhs	52.93
b) Improved	-do-	14.63

**3. Average number of eggs laid per layer per year**

a) Deshi	Number	115
b) Improved	-do-	209

**4. Estimated per day eggs production in the State**

a) Deshi	Lakhs	16.66
b) Improved	-do-	8.37
c) Total-	-do-	25.03

**5. Estimated annual eggs production in the State**

a) Deshi	Crores	60.80
b) Improved	-do-	30.55
c) Total-	-do-	91.35

**6. Average number of birds per 100 poultry keeper households**

a) Cocks	Number	39
b) Hens	-do-	254
c) Cockerels	-do-	40
d) Pullets	-do-	63
e) Chicks	-do-	307
f) Total-	-do-	703



1	2	3	4
7. <u>Average hatching percentage</u>		-	75.2
8. <u>Average feed supplied per poultry bird/day</u>		Gms.	18
9. <u>Annual mortality in poultry</u>		Percentage	19.8
<b>IV. <u>WOOL PRODUCTION AND SHEEP REARING PRACTICES</u></b>			
<b>1. <u>Size of sample</u></b>			
i) Number of flocks observed		Number	328
<b>ii) <u>Total sheep observed</u></b>			
a) Rams and wethers		Number	444
b) Ewes		-do-	8789
c) Male lambs		-do-	830
d) Female lambs		-do-	946
e) Total-		-do-	11009
<b>2. <u>Estimated number of sheep in the State</u></b>			
a) Rams and wethers		Lakh	1.31
b) Ewes		-do-	15.66
c) Lambs		-do-	5.68
d) Total-		-do-	22.65
<b>3. <u>Average wool yield per sheep/year</u></b>			
a) Rams		Kg.	0.671
b) Ewes		-do-	0.551
c) Lambs		-do-	0.334
d) Overall-		-do-	0.523
4. <u>Total annual wool production</u>		Metric Tons	1047
<b>5. <u>Mortality in sheep</u></b>			
a) Rams		Percentage	3.9
b) Ewes		-do-	2.3
c) Lambs		-do-	23.6
d) Overall-		-do-	6.6

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 1.....2.....3.....4.....

V. GOAT MILK PRODUCTION AND GOAT REARING PRACTICES:

1. <u>Total goats observed</u>		
a) Bucks	Number	1087
b) Does	-do-	20846
c) Male kids	-do-	5501
d) Female kids	-do-	7405
e) Total-	-do-	34839
2. <u>Average daily milk yield per goat in-milk</u>	Kg.	0.180
3. <u>Percentage of goats in-milk to milch goats</u>	Percentage	45.5
4. <u>Estimated number of goats in-milk</u>	Number in lakhs	19.23
5. <u>Total goat milk production</u>		
i) Per day	Lakh Kg. (Lakh Ltrs.)	3.466(3.371)
ii) For the year	Lakh Kg. (Lakh Ltrs.)	1264.9(1230.4)
6. <u>Annual mortality in goats</u>	Percentage	6.5

VI. MEAT PRODUCTION:

1. <u>Average meat production per animal</u>		
a) Cattle	Kg.	97.009
b) Buffalo	Kg.	124.602
c) Sheep	Kg.	9.890
d) Goat	Kg.	9.564
2. <u>Estimated number of animals slaughtered</u>		
a) Cattle	Lakh	2.62
b) Buffaloes	Lakh	1.57
c) Sheep	Lakh	19.68
d) Goats	Lakh	43.74
3. <u>Total meat production</u>		
a) Per day	'000M.T.	0.291
b) For the year	-do-	106.23

## CHAPTER I.

1. Introduction:-The present report is based on the ninth annual Integrated Survey conducted in the State, by the Department, for estimation of annual production of major livestock products, viz., milk, eggs, wool and meat for study of the livestock keeping practices during the year 1978-79.

The data on production of milk, eggs, wool & meat as well as on rearing practices of the major categories of livestock and poultry, were collected, as per the revised plan, suggested by the Ministry of Agriculture, Animal Husbandry Statistics Division, Government of India, New-Delhi. This procedure has been followed in this State from 1977-78.

### 1.2 Description of the Survey :

(i) Coverage : The Survey was conducted all over the State, except Greater Bombay area, which is an entirely urbanised area, having only about 0.4 percent of livestock population and 1.5 percent of poultry population, of the State, as per 1978 livestock census. The Maharashtra State occupies 9.4 percent of the area and has 9.2 percent of the population of the country (as per 1971 census). It lies between 16.4°-22.1° North latitude and 72.6°-80.9° East longitude. It has an area of 3,07,762 Sq.Km. It is bounded by Gujrat State to its north-west, Madhya Pradesh to its north east, Andhra Pradesh, Karnataka and Goa to its south and by the Arabian Sea to its west.

The State consists of 26 districts with 235 tahsils comprising 35,778 inhabited villages and 289 towns, as per 1971 population census.

ii) Topography: Topographically, Maharashtra is divided into two natural zones, viz. Deccan Plateau and the coastal region, known as Konkan. The coastal region extends parallel to the Sahyadris (Western Ghats), from north to south, for about 720 Km., with an average width of 50 Km., covering in all 31100 Sq.Km. of area.

The soils occurring in the State, are chiefly derived from basic volcanic rocks, which have more or less uniform mineral and chemical composition. They occupy about 80 percent, of the area of the State. In Vidharba region, the granitoid sediments have given different group of soils. In the coastal region, heavy rainfall has led to formation of laterites and lateritic soils.

(iii) Climate :- The annual rainfall varies between 500 mm to 5000 mm, from eastern part of the State to west side. In west portion i.e. Konkan, the rainfall is maximum and as high as 5000 mm, whereas it falls down to 600-700 mm. in other parts of the State. In some of the districts, the rainfall is even less than 500 mm. The State has a tropical climate with three distinct seasons., i.e. Summer (mid-February to mid-June), Monsoon (Mid-June to mid-October) and Winter (mid-October to mid February).

(iv) Land utilisation pattern :- The State occupies an area of 307.8 lakh hectares. Of this, 17.3 percent is forest area and about 64.5 percent is net cropped area ( as per 1977-78 season and crop Report). The area sown more than once accounts for only 5.2 percent. The area under permanent pastures and grazing land; is 5.1 percent. The total cropped area is 198.29 lakh hectares. Of the total cropped area, 74.1 percent is under food crops while the rest is under non-food crops. The total gross irrigated area is 11.9 percent of the total gross cropped area, and the area solely devoted to fodder crops is only about 4 percent.

(v) Crops :- The crops of jowar, bajra and rice continue to be the important food crops in the State, which occupied 32.1, 8.3 and 7.5 percent of the gross cropped area, respectively, during the year 1977-78, and cotton, groundnut and sugarcane were the important non-food crops, occupying 17.4 percent of the total gross cropped area.

(vi) Livestock Population :- According to 1978 census, the Maharashtra State has 296.42 lakhs livestock. Out of the total livestock, 191.17 lakhs (64.5 percent) are bovines,

75.63 lakhs (25.5 percent) are goats, 26.36 lakhs (i.e. 8.9 %) are sheep, 2.26 lakhs i.e. 0.86 percent are pigs, 0.49 lakh are horses and ponies, 0.51 lakhs are donkeys, while mules and camels numbered only 305 and 533, respectively. The total poultry is 187.51 lakhs.

(vii) Variation in livestock population:-  
(1978 census over 1972 census)

The following table gives the percentage variation of livestock population according to 1978 census, over 1972 census figures.

Table -1  
Comparision of livestock census figures of 1972 & 1978

Sr. No.	Category	Population as per 1978 census	Population as per 1972 census	Percentage variation of 1978 over 1972
1	2	3	4	5
1.	Cattle	1,52,17,859	1,47,05,147	+ 3.49
2.	Buffaloes	38,98,716	33,00,746	+18.12
3.	Sheep	26,36,001	21,28,036	+23.87
4.	Goats	75,62,925	59,10,554	+27.96
5.	Pigs	2,26,188	2,02,936	+11.46
6.	Total Livestock	2,96,41,878	2,63,60,760	+12.45
7.	Total Poultry	1,87,50,817	1,22,16,567	+53.49

It is seen that there is increase in all types of livestock as per 1978 census over the previous census. This increase is maximum in poultry (53 p.c.) followed by goats (28 p.c.), sheep (24 p.c.) and buffaloes (18 p.c.). The total livestock has been increased by 12 p.c. over that according to previous census.

1.3 Period of field work: The data for the survey were collected during all the three seasons of the year 1978-79, as shown below:

1. Summer- March 1978 to June 1978.
2. Rainy - July 1978 to October 1978.
3. Winter- November 1978 to February 1979.

1.4 Sampling Plan:- A stratified multistage random sampling design has been adopted, for the survey. The districts are treated as different strata. The villages are primary or first stage sampling units. The households in the villages are the secondary stage sampling units. For milk recording, animals in-milk in the households, constituted to be the third stage units. A maximum of two animals in-milk are observed for milk recording, from each of the selected households.

From each of 25 districts of the State, 10% villages are selected at random during the year, for collecting householdwise data, on number of livestock and poultry reared. Out of these villages one-third are selected for each of three seasons of the year. From

these one-third of 10% selected villages, from each district, five villages are selected at random, in each season, for collecting detail data on milk, eggs, wool and meat production and on rearing practices of livestock and poultry.

On the basis of data collected from these five selected villages, districtwise (stratumwise) estimates are worked out for a season. The state estimates for a season are obtained, by pooling the districtwise estimates.

The annual estimates of production for the State are worked out, by pooling three seasonal estimates, for the State. The production for Greater Bombay District, is estimated, on the basis of annual data received from Dairy Development Commissioner, Bombay.

1.5 Programme of field work: For collection of data, regarding production and rearing practices of livestock, one Survey Assistant is allotted five villages, selected randomly a fresh for every season from each District. The Survey Assistant visits each selected village in four rounds and in a round he makes a four days halt in each selected village for data collection. He carries out house to house complete enumeration of livestock and poultry, in each of the selected villages, during the first round. From second round onwards, he collects data about milk yield and bovine keeping practices, from randomly/<sup>selected</sup> cluster of two households, having at least one bovine. If the originally selected household does not have any bovine in-milk, he observes another household, having at least one animal in-milk, for milk recording. From each selected household, a maximum of two animals in-milk are observed, for milk recording, every day.

The Survey Assistant also collects data about production of other three major livestock products. The norms for collection of data are as given in table 2.

The details of data collection

Schedule Nos.	Category of households etc, to be observed.	Type of information to be collected.	No. of households to be observed per day
1.	2.	3.	4.
B1	Households having, at least one bovine.	Milk production and bovine keeping practices.	2
B2	Non-bovine keeper's households	Utilisation of milk	1
P1	Any type of households	Changes in no. of poultry birds	10
P2	Households having at least one poultry bird.	Eggs production and poultry rearing practices.	5
P3	Non Poultry Keeper households	Utilisation of eggs	2
W1			
W2	Households having sheep	Sheep rearing practices and wool production	3
W3			
S1	Households having goats	Goat milk production and goat rearing practices	3
T1	Households having livestock or poultry	Meat Production	10
T2	Households having no livestock or poultry	Utilisation of Meat	2
T3	Slaughter houses at	Meat Production & other by-products obtained, through slaughter.	-
T4	District places		
T5			

1.6 Details of data collected, in respect of bovine keeping practices and milk production :-

From the selected bovine-keeper's households, information on the following points is collected.

- (i) No. of bovine maintained, breedwise and sexwise, with their ages.
- (ii) Quantity of feed and fodder given and various modes of procurement of the same.
- (iii) Order of lactation and stage of lactation of milch animals.
- (iv) Production of milk and utilisation of milk and milk products.
- (v) Quantity of dung obtained and its utilisation.
- (vi) Use of working animals for various purpose.
- (vii) Housing, watering and grazing facilities available for animals.

- (viii) Mortality in animals with causes.
- (ix) Vaccinations performed and medical treatment given.
- (x) Sale and purchases of animals with their prices.
- (xi) General information about selected households, such as family size, land holding, etc.

The milk yield and feed/fodder given are recorded by actual weighment, while the other information is obtained, by careful enquiry.

During the survey, the data on the following points were also collected :-

- (1) Egg production and poultry rearing practices
- (2) Wool production and sheep rearing practices
- (3) Meat production and other by-products obtained through slaughter.

In this report, detailed tables only on bovine keeping practices followed have been presented, alongwith other important tables on poultry, sheep and goat rearing practices.

1.7 Staff employed :-

The staff sanctioned under the scheme, alongwith their assignments, is as below :-

Table-3  
Staff Sanctioned

Sr No.	Designation	No. of posts	Particulars of work allotted.
1.	2.	3.	4.
1.	Asstt. Director (Statistical Survey) in M.A.H.S. Jr. Class I	1	Overall incharge in the conduct of the survey entrusted with all administrative and accounts matters, tabulation and analysis of data, as well as preparation of report.
2.	Investigators	2	Estimation of production of live-stock products and analysis of data
3.	Statistical Assistants	4	Scrutiny, Tabulation and compilation of data.
4.	Accountant	1	Accounts work
5.	Senior Clerk		General correspondance regarding Establishment.
6.	Junior Clerk	1	Inward-Outward, Typing, etc.
7.	Assistant Field Officers (Veterinary Officers)	6	Technical Supervision over the work of Survey Assistants.
		one Leave Reserve	
8.	Survey Assistants	28	Collection of field data
		Including three Leave Reserve	
9.	Peons.	2	Office Work.





Table 5

Distribution of villages according to availability of various facilities and their distances from the villages (in km.)

Sr. No.	Item of facility	Percentage of villages for which it is available at a distance (in km.)							Average Distance
		Within the village	1 to 3	4 & 5	6 to 10	Above 10	Present survey	Previous survey 1974-75	
1.	2.	3.	4.	5.	6.	7.	8.	9.	
<u>1. Public Conveyance</u>									
a)	S.T. Bus	20.9	37.4	14.7	17.2	9.8	6.08	5.30	
b)	Railway	22.1	10.4	4.9	15.3	47.3	24.47	-	
<u>2. Artificial Insemination Sub Centre</u>									
		5.5	24.5	14.1	34.4	21.5	17.7		
<u>3. Veterinary Aid Centre</u>									
		4.3	24.6	15.3	37.4	18.4	8.04	7.6	
<u>4. Veterinary Dispensary</u>									
		6.8	10.4	9.8	28.8	44.2	14.84	16.00	
<u>Market for</u>									
5.	Cattle feed	0.0	6.1	9.8	29.5	54.6	16.23	13.7	
6.	Milk and milk products	12.9	11.0	10.4	25.2	40.5	12.95	14.0	
7.	Eggs	5.5	9.2	8.6	28.2	48.5	14.53	16.7	
8.	Wool & Sheep	1.8	3.5	4.4	21.0	69.3	30.60	22.4	
9.	Meat	0.7	12.0	14.7	33.3	39.3	12.05	11.6	
10.	Cattle (Livestock)	0.6	4.9	4.9	27.0	62.6	18.81	16.7	
11.	Hatchery Products (like hatching eggs or day old chicks.)	2.4	2.4	2.4	10.4	82.4	47.41	-	

It is seen that 20.9% of villages had S.T. bus service with in the village itself and for other villages, it was available at an average distance of 6.08 Kms. Similarly the service of Railway was available to 22.1% villages with-in the villages, and for all other villages, it was available at an average distance of 24.47 Kms.

Artificial Insemination facility was available with-in the village for 5.5% of the villages and for other villages, it was available at an average distance of 9.98 kms. Similar survey during 1974-75 showed that A.I. facility was available at an average distance of 17.7 Kms, which shows that due to intensive departmental activities, the coverage of A.I. has been substantially increased.

The veterinary aid from Veterinary Dispensary was available to 6.8% of villages with-in the village it self and for other the villages, it was available at an average distance of 14.84 Kms. The previous survey showed the average distance as 17.7 Kms. Similarly veterinary aid through Veterinary Aid Centre was available, to 4.3% of villages with-in the village and for other villages, it was available at an average distance of 3.04 Kms.

Market facilities for selling livestock products was available, to more villages, with-in the villages, as compared with the results of 1974-75 survey. It was observed that 12.9% of villages had market for selling milk and milk products

followed by 5.5% village having facilities for selling eggs & poultry bird. The average distance at which these facilities were available was least for meat i.e. 12.05 Km. followed by 12.95 Km. for milk and milk products, eggs and birds- 14.58 Kms, cattle feed and fodder-16.23 Kms, sale and purchase of cattle-18.81 Km. and wool and sheep 30.60 Kms. Good quality chicks and hatching eggs to villagers from private or commercial hatcheries were available to villagers, with-in the village to 2.4% of villages, and for other villages. They were available at an average distance of 47.41Kms.

2.2 Number of households per village:- During 1978-79, 61336 households and the livestock and the poultry reared by them were enumerated by the Survey Assistants in 374 selected villages. The distribution of these villages, according to number of households per village, can be given as given in table-6.

Table 6

Distribution of villages according to number of households in the villages.

Percentage distribution of villages having households.	Season				As per 1974-75 survey
	Summer	Rainy	Winter	Overall	
1.	2.	3.	4.	5.	
1. Upto 25	1.6	4.8	5.6	4.1	6.5
2. 26 to 50	8.8	8.1	8.0	8.5	12.5
3. 51 to 100	21.6	28.2	23.2	25.0	28.7
4. 101 to 150	20.8	24.2	17.6	21.4	22.4
5. 151 to 200	12.8	10.5	18.4	14.3	12.5
6. 201 to 300	18.4	11.3	9.6	13.5	9.1
7. 301 to 400	2.4	5.7	8.0	5.5	4.8
8. 401 to 600	4.8	4.0	8.8	6.0	2.3
9. 601 to 800	-	2.4	0.8	1.1	0.6
10. above 800	0.8	0.8	-	0.6	0.6
11. Total	100.0	100.0	100.0	100.0	100.0
	(175)	(124)	(125)	(34)	(351)
12. Average number of households.	149	163	180	169	142

( Figures in brackets indicate number of villages observed).

It is seen that 12.6% of villages had households, less than 50, 25.0 percent had from 51 to 100, 35.7% villages have households in range of 101 to 200, 13.5% villages have households 201 to 300, and remaining 13.2% had more than 300 households per village. The overall average number of households per village was found to be 169. As per previous survey of 1974-75 there were 142 households per village.

2.3 Households rearing livestock and poultry :- From the total of 61336 households observed, it was found that, 60% of them reared bovine, 31.8% households reared poultry and 28.7% households reared goats, either alone or in combination with other livestock or poultry. The households rearing sheep were very few i.e. only 1.3%.

The distribution of households rearing only one type of livestock or poultry and in combinations, was found as given in table 7.

Table 7

Distribution of households according to type of livestock and poultry reared.

Classification of households.	Percentage of households rearing						
	Bovine	Poultry	Goats	Sheep	Livestock in combination	No Live-stock	Total
1.	2.	3.	4.	5.	6.	7.	8.
Households rearing only one type of livestock or poultry	21.0	4.9	3.0	Neg.	47.4	23.7	100.0
Total households rearing livestock or poultry in various combination	60.0	31.8	28.7	1.3	-	23.7	-
As per 1974-75 survey.	57.6	25.7	26.3	0.9	-	27.9	-

(Number of households observed 61336)

Comparing the above results with previous survey of 1974-75, it is observed that, the percentage of households not rearing any livestock or poultry has come down from 27.9% to 23.7%, so also the percentage of households rearing livestock or poultry (in combination), has been increased from 34.2% to 47.4%. (\*)

2.4.1 Classification of bovine keeper households:-

The bovine keeper households were further classified, as those having land and not having land. The distribution of households rearing bovines (with other livestock or poultry) and with or without land is given the in table 8.

(\*) This increase is significant from the point of view of agrarian economy of the rural Maharashtra.

.. 12 ..  
Table 8

Distribution of bovine keeper households according to bovines and other livestock/poultry reared

Particulars of bovine keeper households.	Percentage of households	Average land holding, (ha)	Category of bovine	Average number of bovines reared/100 hhs.					Average no. of other livestock or poultry reared		
				Milch	Adult males	Young stock	Total	Goats	Sheep	Goat	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Having land.	85.4	3.95	Cattle	41	73	157	99	370			
			Buffalo	27	28	5	34	94			
			Total	68	101	162	133	464	287	63	132
Having No land.	14.6	-	Cattle	34	52	68	83	237			
			Buffalo	19	20	2	22	63			
			Total	53	72	70	105	300	310	20	173
Overall (1978-79)	100	3.37	Cattle	40	71	144	96	351			
			Buffalo	26	27	5	32	90			
			Total	66	98	149	128	441	290	57	138
1974-75 (Overall)	-	4.75	Cattle	39	90	166	92	337			
			Buffalo	26	30	4	26	34			
			Total	65	120	170	118	471	139	33	127

Out of total bovine keeper households, 85% were having land. The average number of bovines possessed by them, was more by about 160 per 100 households, as compared with those who did not possess any land. However, the latter had more number of goats and poultry reared, as compared with bovine keeper households having land. The overall average number of bovines reared per 100 bovine keeper households was 441 which consisted of 164 milch bovine, 149 adult males and 128 young-stock alongwith 290 poultry, 138 goats and 57 sheep. The number of bovine reared per household have been slightly reduced (4.7 to 4.4) while the number of sheep & goats reared have slightly increased as compared with previous survey.

2.4.2 Animals reared :- The bovine keeper's households were also classified as those rearing only females, adult males or youngstock. It was found that 9.1% households reared only adult milch females, 12.3% reared only adult males and 3.3% of households had only youngstock the remaining 75.3% bovine keeper's households reared, all the three categories, in combinations. (\*)

2.4.3 Number of adult female reared :-The data were classified according to number of adult females reared by the bovine keepers. The classification of these households is given below.

Table 9

Percentage distribution of bovine keeper's households, rearing adult females.

Number of milch Buffalo reared.	Number of Milch Cows reared							Total	Figures of previous survey (74-75)
	0	1	2	3	4	more than 4	more than 4		
1	2	3	4	5	6	7	8	9	
0	-	34.0	13.2	4.5	2.7	1.7	56.1	60.6	
1	17.5	5.5	3.2	1.1	0.6	0.8	29.7	23.7	
2	5.5	2.1	1.1	0.5	0.3	0.5	10.0	8.6	
3	1.1	0.5	0.3	0.2	0.1	0.2	2.4	3.7	
4	0.4	0.3	0.1	0.1	0.1	0.1	1.1	2.0	
more than 4	0.2	0.1	0.1	Neg	0.1	0.2	0.7	1.4	
Total	24.7	43.5	18.0	6.4	3.9	3.5	100.0	100.0	
Figures of 74-75 survey.	17.1	45.9	19.0	8.2	4.7	5.1	100.0	-	

(Note: Number of households rearing females 28,898)  
Neg- Negligible.

The households rearing only cows was 56.1 percent, compared with 60.6 percent in previous survey. Similarly the households having only buffaloes have been increased from 17.1 percent to 24.7 percent. It was also observed that over 61 percent of the households had two cows, while 40 percent of the households had one to two buffaloes. / about

2.5.1 Households having adult males

The bovine keeper's households were also classified according to number of adult males reared. The classification is given in table 10.

(\*) It was also observed that 68.2% households reared only cattle 6.3% households reared only buffaloes and remaining 25.5% households reared both the categories.

Table 10

Percentage distribution of bovine keeper's household-  
holds rearing adult males, according to their number.

Adult Buffalo- males	Adult Cattle Males							Total	Figures of 74-75 survey.
	0	1	2	3	4	more than 4			
1	2	3	4	5	6	7	8	9	
0	-	13.4	61.7	4.9	10.0	5.5	95.5	97.1	
1	1.2	0.4	0.4	0.1	0.2	0.1	2.4	1.4	
2	1.1	0.1	0.2	0.1	0.1	0.1	1.7	1.1	
3	0.1	N	0.1	N	N	N	0.2	0.2	
4	0.1	0.1	N	-	-	N	0.2	0.1	
more than 4	N	N	N	-	-	N	N	0.1	
Total	2.5	14.0	62.4	5.1	10.3	5.7	100.0	-	
Figures of 74-75 survey.	0.8	20.0	53.8	6.1	13.8	5.5		100.0	

N- Negligible

(Total number of households observed 23106)

About 96 percent of households had only cattle males while 2.5 percent households had only buffalo males.

The household having only one buffalo male have been increased from 0.8% to 2.5%. So also the households possessing one adult cattle male has been decreased from 20% to 14%.

About 76.0 percent households had 1 to 2 adult cattle males and only 16 percent had 4 or more than 4 cattle males.

#### 2.5.2 Households rearing youngstock.

Percentage of bovine keeper's households, rearing youngstock according to age groups, is given in table 11.

Table-11

Distribution of households rearing young calves.

Category of Calves reared.	Households rearing				Total	Figures of 74-75 survey.
	Only cow calves	Only buffalo calves	Both cow/ and buff- alo calves			
1.	2.	3.	4.	5.	6.	
Below 1 year	19.3	10.5	2.00	31.8	16.8	
1-3 years	30.8	7.4	2.00	40.2	76.5	
Both age groups	14.9	3.1	10.0	28.0	6.7	
Total:-	65.0	21.0	14.0	100.0	-	
Figures of 74-75 survey	78.2	18.4	3.4	-	100.0	



( Note:- Total number of households rearing youngstock 22602).

The households having only cow calves have been decreased by about 13 p.c. as compared with 74-75 survey results. The households rearing both categories of calves have been increased from 3.4 p.c. to 14 p.c. Similarly households having calves below 1 year age group and of all age groups have been increased from 23 p.c. to 60 p.c.

2.6.1 Land holding, land use pattern and average number of Livestock and poultry reared by households.

All the households having land were classified as, having only irrigated land, only un-irrigated land and having both types of lands. The distribution of these households according to size of land possessed is given in table No. 12.

Table - 12

Distribution of households having land with size of holding ( in hectares).

Size of land holding	Percentage of households possessing			
	Only Irrigated land	Only Non-irrigated land	Both types of land.	All land owners.
1.	2.	3.	4.	5.
Up to 0.2	9.9 (9.9)	2.0 (2.0)	8.5 (8.5)	7.3 (7.3)
0.2 to 0.4	12.5 (22.4)	2.4 (4.4)	7.1 (15.6)	6.5 (13.8)
0.4 to 0.6	11.9 (34.3)	2.6 (7.0)	4.6 (20.4)	4.8 (18.6)
0.6 to 1.0	17.9 (52.2)	5.1 (12.1)	13.5 (33.9)	12.1 (30.7)
1.0 to 2.0	21.4 (73.6)	17.6 (29.7)	23.5 (57.4)	22.2 (52.9)
2.0 to 3.0	9.6 (83.2)	13.0 (42.7)	10.2 (67.0)	10.7 (63.6)
3.0 to 4.0	7.3 (90.5)	13.7 (56.4)	11.9 (79.5)	12.0 (75.6)
4.0 to 5.0	4.1 (94.6)	9.3 (65.7)	4.3 (83.8)	5.3 (80.9)
5.0 to 6.0	1.9 (96.5)	7.7 (73.4)	4.0 (87.8)	4.7 (85.6)
6.0 to 7.0	0.8 (97.3)	5.1 (78.5)	2.3 (90.1)	2.8 (88.4)
7.0 to 8.0	0.9 (98.2)	4.8 (83.3)	3.6 (93.7)	3.6 (92.0)
8.0 to 16.0	1.6 (99.8)	12.6 (95.9)	5.1 (98.8)	6.3 (98.3)
Above to 16.0	0.2 (100.0)	4.1 (100.0)	1.2 (100.0)	1.7 (100.0)
Percentage to total households having	5.6	74.6	19.8	100.0

(Note :- Figures in brackets denote cumulative totals)

(Number of observations 43931)

The percentages of households having land upto 2 hectares in irrigated, unirrigated and both types were 73.6 p.c. - 29.7 and 57.4 p.c. respectively. The average land holding size for the households having only irrigated land was 1.71 hectares, the same for households having only unirrigated land and both types of land were, 2.92 and 5.12 hectares respectively, giving overall average land holding size as 3.29 hectares per household having land. On an average, 52.9 p.c. of land owners had land upto 2 hectares, while 75.6 p.c. had land upto 4 hectares.

2.6.2 The number of livestock and poultry reared per 100 households according to type of land possessed, is given below.

Table - 13

Average number of livestock and poultry reared per 100 households, according to type of land possessed.

Type of land possessed by the hhs.	Percent- age of hhs.	Ave- -rage size of holding (ha)	Cattle		Buffalo		Tot- al	Poul- try	Sheep	Goats		
			Ma- le	Fe- m	Ma- le	Fe- m						
Only irr- gated land	4.0	1.71	115	80	68	4	61	40	368	334	20	206
Only Non- irrigated land.	53.4	2.92	103	76	65	3	32	19	298	241	53	110
Both typ- es of land.	14.2	5.12	149	103	94	4	62	38	450	273	76	127
Not hav- ing any land.	28.4	-	21	27	26	1	12	7	94	146	6	104
Overall	100.0	3.29	86	66	58	3	32	19	264	223	44	114

From this table, it will be seen that the households having both types of land i.e. irrigated and unirrigated reared maximum no. of bovines ( 450 per 100 households). The average number of bovines reared per 100 households, having only irrigated land, was 368 bovines. The households having non irrigated land, reared on an average 3 bovines. The households having no land reared one bovine. The overall average bovines reared per 100 households was 264. The detail tables of households having number of livestock and poultry reared, per 100 households according to type of land and size of holding are given in Annexures 1 to 4.

The number of poultry and goats reared per 100 households was maximum for households having only irrigated land and minimum for those having only non-irrigated land.

In respect of sheep, however, it was seen that maximum number of sheep per household were reared by households having both types of lands.

2.6.3 Households rearing poultry birds.

The households rearing poultry birds were classified according to total number of poultry birds reared per household reared by them. The distribution is given in table 14.

Table - 14

Distribution of poultry keeper's households according to total number of Poultry birds reared

	Number of poultry birds reared						
	1	2	3	4	5	6	7
Percentage of hhs.	15.4	14.9	9.0	8.8	7.6	7.8	6.3
(Cumulative Total)	(15.4)	(30.3)	(39.3)	(48.1)	(55.7)	(63.5)	(69.8)
	Number of poultry birds reared						Average number of birds/hhs.
	9.	10.	11to20	21 to 50	Above 50.		
Percent -age of household (Cumulative total)	4.8	4.2	3.6	13.5	3.7	0.4	7
(Cumulative total)	(74.6)	(78.8)	(82.4)	(95.9)	(99.6)	(100.0)	

- i) (Number of households observed 19505)
- ii) (Figures in brackets denote cumulative totals).

About 30 p.c. households had 1 to 2 birds, 40 p.c. had 3 to 7 birds 13 p.c. had 8 to 10 birds and remaining 17 p.c. had more than 10 birds each.\*

It was also observed that about 4.2 p.c. poultry keepers households did not rear any adult female birds. The remaining households were distributed according to number of adult female birds reared and the same is presented below in table no. 15.

Table-15

Percentage distribution of households rearing adult female birds.

Number of adult female birds reared								
1.	2.	3.	4.	5.	6.	7.		
1.	2.	3.	4.	5.	6.	7.		
Percentage of house-holds.	31.8	26.3	12.3	10.5	6.1	4.1	2.4	
Cumulative total.	(31.8)	(58.1)	(70.4)	(80.9)	(87.0)	(91.1)	(93.5)	
Number of adult female birds reared.								
8.	9.	10.	11 to 20	21 to 50	Above 50	Total	Average no. of adult female per hhd	
8.	9.	10.	11.	12.	13.	14.	15.	
Percentage of house-holds	1.7	0.9	1.6	1.8	0.4	0.1	100.0	3
Cumulative total	(95.2)	(96.1)	(97.7)	(99.5)	(99.9)	(100.0)	-	-

(Note:- Number of households observed-18683).

About 81 p.c. of poultry keeper's households, rear adult female birds upto four. The overall average number of females reared per poultry keeper household was 3, which is obtained during previous survey in 1975-76.

\* The overall average number of birds reared per household was 7. The same was 6 during 1975-76.

2.6.4 Households Rearing Goats

The goat rearing households were distributed according to no. of goats reared and the same is presented below.

Table - 16.

Percentage distribution of goat rearing households.

Number of goats reared.							
1.	2.	3.	4.	5.	6.	7.	
1.	2.	3.	4.	5.	6.	7.	
24.4	25.4	15.9	9.5	5.9	4.3	2.5	
(Cumulative total)	(24.4)	(49.8)	(65.7)	(75.2)	(81.1)	(85.4)	(87.9)
8.	9.	10.	11 to 20	21 to 50	Above 50	Average no. of Goats per hh.	
8.	9.	10.	11.	12.	13.	14.	
2.6	1.6	1.6	4.5	1.6	0.2	4	
(Cumulative total)	(90.5)	(92.1)	(93.7)	(98.2)	(99.8)	(100.0)	

(Note:- Number of households observed-17581)

It will be seen that 75.2% households reared goats up-to 4 per household. The average number of goats per household was also four. The corresponding figure for 1976-77 survey was 5.

2.6.5 Households rearing Sheep:-

The number of households rearing sheep were 796. Out of these 81.2% were of stationary type. The sheep rearing households were classified according to number of rams heading the flocks. The distribution of the same is given in Table 17.

Table - 17

Number of rams heading the flocks.

No. of rams.	Percentage of flocks			Average no. of Ewes per ram per flock.			Average flock size.		
	Sta.	Mig.	Overall	Sta.	Mig.	Overall	Sta.	Mig.	Overall
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
0	31.3	42.0	33.3	-	-	-	15	37	21
1	46.3	32.0	43.6	22	33	23	29	42	30
2	6.8	13.3	8.1	20	25	22	47	65	52
3	3.7	8.0	4.5	13	15	14	53	58	55
4	4.5	2.7	4.2	12	18	12	62	96	63
5	3.9	2.0	3.5	11	15	11	71	97	74
6	2.5	-	2.0	6	-	6	51	-	51
7	0.3	-	0.2	7	-	7	72	-	72
8	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-
10	0.3	-	0.2	5	-	5	67	-	67
More than 10	0.4	-	0.4	6	-	6	102	-	102
Total	100.0	100.0	100.0	16	35	19	31	47	34
As per 1976-77 survey	-	-	-	23	30	24	28	48	30

It was observed that 33 p.c. of the flocks were having no rams and 44 p.c. of the flocks were having one ram. The average number of <sup>ewes</sup> per ram, works out to be 19, the same was higher for migratory flocks, where 35 ewes were headed by a ram.

The average flock size was observed to be 34, which was 47 for migratory and it was 31, for stationary flocks. The number of sheep reared, per 100 households for stationary and migratory type of flocks, is given below.

Table - 18

No. of sheep of each category observed per 100 flocks.

Type of flock	Percentage of flocks	No. of sheep per 100 flocks observed.			
		Rams	Ewes	Lambs	Total
Stationary	81.2	145	2341	607	3093
Migratory	18.8	103	3645	926	4674
Overall	100.0	137	2587	667	3391
As per 76-77 survey	-	94	2279	615	2988

(Note:- Number of flocks observed 796)

It was observed that the flock size was slightly increased from 30 sheep per flock in 1976-77 survey, to 34 sheep per flock during the current survey.

CHAPTER -III

Milk Production and bovine keeping practices.

3.1 Milk Production:

The estimate of milk production in a season was obtained as a continued product of (i) estimate of average milk yield per day per animal in milk (ii) estimate of number of animals in milk in the season, and (iii) number of days in the season. The annual production in the State is obtained, as a total of the three seasons estimates. The estimate for Greater Bombay was worked out, on the basis of data received, from the Dairy Development Commissioner, Bombay, since the Greater Bombay district was excluded from the scope of this survey. All these estimates are worked out separately, for cows and buffaloes.

3.1.1 (I) Estimated number of milch animals and animals in milk.

The 'Ratio method of estimation' was adopted, to estimate the number of animals in milk, separately for cows and buffaloes. The ratio was worked out, between the total number of animals in milk enumerated, and the corresponding total, as per 1972 census, in all the sampled village groups, in the district. This ratio was then multiplied by the total number of animals in milk, as per 1972 census, in the entire district

The estimates so obtained, for different seasons of each district, were suitably pooled in proportion to relative period of the season, to obtain an estimate for average number of animals in milk, in the year. An exactly similar procedure was adopted to obtain an estimate of the number of milch animals. These estimates of the number of milch animals and animals in milk, have been utilised to work out a few other results, which are presented in this chapter. The seasonwise estimated number of in milk and milch animals are given below.

22  
Table - 19

Seasonwise estimated number of in milk and milch animals.

Season	Estimated number of animals ( in lakhs)			
	In Milk		Milch	
	Cows	Buffaloes	Cows	Buffaloes
1.	2.	3.	4.	5.
Summer	16.46 (3.1)	8.91 (5.6)	41.87	16.84
Rainy	16.51 (4.0)	9.18 (4.2)	40.53	17.43
Winter	16.05 (3.6)	9.88 (5.5)	39.85	15.64
Overall	16.34 (2.1)	9.32 (2.9)	40.75	16.64
1978 census	18.49	12.14	41.14	18.38
Previous survey 1977-78	16.90 (2.1)	8.50 (4.0)	40.24	15.45

(Note:- The figures in brackets indicate percentage standard errors.)

It will be seen that, under all categories, the census figures were over estimates as compared with survey estimates.

There may be many reasons for this discrepancy between the census & survey estimates. One disadvantage

of the survey was the artificial nature of the primary sampling unit (census village), which makes it difficult to be identified, due to lapse of some period after the census is over. The 1978 census was conducted in December with reference date as 15.12.78. Hence, the census figures denote only the livestock number for winter season, whereas, the survey figures estimate livestock number for all the three seasons. This explains partly the difference in estimated number of in milk and milch animals particularly in buffaloes.

3.1.2. Number of animals in milk expressed as proportion of milch animals.

The estimates of the proportions of animals in milk to milch animals, in different seasons, based on the survey data, are given below.

Table-20

Percentage of animals in milk to milch animals.

Season	Cows	Buffaloes
Summer	39	53
Rainy	41	53
Winter	40	63
Overall	40	56
Previous survey (77-1978 census)	42	55
	45	63



It is seen from the table, that in respect of both cows and buffaloes, the census over estimates the percentage of animals in milk. Since, the reference date of 1978 census was 15 December 1978, the proportion of animals in milk refers, only to that part of the year. The survey estimates for Winter Season, are nearer to census estimates, particularly, in respect of buffaloes. The seasonal fluctuations, in proportion of number of animals in milk, are reflected in the survey estimates.

3.2 Average milk yield per day per animal in milk and per milch animal.

Estimates of average milk yield per day per animal milk and per milch animal, in respect of each season, both for cows and buffaloes separately have been presented below.

Table - 21

Average daily milk yield per animal in milk and per milch animal ( in kg.)

Season	Average milk yield per day (in kg.)			
	Cows		Buffaloes	
	In milk	Milch	In milk	Milch
1.	2.	3.	4.	5.
Summer	0.761 (3.0)	0.297	2.083 (6.6)	1.014
Rainy	0.783 (7.5)	0.302	2.144 (5.1)	0.913
Winter	0.961 (3.7)	0.392	2.408 (7.5)	1.390
Overall	0.833 (1.9)	0.330	2.217 (3.7)	1.095
Previous survey 1977-78	0.742 (4.3)	0.286	2.499 (5.6)	1.331

(Note:- Figures in brackets, indicate percentage standard errors).

The average milk yield is maximum in Winter Season and least in Summer Season, both for cows and buffaloes. It is also noted that the in milk buffalo yields more than twice, as much as in milk cow.

3.3 Milk Production.

The estimates of total milk production for the State (excluding Gr.Bombay), for each season and also for the entire year, have been worked out, for cows and buffaloes separately, and are shown in the table given below.

Table - 22Estimates of the annual milk production in Maharashtra.

Season	Milk Production in '000 tonnes		
	Cow Milk	Buffalo Milk	Total
1.	2.	3.	4.
Summer	152.75 (7.9)	226.47 (3.6)	379.22
Rainy	159.05 (5.4)	242.12 (4.9)	401.17
Winter	185.04 (5.2)	285.42 (6.1)	470.46
Total (except Gr.Bombay.	496.84 (3.5)	754.01 (2.9)	1250.85
Gr. Bombay	7.03	156.38	163.41
Total for the State during 1978-79	503.87	910.39	1414.26
Previous year 1977-78.	466.04	933.72	1399.76

(Note:- The figures in brackets indicate percentage standard errors.)

The annual milk production in the State, excluding Gr.Bombay was 1250.85 thousand tonnes, out of which about 40 p.c. was accounted for, by cow milk and the rest, by buffalo milk. The annual estimated milk production, including Gr. Bombay was, 1414.26 thousand metric tons. This included 35.6 percent of milk from cows and the remaining from buffaloes..

3.4.1 Distribution of animals according to daily milk yield.

(i) Cows:- During the year, 5277 cows were selected for milk recording, out of which 11% were zero yielders. Amongst these 11% cows, calf suckled the cow accidentally not give milk in case of 19% cows and in 81 p.c. cows, the calf suckled the milk regularly. The maximum percentage of zero yielders was observed, in Winter Season (11.5%).

(ii) She-buffaloes:- Out of 1968 she-buffaloes selected for milk recording, 0.8 p.c. were zero yielders. The maximum percentage of zero yielders was observed in Summer Season (1.1%).

The ratio of male to female calves, which were allowed to suckle the milk completely, was observed as 2:1 in cows and 1:2 in buffaloes.

The seasonwise distribution of animals according to milk yield are given in detail, in Appendix-5.

#### 3.4.2 Average milk yield according to stage of lactation.

From the data collected about stage of lactation and order of lactation, it was observed that, in case of cows, the daily average milk yield per day per animal in milk, was the highest in third month of calving and in case of buffaloes, the same was the highest in first fortnight of calving. The seasonwise details, regarding average milk yield according to stage of lactation, are given in Appendices 6 & 7.

#### 3.4.3 Average milk yield according to order of lactation.

The percentage distribution of animals in milk, according to their order of lactation and average daily milk yield per animal in milk, are given seasonwise in Appendices- 8 & 9.

Cows:- In case of cows in milk, it was observed that maximum (31%) of cows were observed to be in third lactation, followed by 26% in second lactation. The average number of lactations of the cows was observed to be 3.16.

Buffaloes :- It was observed that maximum i.e. 30% buffaloes were in III rd lactation followed by 24% & 23% in the II<sup>nd</sup> and IV<sup>th</sup> lactation. The average number of lactations per buffalo was observed to be 3.28

The percentage of animals beyond V<sup>th</sup> lactation was very small i.e. 3 p.c. in cows and 5 p.c. in buffaloes.

3.5.1 Availability of milk in bovine keeper households.

Data regarding availability of milk were collected from 6445 bovine keeper households. The details about production and purchase of milk are given below, for cow milk and buffalo milk separately.

Table - 23

Availability of milk in bovine keeper households (kg.)

Classification of households producing.	Milk Produced		Milk Purchased		Total Milk (produced + purchased)	
	Percentage of households.	Average quantity of milk per hhd.	Percentage of hhd.	Average quantity of milk per hhd.	Percentage	Average quantity of milk per hhd
1.	2.	3.	4.	5.	6.	7.
Only cow milk	66	1.066	68.2	0.301	66.7	0.911
Only Buff.milk	30	2.246	31.5	0.597	30.0	1.903
Both cow & Buff.milk	4	1.171	0.3	0.483	3.3	1.158
		2.123		0.533		2.094
Overall						
Cow milk	100	1.072	100	0.302	100	0.923
Buff.milk		2.231		0.596		1.922
Overall availability per bovine keeper hhd per day						
Cow -		0.460	--	0.031	--	0.491
Buff -		0.458	--	0.029	--	0.487
Total -		0.918	--	0.060	--	0.978
Previous survey (1974-75)		0.786	--	0.041	--	0.827

It was observed that a bovine keeper household produced 460 gm. of cow milk and 458 gm. of buff. milk and purchased 31 gm. cow milk and 29 gm. buffalo milk.

3.5.2 Utilisation of milk

The utilisation of cow and buffalo milk for various purposes per bovine keeper households was estimated and the same is given below.

..27..  
TABLE/ -24

Daily utilisation of cow and buffalo milk per bovine keeper household.

Classification of households having	Percent of milk			
	Consumed as fluid milk.	Sold as fluid milk	Converted in to milk products	Balance
1.	2.	3.	4.	5.
Only Cow milk	58	38	3	1
Only Buff.milk	33	56	8	3
Both Cow milk & Buff. milk	42 29	52 64	3 6	3 1
Overall Cow milk	45	48	5	2
Buff.milk	40	49	11	-
Previous Survey (1974-75)				
Cow	61	34	5	-
Buff.	26	60	14	-

The households, producing only cow milk, consumed 58% milk and sold 38% milk, where as those producing only buffalo milk, consumed 33% sold 56% of the milk. On an average, 52% of cow milk was utilised at home and 48% was sold out while 51% of buffalo milk was utilised and 49 p.c. was sold out. by milk producers' households.

3.5.3 Availability and utilisation of milk in non-bovine keeper households.

Data regarding availability of milk were collected from 3223 non-bovine keeper households. Of these households, 6% households were found to be not utilising milk at all. The details regarding availability of milk and its utilisation pattern, in non-bovine keeper households, are given below.

Availability and utilisation of milk in non-bovine keeper households.

Type of milk	Average quantity of milk purchased		Average quantity of milk produced	Percent of milk		
	Quantity Kg.	Average Rate per kg.(Rs.)		Converted into milk products.	Utilised as fluid milk	Kept in balance
1.	2.	3.	4.	5.	6.	7.
Cow Milk	0.124	2.03	-	-	99.00	1.00
Buff. Milk	0.190	2.11	-	0.35	96.70	2.95
Goat Milk	0.127	1.92	0.257	-	98.00	2.00
Total	0.441	-	0.257	-	-	-

A non bovine keeper household purchased 124 gms of cow milk @ Rs.2.03/Kg. and buffalo and goat milk 190 gms @ Rs.2.03/Kg. & 127 gms. @ Rs. 1.92/Kg. respectively. It was further observed that almost all milk is consumed at home as fluid milk in the non bovine keeper household.

3.7 Distribution of households according to quantity of milk produced :

From the data collected regarding production of milk in the households, the distribution of households, according to milk produced is presented in Appendix 10. It is seen that, in case of cow milk maximum percentage of households (i.e. 27%) fall within the range 0.501 kg. to 1.0 kg. and in case of buffalo milk the same fall within the range 1.501 kg. to 2,000 kg.

FEEDING PRACTICES

3.8.1

Data on feeds and fodders fed to the animals, were collected animalwise, from the selected households having bovines. The data were collected for the following types of animals, (i) in milk, (ii) dry and not calved even once, (iii) adult males and (iv) youngstock upto 3 years. The types of feed & fodder were (i) green fodder, (ii) dry fodder and (iii) concentrates.

During the year, the data were collected from 6445 households having 246,99 cattle and 4566 buffaloes. While collecting the data on feeding, information on whether the animals were only grazed or only fed at home or both, was also collected. The seasonwise details about the number of animals observed for feeding practices, are given below.

Table - 26

Number of animals observed for feeding practices.

Category of animals	Cattle				Buffaloe			
	Summer	Rainy	Winter	Total	Summer	Rainy	Winter	Total
1.	2.	3.	4.	5.	6.	7.	8.	9.
In milk	1548	1630	1672	4850	646	587	621	1854
Dry+Not calved even-ence.	1303	1557	1907	4767	462	528	375	1365
Working adult males	2716	3025	3518	9259	86	84	99	269
Youngstock upto 3 years	1504	1697	2622	5823	335	270	473	1078
Total	7071	7909	9719	24699	1529	1469	1568	4566

3.8.2 Distribution of animals according to only grazed, only stalled and both.

The details are given in Appendix-12.

It was observed that in respect of cattle, 89 p.c. of the animals were both grazed and stalled while about 5 p.c. were only stalled. More number of working males and young calves ( about 6 p.c. each) were only stalled as compared with other type of cattle.

In respect of buffaloes, 89 p.c. of the animals were both grazed and stalled. Maximum of 11 p.c. of calves and 8 p.c. of in milk buffaloes were only stalled.

3.8.3 Average quantity of feed/fodder fed per day per animal (in kg.)

The seasonwise details of average quantity of feed/fodder fed per day per animal, for different category of bovines, are presented below in Table 27.

Table - 27

Seasonwise average quantity of feed/fodder fed(Kg.)

Type of feed	Average feed fed per day per animal in kg.							
	Cattle				Buffaloe			
	In Milk	Dry + N.C.	Adult Males	Young stock	In Milk	Dry + N.C.	Adult Males	Young stock
1.	2.	3.	4.	5.	6.	7.	8.	9.
<u>Summer</u>								
Green	0.336	0.363	0.757	0.248	1.080	0.819	-	0.418
Dry	7.434	6.971	8.910	3.307	9.314	6.645	5.990	2.798
Concentrates	0.160	0.136	0.493	0.065	0.772	0.072	0.029	0.006
<u>Rainy</u>								
Green	7.155	5.463	6.132	3.596	10.758	8.708	5.176	3.979
Dry	2.572	2.183	2.601	1.572	2.806	3.307	1.235	1.687
Concentrates	0.092	0.005	0.066	0.005	0.397	0.061	0.047	0.015
<u>Winter</u>								
Green	2.306	1.581	2.176	0.768	6.546	3.304	1.857	2.276
Dry	6.249	5.200	6.414	2.555	6.321	6.577	7.102	2.085
Concentrates	0.134	0.023	0.041	0.001	0.837	0.118	0.093	-
<u>Overall</u>								
Green	3.301	2.560	3.016	1.485	5.988	4.565	3.418	2.159
Dry	5.393	4.723	5.896	2.461	6.264	5.333	4.926	2.224
Concentrates	0.125	0.048	0.176	0.021	0.680	0.079	0.058	0.011
<u>Results of previous survey (1974-75)</u>								
Green	2.765	1.375	2.671	0.989	4.008	2.088	2.888	2.161
Dry	5.296	3.944	5.491	2.323	7.633	5.025	4.241	2.686
Concentrates	0.163	0.009	0.096	0.012	0.611	0.044	0.053	0.091



It is seen that in cattle class, on an average maximum quantity of feed/fodder is fed to working males, followed by in milk cows. In buffalo class, maximum feed/fodder is fed to in milk she buffaloes followed by dry/<sup>not</sup>calved, she buffaloes. When compared with 1974-75 results, It was observed that in cattle class, the quantity fed per animal of green/dry fodder and concentrates increased practically in all classes. Similarly in buffaloes, the quantity fed per animal practically increased in all types of animals except the quantity of dry fodder fed to dry/not calved buffaloes and youngstock.

3.8.4 Distribution of animals according to type of feeding at home.

The data regarding only a particular type of feeding given in addition to grazing to different categories of animals at home, on the day of visit, are presented below.

Table - 28.

Distribution of animals fed with only one type of feed/fodder at home according the type of feeding.

<u>CATTLE</u>						
<u>Type of feeding</u>	<u>Percentage of animals fed to the total animals observed.</u>					
	<u>In Milk</u>	<u>Dry + N.C.</u>	<u>Working adult males</u>	<u>Young stock</u>	<u>Overall Results</u>	<u>of 1974-75 survey</u>
<u>1.</u>	<u>2.</u>	<u>3.</u>	<u>4.</u>	<u>5.</u>	<u>6.</u>	<u>7.</u>
<u>Summer</u>						
Only Green	1	1	2	1	1	-
Only Dry	87	91	74	94	84	81
Only Concentrates.	-	1	1	-	1	-
<u>Rainy</u>						
Only Green	55	57	55	64	57	32
Only Dry	26	28	29	27	28	19
Only Concentrates	-	-	-	-	-	-
<u>Winter</u>						
Only Green	16	16	18	22	18	19
Only Dry	65	75	71	75	72	43
Only Concentrates	-	-	-	-	-	-
<u>Overall</u>						
Only Green	24	25	25	30	26	16
Only Dry	59	64	59	65	61	50
Only Concentrates	-	1	-	-	1	-

<u>BUFFALOES</u>						
1.	2.	3.	4.	5.	6.	7.
<u>Summer</u>						
Only Green	1	3	-	9	3	-
Only Dry	47	85	98	87	50	70
Only Concentrates.	-	-	-	-	-	-
<u>Rainy</u>						
Only Green	42	51	73	62	51	31
Only Dry	18	24	23	34	25	13
Only Concentrates.	2	-	-	-	1	-
<u>Winter</u>						
Only Green	14	21	11	44	24	17
Only Dry	27	60	59	45	42	30
Only Concentrates.	-	-	-	-	-	-
<u>Overall</u>						
Only Green	18	26	25	38	26	14
Only Dry	31	56	63	55	46	42
Only Concentrates.	1	-	-	-	1	-

From the above table, it will be observed that in Summer Season, majority of animals were fed only dry fodder while in rainy season, nearly half of the animals were fed only green at home. The adult cattle males fed with only concentrates at home was found to be 1%. Similarly about 1 p.c. of in milk buffalo were fed with only concentrates.

### 3.9.1 Mortality:- Mortality according to category of animals

Data on mortality amongst cattle and buffalo, was collected during the survey pertaining to a period of 4 months, prior to the date of survey. On analysing the same, it was seen that the annual mortality percentage in cattle was 1.0% as against 1.9% during 1974-75 (previous survey) and in buffaloes, it was 3.1% against 4.4 p.c. (Table-29).

Table-29

Percentage of mortality in bovines

Category of animal	Annual mortality rate in	
	Cattle	Buffaloes
1.	2.	3.
1. In Milk	0.6	0.2
2. Dry and not calved even once	1.6	0.9
3. Adult males	0.8	N.A.
4. Young stock	1.2	10.3
5. Overall	1.0	3.1
6. Results of previous survey ( 1974-75).	1.9	4.4

3.9.2 Cases of Mortality :-

The table shows that maximum mortality was observed in buffalo calves ( 10.3.p.c.) while in cattle class the same was about 1 p.c. in all categories.

Deaths in animals are classified into 1) deaths due to mis-management which includes poor nutrition, negligence in treatment of sick ones or late treatment 2) deaths due to diseases-known and unknown. The contagious diseases may take heavy toll, if not protected well in advance, or animals may die due to some unknown diseases and 3) deaths due to accidents.

It is observed that 61 p.c. of total deaths in cattle caused due to diseases ( contagious or others), about 8 p.c. of deaths were due to accidents and 5 p.c. were due to unknown reasons.

In buffaloes, about 81 p.c. of deaths were due to diseases, 15 p.c. were due to accidents and 4 p.c. were due to unknown causes.

In comparison of the age of the animals at the time of deaths, it is observed during 1978-79 that the mortality in cattle young stock ( 1 p.c.) was much less than that in buffalo young stock ( 10.3%). The exact causes were unknown for 7.5% mortality in buffalo young stock while the remaining

2.8% mortality was due to tympanitis, calf scores, and accidents. The details of mortality are given in appendix 12.

3.10 Production and utilisation of dung.

Seasonwise data on production and utilisation of dung on the previous day of visit were collected in respect of the dung, that was dropped in stalls or at home. The details are given below in Table No. 30.

Table - 30.

Utilisation of the dung collected from bovines at stalls.

Season	Average quantity of dung collected per day (kg.)	Utilisation percentage of dung collected			
		For manure	For dung cake	For other purposes	Total
1.	2.	3.	4.	5.	6.
Summer	3.025 (9463)	75.1	21.6	3.3	100.0
Rainy	3.085 (5876)	97.1	1.9	1.0	100.0
Winter	3.358 (10202)	82.1	15.3	2.6	100.0
Overall	3.172 (25541)	82.9	14.6	2.5	100.0
Results of previous survey (1974-75)	2,994 (32830)	79.9	13.6	6.5	100.0

(Note:- Figures in brackets indicate no. of observations).

It is observed that the dung produced is mainly used as manure by the cultivators in rural areas.

From the above table, it will be seen that the average quantity of dung collected in stalls was 3.172 kg. per animal per day. The quantity of dung collected was the maximum in winter season and it was the minimum in summer.

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Regarding utilisation of dung, it will be seen that 82.9% was used as manure, 14.6% for dung cake and 2.5% for other purposes. The comparison with previous survey report (1974-75) shows that the average quantity of dung collected per bovine has increased slightly ( by about 6 p.c. as also its utilisation pattern has been **nearly** the same as that of previous survey.

....36.

Chapter - IV

Eggs production and poultry rearing practices.

4.1.1 Sample Size Observed:- For collection of data about eggs production and poultry rearing practices, a cluster of 5 households was observed daily, from the 356 villages having poultry, out of the total of 365 villages selected. The details about number of poultry keeper households and total poultry birds observed are given in table no.31 below.

Table- 31.

Number of villages and poultry birds observed.

Season	Number of villages having poultry observed	Number of poultry keeper households observed	Number of poultry birds observed.					
			Cocks	Hens	Cockrels	Pulls	Chicks	Total
1.	2.	3.	4.	5.	6.	7.	8.	9.
Summer	112	4262	1732	10176	2167	3327	8627	26029
Rainy	123	4252	1881	12898	1252	2062	11385	29478
Winter	121	4925	1640	11076	1979	3136	21202	39033
<b>Total</b>	<b>356</b>	<b>13,439</b>	<b>5253</b>	<b>34150</b>	<b>5398</b>	<b>8525</b>	<b>41214</b>	<b>94540</b>
Previous survey (1975-76)	394	11,349	4321	33655	5365	10212	32130	85685

During the year, data about eggs production were collected for 34150 layers, and data on breeding, feeding and other managerial practices followed, were collected in respect of all the 94540 poultry birds from 13,439 poultry keeper households.

4.1.2 Average number of poultry birds per 100 poultry keeper households.

The average number of poultry birds reared, per 100 poultry keeper households, on the day of visit, is presented in table no. 32.

Table - 32

Average number of poultry birds reared,  
per 100 poultry keeper households.

Season	Average number of birds per 100 poultry keeper households.					
	Cocks	Hens	Cock- -erels	Pullets	Chicks	Total
1.	2.	3.	4.	5.	6.	7.
Summer	41 (7)	238 (39)	51 (8)	78 (13)	202 (33)	610 (100)
Rainy	44 (6)	303 (44)	29 (4)	48 (7)	268 (39)	692 (100)
Winter	33 (4)	225 (29)	40 (5)	64 (8)	430 (54)	792 (100)
Overall	39 (5)	254 (36)	40 (6)	63 (9)	307 (44)	703 (100)
Previous survey (1975-76)	23 (4)	297 (51)	29 (5)	58 (10)	171 (30)	578 (100)

(Figures in brackets indicate percentages of birds to total poultry birds).

The average number of birds reared per 100 poultry keeper households was the minimum ( i.e. 610) during summer season, and maximum, (i.e. 792) during winter season. On an average \* these were 703 birds per 100 poultry keeper households, consisting of 39 cocks, 254 hens, 40 cockerels, 63 pullets and 307 chicks. As compared with previous survey of 1975-76, there seems to be increase in average poultry strength per poultry keeper household by 1.25 birds. This increase is mainly due to increase in number of chicks ( 1.36) per household. The overall composition of poultry stock reared per 100 poultry keeper households was observed to be 5 p.c. cocks, 36 p.c. hens, 6 p.c. cockerels, 9 p.c. pullets, and 44 p.c. chicks.

Egg Production4.2 Seasonwise estimated number of layers, laying percentage and total eggs production during the year.

The total eggs production from deshi birds in the State, during the year, was estimated on the basis of data collected in the survey and that from improved birds was estimated, from the data received from commercial poultry farms. The details are given below in table no. 33.

Table - 33

Seasonwise estimated number of layers, laying percentage and eggs production in 1978-79.

Season	Estimated number of layers (in lakhs)			Laying percentage		Total eggs production (in crores)		
	Deshi	Impro- -ved.	Total	Deshi	Impr- -oved	Deshi	Impro- -ved.	Total
1.	2.	3.	4.	5.	6.	7.	8.	9.
Summer	53.76 (9.07)	N.A.	53.76	30.13 (10.8)	N.A.	19.76 (8.9)	N.A.	19.76
Rainy	50.74 (6.7)	N.A.	50.74	30.65 (6.4)	N.A.	19.13 (5.6)	N.A.	19.13
Winter	54.29 (7.0)	N.A.	54.29	33.63 (9.9)	N.A.	21.91 (7.1)	N.A.	21.91
Overall Total	52.93 (4.4)	14.63	67.56	31.47 (5.2)	57.21	60.80 (1.4)	30.55	91.35
Previous survey (1977-78)	51.69 (4.7)	7.93	59.62	33.40 (2.7)	61.76	62.65 (2.3)	17.87	80.52

(Figures in brackets indicate percentage standard errors  
-N.A. - Not available)

The laying percentage was maximum in winter season (33.63) and minimum in summer season (30.13). The figures for improved birds were estimated from the data collected once in the year, from commercial poultry farms. Hence, seasonwise details for improved birds are not available. The total egg production in the year was 60.8 crores from deshi birds and 30.55 crores from improved birds, giving a total of 91.35 crores of eggs production during 1978-79.

#### 4.3.1 Hatching of eggs :-

The detail information regarding latest hatches taken by the households, during the year, prior to the visit of Survey Assistants was collected. The data on number of eggs set for hatching, method of hatching adopted, number of eggs set for hatching per hen and number of chicks produced, were obtained from the selected poultry keeper households. The results are given in table no. 34.



Table - 34

Distribution of households, according to number of hens used for brooding eggs, no. of eggs set for hatching and no. of chicks produced.

Sr. No.	Particulars	Number of hens used for breeding eggs					Overall Total	Previous survey 1975-76
		One	Two	Three	Four or more			
1.	2.	3.	4.	5.	6.	7.	8.	
1.	Percentage of households which have taken hatches:	91.62	6.79	1.35	0.24	100.00	-	
2.	Average number of eggs set for hatching per hen.	12	12	11	14	12	13	
3.	Average number of chicks produced by each hen.	9	9	9	10	9	9	
4.	Hatching percentage	75.15	75.19	76.87	75.23	75.21	70.76	

(Data on 68134 eggs set for hatching, from 4975 households were observed).

It was seen that hens were used for brooding eggs in all the households wherein hatches were taken. An average of 12 eggs were set for hatching per hen and the overall hatching percentage was 75.21.

4.3.2 Period of hatching and hatching percentage.

From the data collected about hatching of eggs, the monthwise details, regarding setting of eggs for hatching, are given in table no. 35.

Monthwise percentage distribution of number of eggs set for hatching and hatching percentage.

Sr No.	Month	Percentage of households where in the eggs were hatched	Percentage of eggs set for hatching.	Hatching percentage	Average number of hens used for brooding 100 eggs
1.	2.	3.	4.	5.	6.
1.	March	5.33	5.31	73.93	8
2.	April	2.68	2.63	74.96	8
3.	May	4.12	3.87	61.97	8
4.	June	6.99	6.67	75.02	8
Total for summer season		19.12	18.98	72.00	8
5.	July	7.57	6.79	74.53	9
6.	August	12.76	11.55	77.46	9
7.	September	9.46	10.06	70.00	8
8.	October	9.94	10.12	83.87	8
Total for Rainy season		39.73	38.52	76.68	8
9.	November	13.78	15.62	77.27	7
10.	December	11.20	12.78	72.76	8
11.	January	10.18	8.61	75.11	9
12.	February	5.99	5.99	75.70	8
Total for Winter Season		41.15	43.00	75.28	8
Overall		100.00	100.00	75.21	8
Previous Survey (1975-76)		-	-	70.76	8

The results revealed that, out of the total eggs hatched, maximum number of eggs, i.e. 15.62 percent eggs were set for hatching during the month of November. Further most of the eggs (60 p.c.) were set for hatching from August to /the per-December. It was further observed that/in the month of October. centage of hatch- The minimum number of eggs, i.e. 2.63 percent, were set for ing was hatching during the month of April, where as the lowest percen- the high- tage of hatching (61.97 percent) was observed during the est i.e. 83.87p.c. month of May.

4.4 Utilisation of eggs in poultry keeper's households.

From the poultry keeper households observed, data regarding procurement and disposal of eggs were also collected. The details are given in table nos.36,37, and 38.

.. 41 ..  
Table - 36

Percentage of poultry keeper households following different modes of procurement and disposal of eggs, on the previous day of visit.

Season	Percentage of poultry keeper's households to total poultry keeper households observed having.								
	Procurement of eggs				Disposal of eggs through				
	Produced of the previous day.	Purchased for Hatching	Table purpose	Consumption at home for Hatching	Table purpose	Sold for Hatching	Table purpose	Breakage and spoilage	Balance
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Summer (4262)	42.53	0.26	1.64	0.49	33.04	2.51	5.37	0.33	14.20
Rainy (4252)	50.61	0.49	1.39	0.49	24.91	0.31	7.20	0.09	25.12
Winter (4925)	54.13	0.28	0.85	0.75	25.67	0.20	9.93	0.02	34.03
Overall (13439)	49.34	0.34	1.27	0.59	27.76	0.97	7.62	0.14	24.12
Previous survey 75-76 (11349)	37.93	0.04	1.70	0.98	24.20	0.08	19.10	1.22	5.70

(Figures in bracket indicate total number of poultry keeper households observed).

.. 42 ..  
Table - 37

Average number of eggs procured and disposed through different modes (on the previous day of visit per 100 poultry keeper households.

Season	Average number of eggs per 100 poultry keeper households								
	Procurement of eggs through				Disposal of eggs through			Breakage and spoilage.	
	Production	Purchased for		Consumption at home for	Sale for		Rate per egg (Rs.)		
		Hatching purpose	Table purpose		Hatching	Table purpose			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Summer (4064)	80.74	1.45	2.93	5.00	48.45	4.25	9.27	0.40	0.35
Rainy (7464)	127.23	2.99	2.42	6.06	55.27	0.77	21.33	0.39	0.33
Winter (6301)	89.91	0.81	1.44	8.91	38.46	0.35	18.68	0.40	0.02
Overall (17829)	98.81	1.70	2.22	6.77	46.95	1.72	16.53	0.40	0.22
Previous survey 1975-76 (18636)	97	1	5	15	62	1	47	0.33	1

(Figures in brackets indicate total number of eggs procured and disposal thereof)....43

.. 43 ..  
Table - 3E

Percentage distribution of egg disposal according to various modes.

Season	Percentage distribution of eggs disposal						Total
	Consumption at home for		Sale for		Breakage and spoilage		
	Hatching	Table purpose	Hatching	Table purpose			
1.	2.	3.	4.	5.	6.	7.	
Summer	7.42	71.96	6.30	13.75	0.57	100.00	
Rainy	7.25	65.97	0.92	25.46	0.40	100.00	
Winter	13.42	57.89	0.52	28.13	0.04	100.00	
Overall	9.37	65.03	2.39	22.90	0.31	100.00	
Figures of last survey 75-76	11.76	48.92	0.78	37.18	1.36	100.00	

From table no. 36, it was observed that, the percentage of households producing eggs was maximum in winter season, i.e. 54.13 p.c. The percentage of households, which consumed eggs for table purpose and hatching was 28.35. Only 8.59 percent poultry keeper household sold eggs for hatching ( 0.97 percent) and for table purpose ( i.e.7.62 percent), Spoilage and breakage was observed in maximum number of households in summer season (i.e. 0.33 percent). The overall average number of households in which breakage or spoilage took place, was observed to be 0.14 percent..

From table no. 37, it was seen that the overall procurement of eggs through production and purchase was 98.81 and 3.92 respectively, in 100 poultry keeper's households. Similarly, the overall disposal of eggs through consumption at home and sale was 53.72 and 18.25 respectively. The breakage and spoilage of eggs observed was very meagre, i.e. 0.22 egg per 100 eggs. The average selling price of eggs was Rs. 0.40 per egg.

From table no. 38, it was observed that the disposal of eggs, through consumption at home and sale was 74.40 percent and 25.29 percent respectively. The overall breakage and spoilage observed was very meagre, i.e. 0.31 percent.

#### 4.5 Feeding Practices:-

It was common practice to feed the birds with grains and cereals twice in a day-once in the morning and once in the evening. The data on feeding were mainly collected for deshi birds only, and no households in the village used ready-made poultry feed. The table no. 41 depicts the different types of grains fed, either alone or with combination, in addition to what they might have consumed, from the surrounding space.

Table - 39

Households feeding different type of feed to poultry birds and quantity fed (gm).

Sr. No.	Name of feed	Percentage of households feeding the feed.	Percentage of birds fed with feed.	Average quantity fed per bird (gm)
1.	2.	3.	4.	5.
1.	Jowar	62.01	66.98	17
2.	Rice	8.27	5.84	19
3.	Bajra	5.25	5.85	18
4.	Jowar & Bajra (mixed)	3.55	3.54	20
5.	Mixture of grains and cereals	11.34	10.59	21
6.	Nachani	5.20	3.59	20
7.	Nagali	3.15	2.50	15
8.	Onion and other green vegetables.	0.67	0.58	18
9.	Rice bran/broken rice	0.53	0.51	22
10.	Maize	0.03	0.02	25
Overall		100.00	100.00	18
Figures of last survey 1975-76		-	-	17

From this table, it is observed that the major constituent of the feed, was Jowar, either alone or with combination, followed by Bajara and Rice. The overall average quantity of feed fed, per deshi bird per day, was 18 gms.

4.6 Mortality in Poultry :-

The details regarding deaths of birds occurred in the households due to various causes, during the last month of the visit are given in table no. 40 and 41.

Table -40

Percentage distribution of deaths in different categories of poultry birds according to various causes of deaths.

Sr No.	Category of birds	Percentage of deaths due to							Total	Annual mortality	Mortality in previous survey 75-76
		Diseases.	Physical-Mach-nical force	Anim-als.	Attack of Birds	Other reas-sons.					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.		
1.	Cocks (5253)	0.4	0.8	-	-	0.1	1.3	5.5	1.2		
2.	Hens (34150)	11.9	0.8	5.5	-	0.9	19.1	11.6	22.3		
3.	Cockerls (5398)	1.7	0.8	0.1	-	0.1	2.7	10.4	2.8		
4.	Pullets (8525)	1.2	0.6	0.1	0.1	0.2	2.2	5.4	3.8		
5.	Chicks (41214)	18.7	8.1	32.0	9.5	6.4	74.7	29.7	69.9		
Total (94540)		33.9	11.1	37.7	9.6	7.7	100.0	19.8	16.0		
Figures of previous survey 75-76 (85685)		35.5	11.1	37.7	7.9	7.8	100.0	16.00	-		

( Note: Figures in brackets indicate no. of birds observed)

It was observed that maximum deaths occurred due to attack of animals i.e. 37.7 p.c. followed by diseases, i.e. 33.9 p.c. The deaths due to physical or machnical forces such as excess of heat or cold, etc. and due to attack of birds for prey were 11.1 p.c. and 9.6 p.c. respectively. The remaining 7.7. p.c. deaths were due to other reasons. The annual mortality observed in poultry birds was 19.8 p.c.



Table - 41

Percentage distribution of birds died due to different diseases.

Sr. No.	Category of birds	Percentage of deaths due to						
		Ranikhet Pox	Fowl Pox	Diarrhoea	Worms	Undigged-nosed diseases.	Total	Figures of previous survey
1.	2.	3.	4.	5.	6.	7.	8.	9.
1	Cocks	0.1	0.3	-	0.1	0.8	1.3	1.0
2	Hens	4.1	4.0	1.6	-	25.4	35.1	30.5
3	Cockerels	-	0.5	0.4	-	4.0	4.9	4.1
4	Pullets	-	0.3	0.4	-	2.8	3.5	6.3
5	Chicks	6.8	2.7	10.7	-	35.0	55.2	58.1
Total		11.0	7.8	13.1	0.1	68.0	100.0	100.0
Figures of previous survey 1975-76		13.8	2.2	11.6	10.6	61.8	100.0	-

Amongst the birds which died due to disease, 11.0 p.c. died due to Ranikhet, 7.8 p.c. due to fowl pox, 13.1 p.c. due to diarrhoea and the remaining 68.1 p.c. died due to other undignosed diseases.

Chapter-VWool Production and Sheep rearing practices.

5.1 Sample Size Observed :- For studying wool production and sheep rearing practices, all the households rearing sheep in the selected villages, were observed. The details of sheep observed in these households are given in table no.42

Table -42Details of sheep observed.

Sr. No.	Season	No.of flocks	No.of sheep observed				Total
			Rams	Ewes	Lambs		
					Male	Female	
1.	2.	3.	4.	5.	6.	7.	8.
1.	Summer	130	196	3596	575	590	4957
2.	Rainy	99	162	2284	255	348	3049
3.	Winter	99	86	2909	-	8	3003
Total		328	444	8789	830	946	11009

A total of 328 flocks were observed in the selected villages which consisted of an average of 1.4 rams, 26.8 ewes and 5.4 lambs, per flock.

5.2 Number of sheep in stationary and migratory flocks.

Out of the total of 11009 sheep observed 8455 were from stationary flocks and the remaining 2554 sheep were from migratory ones. ( table no. 43 ).

Table - 43Number of sheep in Stationary and Migratory flocks.

Type of flocks.	Number of flocks	Number of sheep reared					Total	Percentage	Previous survey 1976-77
		Rams	Ewes	Lambs					
				Male	Female				
1.	2.	3.	4.	5.	6.	7.	8.	9.	
Stationary	268	373	6576	702	799	8455	76.8	87.0	
Migratory	60	66	2213	28	147	2554	23.2	13.0	
Total	328	444	8789	730	946	11009	100.0	100.0	

It was observed that 76.8 p.c. of the total sheep were

from stationary type of flocks and 23.2 percent were from migratory type of flocks.

5.3 Estimated number of sheep in the State.

Estimated number of sheep :- Out of the total sheep estimated, there were 1,31,279 (5.8 p.c) rams, 15,65,984 (69.1 p.c.) ewes and 5,67,804 (25.1 p.c.) lambs. The total estimated number of sheep was 22.65 lakhs as compared with 20.71 lakhs estimated in 1976-77 survey. As per 1978 census, the same was 26.14 lakhs.

5.4 Estimated wool production in the State

The number of sheep shorn per clip, average wool yield per sheep per clip and total wool production in the State are presented in table no.44 below.

Table - 44

Estimated number of sheep shorn, average wool production per sheep and total wool production in the State.

Season	Estimated number of sheep shorn ( in lakhs)			
	Rams	Ewes	Lambs	Total
1.	2.	3.	4.	5.
Summer	1.22(93.4)	15.29(97.6)	3.89(68.5)	20.40 (90.7)
Winter	1.31(100.)	15.51(99.0)	2.82(49.7)	19.64 (86.7)
Overall for the year	1.27(96.7)	15.39(98.3)	3.36(59.1)	20.02 (88.4)
Previous survey year 1977-78	1.18(69.4)	14.10(95.2)	3.06(73.6)	18.34 (88.7)

Season	Average wool yield per sheep (in kg.)				Total Wool Production ( in tonnes)			
	Rams	Ewes	Lambs	Over all	Rams	Ewes	Lambs	Total
1.	6.	7.	8.	9.	10.	11.	12.	13.
Summer	0.341	0.277	0.186	0.263	41.8	423.4	72.3	537.5
Winter	0.330	0.274	0.143	0.260	43.3	424.7	41.8	509.8
Overall for the year	0.671	0.551	0.334	0.523	85.1	848.1	114.1	1047.3
Previous survey year 77-78	0.666	0.529	0.323	0.504	78.8	748.9	95.2	922.9

(Note: Figures in brackets indicate percentage of sheep shorn).

The average wool yield worked out to be 671gms. per ram, 551 gms. per ewe, and it was 334 gms. per lamb. The total estimated wool production in the State worked out to be 1047-299 tonnes for the year 1978-79

5.5 Disposal of wool :-

It is a general practice to sell the wool produced on cash payment to the merchants who either collect the wool on the spot or at the local market. Nearly 97.61 p.c. of the wool produced was sold against cash payment, 0.2 p.c. was sold against repayment of loans and 1.9 p.c. was utilised at home for preparation of products. The details are given in table no. 45.

Table - 45

Disposal of Wool ( in percentage)

Type of flock	Cash pay- -ment	Repay -ment of loan	Repay -ment of adv- -ance	Used at home	Given as gift	Balance	Total
1.	2.	3.	4.	5.	6.	7.	8.
Stati- -onary	97.56	0.25	-	1.93	0.10	0.16	100.00

5.6 Mortality in Sheep:-

Data were collected about the sheep died during different seasons, of the survey period in the flocks studied. It was observed that amongst the total sheep died during the year, 10.1 p.c. died due to worms infections, 15.9 p.c. due to <sup>to</sup>Enterotoxaemia 22.1 p.c. due to Diarrhoea, 41.9 p.c. due to unrecognised diseases and 0.4 p.c due to attack of animals. The details of mortality in sheep is given in table 46, categorywise.

The mortality of sheep was observed to be 3.9% in rams, 2.3% in ewes and 23.6% in lambs and the overall mortality was 6.6%. The mortality of lambs was higher in migratory flocks (29.3%) as compared with stationary flock (22.4%).

Table - 46

Percentage mortality due to various reasons.

Deaths due to various reasons.	Stationary					Migratory					Total (Stationary + Migratory)				
	Rams	Ewes	Lambs	Tot- -al	% to total	Rams	Ewes	Lambs	Tot- -al	% to total	Rams	Ewes	Lambs	Tot- -al	% to total
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
Worm infec- -tion	-	91.67	8.33	100.00	13.19	-	100.00	-	100.00	2.63	-	92.31	7.69	100.00	10.08
Enterotoxae- -mia	9.76	65.85	24.39	100.00	74.62	-	-	-	-	-	9.76	65.85	24.39	100.00	15.89
Diarrhoea	5.88	44.12	50.00	100.00	18.68	4.35	17.39	78.26	100.00	30.26	5.26	33.33	61.40	100.00	22.09
Unknown disease	1.75	42.11	56.14	100.00	31.32	1.96	21.57	76.47	100.00	67.11	1.85	32.41	65.74	100.00	41.86
Attack of animals	-	-	100.00	100.00	0.55	-	-	-	-	-	-	-	100.00	100.00	0.39
Other reasons	-	-	100.00	100.00	13.74	-	-	-	-	-	-	-	100.00	100.00	9.69
Overall	3.85	48.35	47.80	100.00	-	2.63	22.37	75.0	100.00	-	3.49	40.70	55.81	100.00	-
Mortality percentage	3.7	2.6	22.4	6.9	-	5.7	1.5	29.3	5.6	-	3.9	2.3	23.6	6.6	-
Previous survey 76-77	5.76	8.20	19.22	10.71	-	5.04	1.82	7.98	2.96	-	5.68	7.36	18.20	9.77	-

5.7 Reduction in Sheep Population :-

The reduction in sheep was observed to be due to various reasons. The major reduction was due to deaths (51.2 p.c.) followed by sale for slaughter (39.1 p.c.). The details are given in table no.47.

In respect of stationary flocks, the reduction due to above reasons is practically of the same order ( 45 p.c.). However, in migratory flocks, the reduction is much higher ( 77 p.c.) as compared with that due to sale for slaughter ( 17 p.c.).

Table - 47

Percentage Reduction in sheep due to various reasons.

Sr. No.	Various reasons of disposal/sale	Stationary					Migratory					Total				
		Rams	Ewes	Lambs	Tot- -al	%to total dispo- -sal	Rams	Ewes	Lambs	Tot -al	%to total dispo- -sal	Rams	Ewes	Lambs	Tot- -al	%to total dispo- -sal
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1.	Sold to Butchers	7.6	67.7	24.5	100.0	67.6	10.5	73.7	15.8	100.0	53.3	7.8	68.3	23.9	100.0	66.0
2.	Sold for rearing purposes.	5.4	91.9	2.7	100.0	13.5	-	100.0	-	100.0	11.2	4.9	92.7	2.4	100.0	13.2
3.	Deaths due to various reasons	2.2	28.2	69.6	100.0	18.9	2.6	22.4	75.0	100.0	35.5	2.3	27.1	70.6	100.0	20.8
4.	Total disposal	6.2	63.5	30.3	100.0	100.0	6.5	58.4	35.1	100.0	100.0	6.3	62.9	30.8	100.0	100.0
5.	%to sheep observed.	54.5	31.9	66.5	39.0	-	42.4	11.3	54.6	16.8	-	52.7	26.7	64.6	33.9	-
		(378)	(6576)	(1501)	(8455)		(66)	(2213)	(275)	(2558)		(444)	(8789)	(776)	(11009)	
	Previous survey 1976-77	32.5	46.1	71.7	54.6	-	5.0	9.47	16.3	10.5	-	30.2	42.9	69.7	51.4	-
		(981)	(23967)	(8359)	(33295)		(119)	(3432)	(733)	(4284)		(1088)	(27399)	(9092)	(37579)	

(Note:- Figures in brackets indicate the number of sheep observed).

Goat milk production and goat rearing practices.

6.1 Sample Size Observed:- For working out the estimates of goat milk production and to study the goat rearing practices, data on goats were collected daily, from three households, in all the selected villages. The details of number of households rearing goats observed and number of goats observed are given in table no. 48.

Table - 48

Sample size observed for goats.

Sr. No.	Season	No. of households having goats.	Total number of goats observed				Total
			Bucks	Does	Male kids	Female kids	
1.	2.	3.	4.	5.	6.	7.	8.
1.	Summer	2811	387	6878	1690	2469	11694
2.	Rainy	2684	348	6945	1544	2275	11112
3.	Winter	3031	352	7023	1997	2661	12033
Total		8526	1087	20846	5501	7405	34839

Data about milk production and its utilisation, breeding, feeding and other managerial practices followed by the goat owners, were collected for 34,839 from 8,526 households. On an average there were 409 goats per households consisting of 13 bucks, 244 does, 65 male kids and 87 female kids.

6.2 Estimated number of goats in milk and milk production in the State.

The details of estimated number of goats ( milch and in milk ) and milk production in Maharashtra State are given in table no. 49.



Table - 49Estimated number of milch and in milk goats and goat milk production.

Season	Estimated number of		Perçen-	Average	Total milk
	Milch	In Milk	-tage	yield per	production
	goats	goats	of goa-	day per	for the sea-
			-ts in	goat in	-son (000M.T
			milk	milk (kg.)	)
1.	2.	3.	4.	5.	6.
Summer	40,76,769	21,38,567	52.46	0.164	42.928
Rainy	40,63,477	15,77,576	38.82	0.199	38.613
Winter	45,34,126	20,51,588	45.25	0.183	44.949
Overall	42,24,791	19,22,577	45.51	0.180	126.490
Previous survey 1977-78	39,44,813	16,25,566	41.21	0.206	122.17

The daily average milk yield per goat in milk, the year was estimated at 0.180 kg. It was observed to be the highest, viz. 0.199 kg. per goat in milk in rainy season and lowest viz. 0.154 kg in summer. The total estimated number of milch goats in the State were 42.25 lakhs. The number of milch goats as per livestock census- 1978 (December 1978) was 43.49 lakhs. Thus the estimated figures closely tally with census figures. The percentage of goats in milk was 45.5.

The estimated milk production from goats was 126.490 thousand metric tonnes during the year.

### 5.3 Mortality in goats

The details about mortality in different categories of goats due to various diseases and other reasons are given in table no. 50.

Table-50

Percentage mortality in different categories of goats, due to various diseases.

Sr. No.	Mortality due to	Percentage of goats died out of total deaths in				Total	Percentage to total deaths
		Adult goats		Kids			
		Male	Female	Male	Female		
1	2	3	4	5	6	7	8
1.	Indigestion	20	20	20	40	100	3
2.	Undiagnosed	2	60	23	15	100	23
3.	Diarrhoe	3	47	26	24	100	17
4.	Small-Pox	100	-	-	-	100	1
5.	Skin disease	5	85	5	5	100	10
6.	Swelling of Throat	20	40	20	20	100	3
7.	Worms	-	100	-	-	100	2
8.	Other diseases	4	37	25	33	100	37
9.	Other reasons (accidents, etc.)	-	89	11	-	100	4
Total deaths-		5	52	21	22	100	100
<u>Overall Mortality percentage</u>		9.0	5.7	8.6	6.7	6.5	-
Previous survey 1976-77		0.3	3.6	3.8	3.2	10.9	-

Out of total goats died, 5 percent were adult males, 52 percent adult females, 21 percent male kids and 22 percent female kids.

6.4 Reduction in number of goats due to various reasons: Out of the total reduction in number of goats during the year, 61 p.c. were sold for slaughter or for other purpose and 37 p.c. were died due to various diseases. The remaining reduction was due to deaths by various reasons. The details are given in Table 51.

Table-51

Percentage reduction in goats due to various reasons.

Various reasons of disposal/sale	Adult		Kids		Total	Percentage to total disposal
	Male	Female	Male	Female		
1	2	3	4	5	6	7
1. Sold for slaughter/ other purpose.	34.7	51.1	7.9	6.3	100.0	61.1
2. Deaths due to various diseases.	4.7	50.5	21.9	22.9	100.0	37.0
3. Deaths due to other reasons.	10.0	80.0	10.0	-	100.0	1.9
4. Percentage to total disposal.	23.1	51.5	13.1	12.3	100.0	100.0
Total goats observed	1087	20846	5501	7405	34839	

6.5 Estimated meat production in the State: On the basis of data collected from slaughter houses in the Districts, average meat produced per animal for different species was worked out. While estimating the number of animals slaughtered, the figures from Annual Administration Report 1978-79 were taken in to consideration in addition to those slaughtered in households and unrecognised slaughtered houses. The details about meat production are given in Table No.52.

Table-52

Estimated number of animals slaughtered average meat production and total meat production in the State during 1978-79.

Sr. No.	Species	Average meat production per animal (in Kg.)	Estimated no. of animals slaughtered (in Lakhs)	Total meat production (000 M.T.)
1	2	3	4	5
1.	Cattle	97.009	2.62	25.37
2.	Buffalo	124.602	1.57	19.56
3.	Sheep	9.890	19.68	19.47
4.	Goats	9.564	43.74	41.83
Total-		-	-	106.23
Previous year 1977-78		-	-	93.07

From the above table, it is seen that average meat produced per sheep is slightly higher than that of goat. Also, out of the total meat production 24 p.c. accounted from cattle, 18 p.c. each from buffalo & sheep and remaining 40 p.c. from goats.

6.6 Disposal of by-products of animals: The data on disposal of by products, such as heads, hoofs, etc. were collected alongwith the data regarding production of meat. The details about the average price realised per piece are given below in Table No.53.

Table-53

Average price of heads, hoofs and other parts of the animals.

Sr. No.	Category of animals	Average price per piece ( in Rs.)							
		Head	Hoof	Brain	Lung	Liver	Spleen	Blood	Intes-tine
1	2	3	4	5	6	7	8	9	10
1.	Cattle	6.22	2.79	1.65	1.55	4.58	-	-	11.88
2.	Buffalo	6.12	2.84	1.22	0.75	1.68	-	-	12.29
3.	Sheep	4.45	1.30	0.74	1.25	5.07	5.36	1.07	2.23
4.	Goat	3.95	1.72	0.82	0.96	6.39	7.13	0.50	3.59

It can be seen from the above table that a butcher on an average gets Rs.28.67 per cattle, Rs.24.90 per buffalo, Rs.21.47 per sheep and Rs.25.06 per goat, through the sale of different parts of the animals, in addition to the amount realised by sale of beef/mutton.

CHAPTER - VII

SUMMARY

7.1 The Integrated Survey Scheme was implemented by the Department of Animal Husbandry, Maharashtra State, for estimation of annual production of the four important livestock products, viz. milk, eggs, wool and meat and study of livestock keeping practices, followed in the State, during the year under report. The present report discusses the results of detailed statistical analysis of the data collected during this survey conducted in 1978-79.

7.2 Sampling design :

The sampling design adopted for the survey was a multistage stratified random sampling. The Greater Bombay district was excluded from the scope of the survey and five villages each from remaining 25 districts, were selected in every season. One enumerator was entrusted the survey work of five villages from each of the 25 districts.

7.3 Results :

1) The data were collected from 6445 bovine keeper households and a total of 29265 bovines were observed for bovine keeping practices and 6704 animals were observed for milk recording. For collecting data on egg production, 13,439 households having poultry were observed.

2) The average size of land holding for the households having only irrigated land was 1.71 hectares. It was 2.92 and 5.12 hectares for the households having only non-irrigated and both types of lands, respectively.

3) Out of the total households observed, 4 percent were having only irrigated land, 53.4 percent had only non-irrigated land, 14.2 percent had both types of land and remaining 28.4 percent households, were having no land.

4) The average number of households per village was 169.

5) About 24 percent of the total households observed, had no livestock or poultry, 60.0 percent households had bovine, while 31.8 percent households had <sup>+</sup> goats and only 1.3 percent households had sheep.

⊗ poultry, 28.7 percent households had goats

6) On an average, each bovine keeper household was observed to have about 4 cattle and one buffalo i.e. five bovines approximately.

7) During the year under report, the estimated number of cows in-milk was 16.34 lakhs and that of buffaloes was 9.32 lakhs. The percentage of animals in-milk was 40 percent in cows and 56 percent in buffaloes.

8) The estimated average daily milk yield per cow in-milk was 833 grams and per milch cow was 330 grams. The same figures for buffaloes were 2216 grams per buffalo in-milk and 1096 grams, per milch buffalo.

9) The annual estimated milk production in the State was 1414.26 thousand metric tons.

10) About 11 percent cows and one percent buffaloes yielded no milk, less than one kg. per day and 69.0 percent of in-milk buffaloes gave milk less than 2.5 kg. per day. <sup>> 0.5 percent of milk</sup>

11) The estimated average milk production per bovine keeper household was 918 grams (consisting of 460 grams of cow milk + 458 grams of buffalo milk). Of this, 45 percent of cow milk and 40 percent of buffalo milk was consumed as fluid milk. Forty-eight percent of cow milk and 49 percent of buffalo milk was sold as fluid milk and 5 percent of cow milk and 11 percent of buffalo milk was converted into milk products.

12) About 7 percent of cattle and 4 percent of buffaloes were maintained, on grazing only.

13) Amongst the animals which received some kind of feeding at home, the average quantity of feed/fodder fed per animal was observed to be 7.015 kg. dry fodder, 8.052 kg. green fodder and 1.991 kg. concentrates, in cattle class and 7.461 kg. dry fodder, 10.652 kg. green fodder and 1.765 kg. concentrates, in respect of buffalo class.

14) The annual mortality rate observed was 1.0 percent in cattle and 3.1 percent in buffaloes.

15) The average quantity of dung dropped in cattle shed was observed to be 3.172 kg. per bovine, per day.

16) In 11.1 percent of the villages, the facilities for veterinary aid was available within the village while about 40 percent villages had this facility within a distance of 5 kms. This facility was available at an average distance of 8 kms.

17) The market for sale and purchase of eggs and birds was available within the village, for 5.5 percent of villages and within distance of 5 kms. for 17.8 percent of the villages. This facility was available in general, at an average distance of 14.6 kms. for the selected villages.

18) About 5 percent of the households per village were having only poultry, and no other livestock.

19) Majority of the households (70 percent) reared layers upto 3 and total poultry upto 7.

20) The average number of layers reared per poultry keeper household, was found to be 3 and the average number of total poultry birds reared was found as 7.

21) The average number of different categories of poultry birds reared per 100 poultry keeper households, was observed as 39 (5%) Cocks, 254 (36%) Hens, 40 (6%) Cockerels, 63 (9%) Pullets and 307 (44%) Chicks, giving the total birds as 703.

22) During the year under report the estimated number of deshi and improved layers was 52.93 lakhs and 14.63 lakhs respectively with laying percentage as 31.47 percent and 57.21 percent.

23) The per day estimated eggs production was 16.66 lakhs from deshi poultry and it was 8.37 lakhs from improved poultry.

24) The estimated annual eggs production was 60.80 crores from deshi layers and 30.55 crores from improved layers giving an annual production of 91.35 crores.

25) The contribution of eggs from improved layers in total annual eggs production was 33 percent.

26) The average number of eggs produced per bird during the year was 115 for deshi layers and 209 for improved layers.

27) The overall average number of eggs set for hatching under a hen was 12, and the hatching percentage was 75.2.

28) Maximum number of eggs set for hatching were 15.6 percent in the month of November and the maximum hatching percentage (83.9) was observed in the month of October.

29) On the previous day of visit, eggs were produced in 49 percent of the households and in 28 percent households, eggs were consumed for table purpose. In 8 percent of the households, the eggs were sold for table purpose.

30) On an average, 100 households rearing poultry produced 99 eggs and purchased 4 eggs, per day.

31) As regards disposal of the eggs, the poultry rearing households used/sold, 9 percent eggs for hatching and 64 percent eggs for table. The breakage and spoilage was about 0.3 percent.

32) The rate of sale of eggs was 40 paise/egg.

33) Almost all the birds were observed to be supplemented by residual grains, in addition to what they consumed from the surroundings. The daily average quantity of grains fed per bird was, 18 grams.

34) The overall mortality in poultry birds was about 20 percent. The mortality was maximum in chicks i.e. 30 percent out of total chicks observed.

35) Out of the birds died highest i.e. 47 percent died due to attack of animals/birds of prey followed by 34 percent due to diseases.

36) The data on sheep rearing practices were collected from 328 flocks. In all 11,009 sheep were observed for detail study.

37) The overall flock size consisted of 1 ram, 27 ewes and about 6 lambs.

38) The average wool yield per sheep was 523 grams for the year. The estimated annual wool production for the state was 1047 Metric Tons.

39) The overall annual mortality in sheep was observed to be 6.6 percent.

40) The total number of goats observed for goat rearing practices were 34,839 from 8,526 households.

41) On an average, there were 409 goats per 100 households consisting of 13 bucks, 244 does and 152 kids.

42) The percentage of goats in-milk was 45.51. The estimated number of in-milk goats was 19.23 lakhs.

43) The average daily milk yield per goat in-milk was 180 grams. The estimated annual goat milk production was 126 thousand Metric Tons.



4 44)The overall mortality percentage in goats was 6.5 .

45)The average meat production per animal was estimated as 97.009 kgs. for cattle, 124.602 kgs. for buffalo, 9.890 kgs. for sheep and 9.564 kgs. for goat.

46)A total of 2.62 lakhs cattle, 1.37 lakhs buffaloes, 19.68 lakhs sheep and 43.74 lakhs goats were slaughtered in the state during the year.

47)The estimated annual meat production for the state was 106.23 thousand Metric Tons.

... 64 ...  
CHAPTER - VIII  
APPENDIX - 1

Average number of livestock & poultry reared per  
100 households according to size of irrigated  
land holding.

Sr. No.	Range (in hectares)	Percentage of households	Cattle			Buffaloes		Total	Poultry	Sheep	Goats	
			Males	Females	Young stock	Male	Female					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	Upto 0.2	9.91	40	30	23	4	64	42	203	294	23	183
2.	0.2 to 0.4	12.49	58	42	35	2	61	44	242	217	-	126
3.	0.4 to 0.6	11.89	99	32	30	4	78	37	280	306	9	207
4.	0.6 to 1.0	17.96	90	56	51	3	57	34	291	327	3	187
5.	1.0 to 2.0	21.43	110	92	79	2	54	41	378	315	15	199
6.	2.0 to 3.0	9.58	154	116	106	9	56	33	474	395	-	250
7.	3.0 to 4.0	7.28	196	117	91	6	56	39	505	369	17	217
8.	4.0 to 5.0	4.12	196	147	125	11	58	49	586	637	-	327
9.	5.0 to 6.0	1.86	211	235	183	17	98	83	827	733	276	278
10.	6.0 to 7.0	0.77	253	163	142	5	63	37	663	295	-	135
11.	7.0 to 8.0	0.89	259	218	164	-	73	32	746	386	-	341
12.	8.0 to 16.0	1.62	350	210	187	10	100	65	922	235	415	520
13.	Above 16.0	0.20	480	800	500	60	80	80	2000	380	-	420
Overall		100.00 (2473)	115	80	68	4	61	40	368	334	20	206
Households having no land.		28.38 (17405)	21	27	26	1	12	7	94	146	6	104

(Note:- Figures in brackets indicate number of households observed.)

APPENDIX-2

Average number of livestock and poultry reared per 100 households according to size of Un-irrigated land holding.

Sr No.	Range (hectares)	Percentage of households	Cattle			Buffaloe			Total	Poultry	Sheep	Goats
			Male	Femal	Young stock	Male	Femal	Young stock				
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	Upto 0.2	8.46	44	30	20	4	26	14	138	255	64	80
2.	0.2 to 0.4	7.09	40	33	29	3	27	15	147	229	91	86
3.	0.4 to 0.6	4.77	64	52	39	3	25	15	195	308	59	82
4.	0.6 to 1.0	13.53	63	49	37	3	26	15	193	241	53	81
5.	1.0 to 2.0	23.53	84	59	50	3	27	16	239	211	36	100
6.	2.0 to 3.0	10.22	83	82	69	3	29	17	283	267	59	128
7.	3.0 to 4.0	11.88	127	82	70	4	29	16	328	219	43	102
8.	4.0 to 5.0	4.34	149	103	91	5	33	20	401	269	72	148
9.	5.0 to 6.0	4.04	156	118	104	2	38	32	430	222	59	133
10.	6.0 to 7.0	2.34	174	129	121	5	46	24	499	252	41	145
11.	7.0 to 8.0	3.55	186	136	117	3	49	26	517	213	55	129
12.	8.0 to 16.0	5.04	264	192	173	5	59	40	733	275	52	199
13.	Above 16.0	1.21	366	272	247	7	110	75	1077	379	61	271
Overall		100.00	1037	766	653	32	321	192	2982	2411	532	1102
		(32752)										

(Note:- Figures in bracket indicates number of households observed.)

APPENDIX-3

Average number of livestock & poultry reared per 100 households according to size of both type (Irrigated + Unirrigated) of land holdings.

Sr. No.	Rang (in hectares)	Perc-centage of households	Cattle			Buffalo			Tot-al	Pou-ltry	She-Goats	
			Male	Fem	You- ng sto- ck.	Male	Fem	You- ng ine.				
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	Upto 0.2	1.95	44	28	19	9	86	39	225	157	-	52
2.	0.2 to 0.4	2.37	60	33	20	9	91	58	271	261	51	96
3.	0.4 to 0.6	2.66	54	28	21	8	91	47	249	234	10	71
4.	0.6 to 1.0	5.11	65	33	29	5	73	41	246	239	49	79
5.	1.0 to 2.0	17.57	97	56	47	2	58	34	294	245	49	97
6.	2.0 to 3.0	12.98	117	70	67	2	52	33	341	284	49	132
7.	3.0 to 4.0	13.73	138	93	83	3	45	28	390	280	98	128
8.	4.0 to 5.0	9.35	137	91	90	4	51	32	405	238	76	117
9.	5.0 to 6.0	7.75	149	98	92	2	45	30	416	307	93	125
10.	6.0 to 7.0	5.11	140	99	76	4	52	32	403	278	96	107
11.	7.0 to 8.0	4.78	189	149	130	4	68	39	579	333	85	145
12.	8.0 to 16.0	12.57	268	206	194	4	83	54	809	304	97	186
13.	Above 16.0	4.07	407	330	312	6	105	70	1230	321	211	230
Overall		100.00	149	103	94	4	62	38	450	273	76	127

( Note:- Figures in bracket indicates number of households observed.)

APPENDIX - 4

Average number of livestock and poultry reared per 100 households according to average size of land holding (overall).

Sr. No.	Rang (in hectares)	No. of House-holds	Cattle			Buffalo		Total Bovine	Poultry	Sheep	Goats	
			Malw	Fem	Youn	Male	Fem					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	Upto 0.2	7.25	44	30	20	4	33	17	148	253	57	87
2.	0.2 to 0.4	6.46	44	34	29	4	35	21	167	230	78	91
3.	0.4 to 0.6	4.75	66	47	35	4	40	21	213	300	80	98
4.	0.6 to 1.0	12.11	66	48	37	3	32	19	205	248	48	89
5.	1.0 to 2.0	22.23	88	60	52	3	33	20	256	222	51	105
6.	2.0 to 3.0	10.73	95	81	70	3	36	22	307	278	75	135
7.	3.0 to 4.0	11.99	132	86	74	4	33	19	343	238	73	112
8.	4.0 to 5.0	5.32	147	101	92	5	40	26	411	286	83	145
9.	5.0 to 6.0	4.65	155	114	102	3	42	32	448	262	75	134
10.	6.0 to 7.0	2.80	163	119	105	5	49	27	468	262	60	131
11.	7.0 to 8.0	3.65	188	140	121	3	55	30	537	247	62	136
12.	8.0 to 16.0	6.34	267	198	181	5	69	46	766	286	75	198
13.	Above 16.0	1.72	386	303	279	7	108	72	1155	352	130	253
Overall		100.00	113	82	71	4	39	24	333	253	59	118

Chapter - VII

APPENDIX - 5

Percentage distribution of animals in milk, according to milk yield in different seasons.

Range of yields kg.	Cows				Buffaloes			
	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
1.	2.	3.	4.	5.	6.	7.	8.	9.
0.	10.82	10.22	11.49	10.86	1.07	0.34	0.79	0.76
0.0-0.5	39.87	31.36	32.00	34.30	9.88	4.80	12.13	9.09
0.5-1.0	24.00	30.02	24.84	26.26	15.22	11.13	6.61	11.23
1.0-1.5	14.32	16.72	15.06	15.37	23.77	10.04	12.13	17.12
1.5-2.0	5.76	7.20	9.19	7.45	17.62	16.96	19.69	18.09
2.0-2.5	3.68	1.86	4.54	3.39	11.22	15.24	14.49	13.47
2.5-3.0	0.83	1.10	1.87	1.29	9.48	12.34	11.18	11.03
3.0-3.5	0.30	0.52	0.48	0.44	5.48	10.45	6.30	7.22
3.5-4.0	0.12	0.52	0.21	0.28	2.80	6.85	4.41	4.52
4.0-4.5	0.12	0.12	0.11	0.11	1.60	4.28	5.04	3.51
4.5-5.0	0.12	0.12	0.11	0.11	0.67	1.54	1.89	1.32
5.0-5.5	-	-	0.05	0.02	0.40	0.68	2.83	1.27
Above 5.5	0.06	0.24	0.05	0.11	0.79	0.85	2.50	1.37
Overall average per day in gms.	0.761	0.783	0.961	0.833	2.083	2.144	2.408	2.216
	(1683)	(1722)	(1872)	(5277)	(7491)	(584)	(635)	(1968)
As per 1974-75 survey	0.584	0.578	0.752	0.638	2.144	2.864	2.982	2.674
	(2807)	(1867)	(1884)	(6558)	(1015)	(635)	(711)	(2361)

(Note:- Figures in brackets indicate no. of observations).

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APPENDIX - 6

Percentage distribution of cows observed according to stage of lactation and their average milk yield, per day per cow in milk.

Sr. No.	Stage of lactation (in months)	Season				Overall
		Summer	Rainy	Winter		
1.	2.	3.	4.	5.	6.	
1.	Upto 1/2	4.99	0.70	1.39	2.31 (0.689)	
2.	1	1.66	1.98	1.66	1.76 (1.000)	
3.	2	5.17	6.62	3.95	5.21 (1.074)	
4.	3	11.46	12.48	7.80	10.50 (1.312)	
5.	4	14.08	14.08	11.91	13.34 (0.911)	
6.	5	15.09	12.08	12.50	13.19 (0.841)	
7.	6	16.70	14.28	18.58	16.58 (0.855)	
8.	7	10.10	11.03	10.89	10.69 (0.646)	
9.	8	5.82	9.58	10.79	8.81 (0.548)	
10.	9	2.79	5.17	5.62	4.57 (0.491)	
11.	10	2.79	4.00	5.46	4.13 (0.399)	
12.	11	2.62	2.03	2.67	2.45 (0.386)	
13.	12	3.33	4.24	4.75	4.13 (0.316)	
14.	Above 12	3.39	4.63	2.03	2.33 (0.289)	
No. of observations		1683	1722	1872	5277	

(Note:- Figures in brackets indicate average milk yield.)

...70/-

APPENDIX -7

Percentage distribution of buffaloes observed according to stage of lactation, and their average milk yield per day, per buffalo in milk.

Sr. No.	Stage of lactation (in months)	Season			Overall
		Summer	Rainy	Winter	
1.	2.	3.	4.	5.	6.
1.	Upto 72	1.07	0.35	1.52	1.32 (2.600)
2.	1	0.53	2.05	1.26	1.22 (2.333)
3.	2	2.67	4.96	6.93	4.73 (2.465)
4.	3	7.08	7.02	10.55	6.18 (2.261)
5.	4	15.09	11.98	16.38	14.58 (2.153)
6.	5	18.02	17.29	14.49	16.67 (2.024)
7.	6	21.09	16.95	10.87	16.56 (1.998)
8.	7	13.08	9.42	7.39	10.16 (1.770)
9.	8	8.42	8.23	6.93	7.83 (1.874)
10.	9	3.87	7.36	4.57	5.13 (2.200)
11.	10	3.34	4.45	4.25	3.95 (1.821)
12.	11	1.20	2.91	2.99	2.29 (1.500)
13.	12	2.80	4.12	7.08	4.57 (2.092)
14.	Above 12	1.74	2.91	4.73	3.05 (1.167)
No. of observations		749	584	635	1968

(Note:- Figures in brackets indicate average milk yield).



APPENDIX - 8

Percentage distribution of cows in milk according to order of lactation and average milk yield per day ( in kg.)

Sr. No.	Order of Lactation	Season			
		Summer	Rainy	Winter	Overall
1.	2.	3.	4.	5.	6.
1.	I	7.25	5.85	6.85	6.64 (0.677)
2.	II	17.11	32.48	29.05	26.36 (0.743)
3.	III	25.25	32.94	34.35	30.98 (0.756)
4.	IV	26.20	20.38	24.36	22.59 (0.807)
5.	V	18.00	6.38	6.36	10.08 (0.848)
6.	VI	4.22	4.33	1.28	2.24 (0.693)
7.	VII	0.95	0.58	0.59	0.70 (0.378)
8.	VIII	0.66	0.16	0.11	0.30 (0.547)
9.	Above VIII	0.36	-	-	0.14 (0.178)
No. of observations		4683	1722	1872	5277

(Note:- Figures in brackets indicate average milk yield).

A P P E N D I X - 9

Percentage distributies of buffaloes in milk according to their order of lactation and average milk yield per Buffaloe in milk (in Kg.)

Sr.No.	Order of lactation	S E A S O N			Overall
		Summer	Rainy	Winter	
1.	2.	3.	4.	5.	6.
1.	I	5.74	4.79	7.09	5.89 (1.677)
2.	II	27.23	22.60	22.84	24.44 (1.943)
3.	III	22.43	40.75	30.08	30.34 (2.041)
4.	IV	24.70	20.21	22.84	22.76 (2.039)
5.	V	12.42	7.88	12.76	11.18 (2.132)
6.	VI	5.34	2.23	2.52	3.51 (2.344)
7.	VII	1.07	0.86	1.42	1.12 (2.170)
8.	VIII	0.67	0.68	.15	0.51 (1.750)
9.	Above VIII	0.40	-	0.30	0.25 (1.250)
		749	584	635	1968

(NOTE: Figures in brackets indicate average milk yield)

A P P E N D I X -10

Distribution of households according to a range of daily produced (in kg.)

Sr. No.	Range of milk Produced (kg.)	Percentage of households producing			
		Cow milk	Buffalo milk	Cow & Buffalo milk	Overall
1.	2.	3.	4.	5.	6.
1.	Upto 0.250	13.31	1.56	-	9.21
2.	0.250 to 0.500	21.96	5.15	1.28	16.11
3.	0.500 to 1.000	26.74	13.80	4.52	22.00
4.	1.000 to 1.500	19.28	18.13	5.81	18.40
5.	1.500 to 2.000	8.45	18.95	12.90	11.80
6.	2.000 to 4.000	8.53	33.12	49.68	17.50
7.	4.000 to 8.000	1.48	9.11	20.00	3.30
8.	above 8.000	0.25	0.18	5.81	1.68
<b>Total</b>		100.00 (2427)	100.00 (1087)	100.00 (155)	100.00 (3669)

(NOTE :+ Figures in brackets indicate number of households observed.)

A P P E N D I X -11

Distribution of households according to type and average number of bovine reared per household:

Sr. No.	Type of household	Percentage of households	C A T T L E					S H E E P + G O E S					Total Buffalo	Total Bovine	
			In milk	Dry	Not cal- -ved even once	Adult male	Young stock	Total Cattle	In milk	Dry	Not Calved even once	Adu- lt ma- les.			Young stock
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1.	Private Cultivator	63	0.55	0.77	0.04	1.53	1.07	3.96	0.12	1.14	0.01	0.04	0.11	0.42	4.38
2.	Commercial Cultivator	22	0.92	0.66	0.05	1.39	1.13	4.15	0.70	0.27	0.03	0.06	0.47	1.53	5.68
3.	Private Non cultivator	4	0.46	0.52	0.05	0.68	0.78	2.49	0.13	0.15	0.03	0.23	0.12	0.66	3.15
4.	Commercial Non-Cultivator	2	0.71	0.50	0.02	0.39	0.75	2.37	0.40	0.19	-	-	0.30	0.89	3.26
5.	Private labourer	7	0.56	0.40	0.02	0.71	0.81	2.50	0.11	0.17	0.01	0.02	0.05	0.36	2.86
6.	Commercial labourer	2	0.45	0.44	0.04	0.53	1.08	2.54	0.38	0.14	0.01	-	0.21	0.74	3.28
Overall :-		100	0.63	0.70	0.04	1.36	1.04	3.77	0.26	0.17	0.01	0.05	0.19	0.68	4.45

A P P E N D I X - 1 2

Percentage distribution of animals according to general feeding practices followed as only grazed (G) only stall fed (S) or both (G + S).

Categor of Animals	S U M M E R			R A I N Y			W I N T E R			O V E R A L L		
	G	S	G+S	G	S	G+S	G	S	G+S	G	S	G+S
1.	2.	3.	4.	5.	6.	7.	9.	10.	11.	12.	13.	
<u>C A T T L E</u>												
In milk	4.65	6.07	89.28	4.54	0.12	95.34	5.72	0.66	95.62	4.27	2.21	93.52
Dry & N.C.	7.44	4.53	88.03	8.29	0.06	91.65	8.40	0.05	91.55	9.27	1.28	89.45
Adult Males	1.00	18.92	80.08	7.11	-	92.89	6.49	2.07	91.44	5.09	6.34	88.57
Young Stock up to 3 years.	18.15	11.70	70.15	6.78	5.42	87.80	12.07	4.15	84.78	11.66	6.47	81.87
Overall	6.63	11.92	81.45	6.74	1.20	92.06	7.63	2.00	90.37	7.28	4.58	88.14
<u>B U F F A L O E S</u>												
In Milk	0.93	15.48	83.59	1.19	-	98.81	1.77	8.65	89.58	1.40	8.31	90.29
Dry & Not calved even once	4.76	7.14	88.10	3.60	-	96.40	4.89	2.45	92.66	4.32	3.08	92.60
Adult Males	7.29	-	92.71	16.67	-	83.33	10.21	9.18	80.61	11.52	3.35	85.13
Young Stock up to 3 years	9.85	7.76	82.39	2.96	12.59	84.45	4.97	14.04	80.99	5.94	11.60	82.46
Overall	4.42	10.33	85.25	3.27	2.31	94.42	3.99	8.82	87.19	3.94	7.23	88.83

( G - Grazed, S- Stall fed )

A P P E N D I X- 13.

Seasonwise percentage distribution of bovines according to different places of grazing.  
Grazing house and quality of grazing land.

Season	Places of grazing					Average of grazing hours perday	Quality of grazing land			Charges paid for grazing land annual in Rs.	Charges paid for grasing the animal (Monthly) in Rs.
	Unculti- vated lands	Fedds	Forest	Road Sides	Other places		Good	Medi- mum	Low		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Summer	30.56	40.70	11.50 (1705)	9.38	7.86	7.40 (1311)	12.17	59.75 (805)	28.08	25.00 (1)	11.96 (181)
Rainy	47.50	23.30	6.20 (1322)	3.78	19.22	6.85 (1871)	24.75	66.79 (792)	8.46	-	34.35 (37)
Winter	40.68	38.64	-	9.82 (2109)	10.86	-	4.62	73.95 (975)	21.43	23.83 (6)	9.46 (646)
OVERALL	39.08	35.38	5.41 (5136)	8.12	12.01	7.07 (3182)	13.18	67.30 (2572)	19.52	24.00 (7)	11.29 (1164)

NOTE:!-- Figures in brackets indicate no. of observations.

## A P P E N D I X - 14.

Distribution of animals fed with a feed/fodder either alone or in combination with other type of feed/fodder and average a quantity fed per animal per day (in kg) for the animals which received some feeding.

Sr. No.	Category	Type of feeding	Percentage of animals fed to the total animals fed with any of the fed/fodder.					Average quantity fed per animal per day (in kg)				
			In milk	Dry + N.C.	Working adult males	Young stock	Overall	In Milk	Dry+N.C.	Working adult males	Young stock	Overall
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	CATTLE	Dry fodder	73.5	74.8	74.0	70.1	73.2	7.664	6.955	8.390	3.975	7.015
		Green Fodder	36.2	35.3	34.9	34.4	35.1	9.507	8.002	9.111	4.880	8.052
		Concentrate	8.2	2.1	8.8	1.0	5.7	1.600	2.487	0.251	2.265	1.991
2.	BUFFALOES	Dry Fodder	71.0	71.6	78.2	60.5	69.1	8.954	7.786	7.124	3.911	7.461
		Green Fodder	46.7	42.5	29.0	44.7	44.0	13.000	11.207	13.325	5.138	10.652
		Concentrates	38.5	4.0	9.7	0.6	18.0	1.791	1.859	0.678	1.976	1.765

## APPENDIX - 15

Percentage distribution of animals according the method adopted for pregnancy.

Type of Household	Pregnancy in			Calving Percentage in					
	Cows			Buffaloes					
	A.I	N.S.	TOTAL	A.I.	N.S.	TOTAL			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Private Cultivator	4.47	51.05	55.52	2.87	34.41	37.28	42.76	26.07	
Commercial Cultivator	8.66	22.21	30.87	3.94	43.55	47.49	57.27	25.53	
Private Non-Cultivator	0.22	3.24	3.46	0.36	1.79	2.15	50.46	19.67	
Commercialcultivator	0.92	2.44	3.36	0.54	2.15	2.69	71.62	20.83	
Private labourer	0.19	4.95	5.14	4.66	2.33	6.99	51.92	44.83	
Commercial labourer	0.25	1.40	1.65	2.32	1.08	3.40	59.77	37.25	
OVERALL	14.71	85.29	100.00 (3152)	14.69	85.31	100.00 (568)	48.09	26.45	

NOTE:- Figures in brackets indicate number of observation.



APPENDIX-16 :- Statement showing diseasewise & agewise mortality percentage in Bovine

Name of Disease	C A T T L E								B U F F A L O							
	Upto 1 month	1 to 3 months	3 months to 1 yr.	1 year to 3yrs.	3to5 years	5to10 years	More than 10yrs.	Total	Upto 1 month	1to3 months	3months to 1yr.	1Year to 3yr.	3to5 yrs.	5to10 years	More than 10yrs.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
F.M.D.	-	-	6.25	-	-	-	-	6.25	-	-	-	-	-	-	-	-
H.S.	3.75	-	-	1.25	2.50	-	-	7.25	-	-	-	-	2.2	-	-	2.2
Diarrhoea	1.25	1.25	1.25	1.25	-	-	-	5.00	-	4-3-	-	-	-	-	-	4-3
Tympany	-	-	-	-	1.25	-	-	1.25	-	-	2.2	2.2	-	-	-	4-4
B.C.	-	-	-	-	-	-	1.25	1.25	-	-	-	-	-	2.2	-	2.2
R.P.	-	-	-	-	-	-	1.25	1.25	-	-	-	-	-	-	-	-
Pox.	-	-	-	-	-	-	1.25	1.25	-	-	-	-	-	-	-	-
Rabies	-	-	-	1.25	-	-	-	1.25	-	-	-	-	-	-	-	-
Other Diseases	3.75	-	5.00	3.75	6.25	12.50	5.00	36.25	23.9	23.9	15.2	2.2	2.2	-	-	67.4
Deaths due to diseases	8.75	1.25	13.75	7.50	10.00	12.50	7.50	61.25	23.9	28.2	17.4	4.4	4.4	2.2	-	80.5
Deaths due to oldage	-	-	-	-	-	-	26.25	26.25	-	-	-	-	-	-	-	-
Deaths due to accident	-	-	-	-	1.25	6.25	-	7.50	2.2	10.9	-	-	-	2.2	-	15.2
Deaths due to other reasons	-	-	-	-	3.75	1.75	-	5.00	-	-	2.2	-	2.2	-	-	4.4
TOTAL deaths	8.75	1.25	13.75	7.50	15.00	20.00	33.75	100.0	26.1	39.1	19.6	4.4	6.6	4.4	-	100.0

NOTE : Totals of rows and columns may or may not add. to 100 due to rounding.