



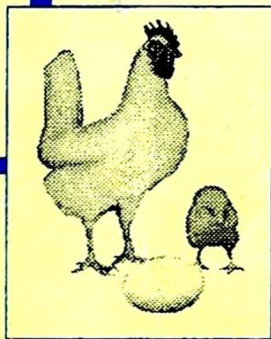
GOVERNMENT OF MAHARASHTRA DEPARTMENT OF ANIMAL HUSBANDRY INTEGRATED SAMPLE SURVEY SCHEME

Report on Estimation of Milk, Egg, Wool, Meat Production and Livestock & Poultry Keeping Practices In Maharashtra State For the Year

2012 - 2013



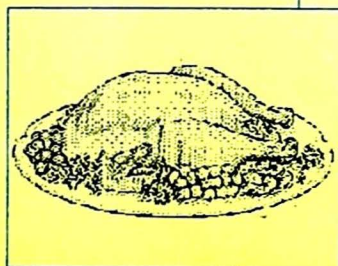
MILK



EGG



WOOL



MEAT

S



Integrated Survey Scheme,
Report On

Milk, Egg, Wool, Meat Production And
Livestock & Poultry Keeping Practices In
Maharashtra State For the Year

2012-13

Department of Animal Husbandry, Maharashtra State, Pune-411007.

PREFACE

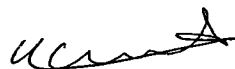
Livestock plays an important and supplemental role to the development of agrarian rural economy of the State. It has been an established fact that, flow of income to the owners through livestock production is continuous throughout the year irrespective of season. Animal Husbandry and the livestock production is thus, playing a vital role in the sustainable economic up-liftment of the rural masses. With this in mind, Animal Husbandry Department is framing and implementing policies for genetic up gradation of the livestock for insuring the desired growth in livestock production in Maharashtra State. In order to assess the impact of these programs and policies ; there is obviously, a need to have estimates of production of Major Livestock Products such as Milk, Eggs, Meat and Wool with an objective interpretation and well within the scheduled time frame. To meet this need, the Integrated Sample Survey scheme for estimation of these major livestock products is being implemented in Maharashtra State from the year 1970 -71.

The present Forty-Three annual report exhibits the data collected during the year 2012-13. Analysis of this data furnishes an elaborative and fundamental information about the livestock, livestock products, feeding and management practices , utilization pattern of the livestock products etc. in the state.

This study is a part of the pre-investment survey which is proposed to be continued in future. It aims to assure an objective appraisal of physical, financial and managerial resources available in Animal Husbandry sector which would enable us in making a systematic planning for enhancing livestock production (*i.e.* Production of Milk, Eggs, Meat, and Wool) both in quantitative and qualitative terms.

I sincerely thank the farmers of the State for their cooperation in providing necessary information to the field staff.

I congratulate the office staff and field staff of Integrated sample survey scheme for their sincere endeavor in preparing the present report under the able guidance of Deputy Director (Statistics) in commissionerate of Animal Husbandry.



Commissioner,
Animal Husbandry, Maharashtra State,
Pune.

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1. MAHARASHTRA AT A GLANCE

Sr. No.	Item	Unit	Particulars
1.	Population (2011)	'000'	112373
	Male	'000'	58361
	Female	'000'	54012
	Rural	'000'	61545
	Urban	'000'	50828
2.	Total Villages	Number	43711
	Inhabited	Number	41095
	Uninhabited	Number	2616
3.	Total Cities and Towns	Number	535
4.	Total Districts	Number	35
5.	Total Tahsils	Number	355
6.	Zilla Parishads	Number	33
7.	Panchayat Samitis	Number	351
8.	Municipal Corporations	Number	23
9.	Municipal Councils	Number	221
10.	Nagar Panchayat	Number	5
11.	Cantonment Boards	Number	07
12.	Grampanchayats(2008-09)	Number	27906
13.	Geographical Area	Thousand Sq. Km.	308
14.	Net sown area-(2008-09)	Thousand hecter	17,401
15.	Gross cropped-area-(2008-09)	Thousand hecter	22,612
16.	Gross Irrigated-area-(2008-09)	Thousand hecter	4050
17.	Forest area-(2010-11)	Sq.Km	61939
18.	Area under Fodder-(2000-01)	'00' hecter	5100
19.	Area under Pasture and Grazing land -(2006-07)	'000' hecter	1252
20.	No. of operational holdings-(2009-10)*	'000'No.	13716
21.	Area of operational holdings-(2009-10)*	'000' hecter	20005
22.	Average size of operational holdings(2009-10)*	hecter	1.46
23.	Length of Coastline	Km.	720
24.	State Income at current prices (2010-11)*	Crore Rs.	982452
25.	Percapita Income at current prices (2010-11)*	Rs	87686
26.	Gross State Domestic Products (GSDP) at current prices (2010-11)	Crore Rs	1068327
27.	National Domestic products (GDP) at current prices (2010-11)	Crore Rs	7078512
28.	Gross value of livestock products at current prices (2011-12)	Crore Rs	39146.02

Sr. No.	Item	Unit	Particulars
29.	Total Livestock (2007)	'000'	35955
30.	Cows in Milk (2007)	'000'	3099
31.	Buffaloes in Milk (2007)	'000'	2307
32.	Total Cattle (2007)	'000'	16184
33.	Total Buffaloes (2007)	'000'	6073
34.	Total Sheep(2007)	'000'	2909
35.	Total Goats (2007)	'000'	10391
36.	Total Poultry- Deshi(2007)	'000'	20011
37.	Poultry-Improved(2007)	'000'	44745

* Provisional

Important achievement (2011-12)			
a.	Artificial Insemination (Total)	Unit	Particulars
	Exotic	'000'	301
	Cross-breed	'000'	859
	ND/ Indigenous	'000'	170
	Buffalo	'000'	610
	Total	'000'	1940
b.	Calves born		
	Cross-breed	'000'	399
	ND/ Indigenous	'000'	59
	Buffalo	'000'	203
	Total	'000'	661
c.	Treatment	'000'	12784
d.	Castrations	'000'	850
e.	Operations Minor	'000'	784
	Major	'000'	36
f.	Vaccinations	'000'	50690

2. RESULTS AT A GLANCE

Some salient results at a glance from the survey on production of Milk, Eggs, Meat and Wool and study of livestock and poultry keeping practices in Maharashtra State during the year 2012-13.

Sr. No.	Item	Unit	Particular
I	GENERAL		
1	Size of samples observed		
	(i) Districts observed	Number	35
	(ii) Villages observed	Number	624
2	Characteristics of villages		
	(i) Having Bovine	%	100
	(ii) Having Poultry	%	89.44
	(iii) Having Sheep	%	7.53
	(iv) Having Goats	%	94.91
	(v) Average number of house holds per village	Number	216
3	Households rearing		
	(i) Bovine	%	99.8
	(ii) Poultry	%	33.3
	(iii) Sheep	%	0.1
	(iv) Goats	%	29.3
	(v) Households rearing No livestock and poultry	%	25.9
4	Availability of facility for Veterinary Aid		
	(i) Within village	%	23.9
	(ii) Upto 5 Kms.	%	63.4
	(iii) Average distance for veterinary Aid	Kms.	4.7
II	MILK PRODUCTION AND BOVINE KEEPING PRACTICES		
1	Size of sample observed		
	(i) Bovine keeper house-holds	Number	14459
	(ii) Bovine observed for detailed study	Number	78615
	(iii) In milk animals for milk recording		
	(a) Cows		
	(i) Indigenous	Number	5179
	(ii) Crossbred	Number	2524
	(b) Buffaloes	Number	5286
2	Estimated number of in milk animals		
	(i) Cows in-milk		
	(a) Indigenous	Lakhs	19.98
	(b) Cross breed	Lakhs	13.58
	(c) Total	Lakhs	33.56
	(ii) Buffaloes in-milk		
		Lakhs	24.48
	(iii) Goats in-milk		
		Lakhs	35.84

Sr. No.	Item	Unit	Particular
3	Average daily Milk yield per animal Inmilk		
	(i) Cows		
	(a) Indigenous	Kg.	1.801
	(b) Crossbred	Kg.	6.891
	(c) Overall	Kg.	4.346
	(ii) Buffaloes	Kg.	4.144
	(iii) Goats	Kg.	0.232
4	Estimated annual milk Production		
	(i) Cows milk		
	(a) Indigenous	Lakh Kg.	13129.49
	(b) Crossbred	Lakh Kg.	34157.03
	(ii) Buffaloes milk	Lakh Kg.	37020.97
	(iii) Goats milk	Lakh Kg.	3037.37
	(iv) Total	Lakh Kg.	87344.86
5	Per capita per day availability of milk	Gms.	210
6	Average quantity of feed/ fodder fed per day per animal		
	(a) Cattle		
	I) Indigenous		
	(i) Green	Kg.	5.001
	(ii) Dry	Kg.	5.045
	(iii) Concentrate	Kg.	0.741
	Crossbreed		
	(i) Green	Kg.	6.009
	(ii) Dry	Kg.	6.112
	(iii) Concentrate	Kg.	0.937
	(b) Buffaloes		
	(i) Green	Kg.	5.237
	(ii) Dry	Kg.	6.958
	(iii) Concentrate	Kg.	1.318
7	Average quantity of dung collected in cattle shed per bovine per day	Kg.	4.668
8	Estimated annual quantity of dung collected	"000" MT	38132
III	EGG PRODUCTION AND POULTRY KEEPING PRACTICES		
1	Size of sample observed		
	(i) Total poultry keeper house holds	Number	24473
	(ii) Total Poultry birds		
	(a) Cocks	Number	18654
	(b) Hen	Number	73314
	(c) Cockerels	Number	19319
	(d) Pullets	Number	21476
	(e) Chicks	Number	32592
	(f) Total	Number	165354

Sr. No.	Item	Unit	Particular
2	Estimated number of layers		
	(a) Deshi	Lakhs	80.52
	(b) Improved	Lakhs	131.08
	(c) Total	Lakhs	211.60
3	Average number of eggs laid per layer per year		
	(a) Deshi	Number	121
	(b) Improved	Number	274
4	Estimated annual eggs production		
	(a) Deshi	Lakhs	9743
	(b) Improved	Lakhs	35918
	(c) Total	Lakhs	45661
5	Per capita per annum availability of eggs	Number	40
6	Average number of poultry birds per 100 poultry keepers		
	(a) Cocks	Number	76
	(b) Hen	Number	300
	(c) Cockerels	Number	79
	(d) Pullets	Number	88
	(e) Chicks	Number	133
	(f) Total	Number	676
7	Average feed supplied per bird per day	Gm.	31
IV	WOOL PRODUCTION AND SHEEP REARING PRACTICES		
1	Size of sample observed		
	(a) Number of flocks	Number	269
	(b) Number of sheep	Number	26828
2	Estimated number of sheep		
	(i) Rams/Wethers	Lakhs	3.16
	(ii) Ewes	Lakhs	17.37
	(iii) Lambs	Lakhs	9.93
	(iv) Total	Lakhs	30.45
3	Estimated number of sheep shorn		
	(i) Rams/Wethers	Lakhs	2.99
	(ii) Ewes	Lakhs	17.03
	(iii) Lambs	Lakhs	5.18
	(iv) Total	Lakhs	25.20
4	Estimated annual wool yield per sheep shorn		
	(i) Rams/Wethers	Kg.	0.683
	(ii) Ewes	Kg.	0.652
	(iii) Lambs	Kg.	0.363
	(iv) Overall	Kg.	0.596
5	Estimated annual wool production	M.T.	1503

Sr. No.	Item	Unit	Particular
V	GOAT MILK PRODUCTION AND GOAT REARING PRACTICES		
1	Sample size observed		
	(i) Goat keeper households	Number	25987
	(ii) In- milk goats for milk recording	Number	29385
2	Average daily milk yield per goat in – milk	Kg.	0.232
3	Estimated number of goats in milk	Lakhs	35.84
4	Estimated annual goat milk production	Lakh Kg.	3037.37
VI	MEAT PRODUCTION		
1	Average meat production per animal		
	(i) Cattle	Kg.	125.179
	(ii) Buffalo	Kg.	139.275
	(iii) Sheep	Kg.	12.280
	(iv) Goat	Kg.	11.901
	(v) Pig	Kg.	27.689
	(vi) Poultry	Kg.	1.260
2	Estimated number of animals slaughtered		
	(i) Cattle	Lakhs	2.99
	(ii) Buffalo	Lakhs	3.71
	(iii) Sheep	Lakhs	27.57
	(iv) Goat	Lakhs	59.29
	(v) Pig	Lakhs	6.66
	(vi) Poultry	Lakhs	3006.21
3	Estimated annual meat production	“000” MT	590.683

3. INTRODUCTION

The State of Maharashtra occupies a prominent place in the Indian union and is the third largest State of the country which is 10% of the natural land mass. It lies between the North latitudes '15' and '22' and East latitudes '72' and '81'. The State consists of 35 districts with 355 tahsils and 41095 inhabited villages, 535 cities and town units as per the 2011 Human Census. The State can be roughly divided into two major physiographic divisions namely (i) Deccan plateau and (ii) Coastal Kokan Region. The State has tropical climate with three distinct seasons (a) Summer (b) Rainy (c) Winter, the annual rain fall ranges from 500 m.m. to 5000 m.m. The district wise annual rainfall figures given in.

Table No. 1

RAINFALL OF MAHARASHTRA STATE FOR THE YEAR 2012

Sr.No.	District	Normal Rainfall (in mm)	Actual Rainfall (in m.m.)
1.	Thane	2528.2	2122.0
2.	Raigad	3149.8	2970.7
3.	Ratnagiri	3511.0	3881.9
4.	Sindhudurga	3477.6	3278.4
5.	Nashik	1073.9	863.2
6.	Dhule	566.5	406.1
7.	Nandurbar	876.7	727.5
8.	Jalgaon	702.4	405.1
9.	Ahmednagar	497.4	383.4
10.	Pune	830.1	677.0
11.	Solapur	559.7	411.7
12.	Satara	922.2	918.2
13.	Sangli	551.6	407.8
14.	Kolhapur	1899.1	1677.3
15.	Aurangabad	675.4	368.7
16.	Jalna	688.1	324.2
17.	Beed	668.6	435.1
18.	Latur	788.6	759.8
19.	Osmanabad	741.7	390.9
20.	Nanded	943.8	660.7
21.	Parbhani	776.7	636.9
22.	Hingoli	884.8	709.8
23.	Buldhana	712.9	611.8
24.	Akola	734.9	828.4
25.	Washim	843.9	846.4
26.	Amrawati	860.9	1046.2
27.	Yevatmal	962.3	949.0
28.	Wardha	967.1	864.1
29.	Nagpur	1037.4	1011.6
30.	Bhandara	1330.0	1309.5
31.	Gondiya	1412.8	1244.6
32.	Chandrapur	1194.3	1319.5
33.	Gadchiroli	1415.9	1581.7
State average		1175.3	1061.5

Source : Commissioner of Agriculture, Government of Maharashtra, Pune.

The State has a total geographical area of about 30.76 million hectares. Of this 16.94% area is under forest cover and 10.22% area is considered barren and unfit for cultivation. The gross cropped area during the year 2007-08 was 73.66%. Average size of holding per holder in the State is 1.66 hectares.(Agricultural Census 2000-01) Distribution of land holders according to size of agricultural land is as follows.

OPERATION HOLDING (According to Agricultural Census (2000-01))

Sr. No.	Type of holding	Number of holders (in 00)	Area of operational holdings("00"hector)	Average size of holdings (hectare)
1.	Marginal holding (up to 1 ha.)	53057	26487	0.50
2.	Small holding (1-2 ha.)	36056	51271	1.42
3.	Semi- medium holding (2-5 ha.)	26520	77807	2.93
4.	Medium holding (5-10ha.)	4873	32084	6.58
5.	Large holding 10-20 ha.)	773	9961	12.89
6.	Large holding 20 ha and above	97	3418	36.75
	Total	121376	201028	1.66

The State has following main and important rivers (i) Krishna (ii) Koyana, (iii) Godavari, (iv) Bhima, (v) Wainganga, (vi) Wradha.

Based upon the Agro climatic conditions, the State can be divided in to nine zones. The salient features of these zones particularly relating to rainfall, topography etc. presented in table No. 2.

The annual rainfall in the scarcity Zone is about 700 m.m.and in the Ghat Zone it is up to 4000 m.m. The scarcity Zone includes parts of some districts like Dhule, Ahmednagar, Aurangabad, Beed, Osmanabad, and Solapur.while the Ghat zone includes Sahyadri ranges and some parts of districts like Satara, Sangli, Kolhapur, Pune and Nashik.

Table No. 2

AGROCLIMATIC ZONES OF MAHARASHTRA STATE

Sr. No.	Zone	District	Annual rain fall in mm.
1.	South Kokan Costal Zone	Ratnagiri, Sindhudurg	3100
2.	North Kokan costal Zone	Thane , Raigad	2600
3.	Western Ghat Zone	East part of Thane,Raigad,Ratnagiri,Sindhudurg,East Nashik,Pune, Satara and Kolhapur	3000 to 6000
4.	Sub Mountain Zone	Western Nashik,Pune,Satara,Kolhapur and Sangli.	700 to 1250
5.	Western Maharashtra Plane Zone	West part of Dhule, Nashik,Pune,Satara,Sangli and Ahmadnagar	700 to 1250
6.	Western Maharashtra Scarcity Zone	Satara,solapur,Sangli,Pune,Ahmadnagar, Nashik,Dhule,Western Beed, Aurangabad	Below 750
7.	Central Maharashtra Plateau Zone	Jalgaon, Buldhana, Amrawati, Akola, Jalna, Osmanabad, Latur, East Beed, Aurangabad, West Parbhani.	700 to 900
8.	Central Vidarbha	Nagpur, Wardha, Yavatmal, Nanded, East Parbhani., South Akola, west Chandrapur	950 to 1250
9	Eastern Vidarbha	Gadchiroli, Bhandara, Eastern Chandrapur, Nagpur	1250 to 1700

Source : Agro climatic zone, specific research S.P. Ghosh/ICAR, New Delhi.

HUMAN POPULATION

Total human population of the state as per 2011 population census is 1123.73 lakh.

The population growth rate in the state during 2001-2011 is 15.99%.The rural population of Maharashtra state is 615 lakhs. (54.7%) and overall density of population is 365 persons per sq.km.The district wise human populations presented in table No.3

Table No. 3

Sr. No.	District	Human Population (in Lakhs.)
1.	Mumbai City	31.46
2.	Mumbai Suburb	93.32
3.	Thane	110.54
4.	Raigad	26.35
5.	Ratnagiri	16.13
6.	Sindhudurg	8.49
7.	Nashik	61.09
8.	Dhule	20.49
9.	Nandurbar	16.46
10.	Jalgaon	42.24
11.	Ahmadnagar	45.43
12.	Pune	94.27
13.	Satara	30.04
14.	Sangli	28.21
15.	Solapur	43.16
16.	Kolhapur	38.74
17.	Aurangabad	36.96
18.	Jalna	19.58
19.	Parbhani.	18.36
20.	Hingoli	11.79
21.	Beed	25.86
22.	Nanded	33.57
23.	Osmanabad	16.6
24.	Latur	24.56
25.	Buldhana	25.88
26.	Akola	18.19
27.	Washim	11.97
28.	Amrawati	28.88
29.	Yavatmal	27.75
30.	Wardha	12.96
31.	Nagpur	46.53
32.	Bhandara	11.99
33.	Gondia	13.22
34.	Chandrapur	21.94
35.	Gadchiroli	10.72
Maharashtra state		1123.73

LIVESTOCK CENSUS

As per 2007 livestock Census, the state has 161.84 lakhs cattle, 60.73 lakhs buffaloes, 29.09 lakhs sheep and 103.91 lakhs goats. The district wise population of productive livestock as per 2007 Census is given in Table No. 4.

Table No. 4.

DISTRICT WISE PRODUCTIVE LIVESTOCK POPULATION (Number)

Sr. No.	District	Cows in milk		Buffaloes in- milk	Goats in- milk	Total sheep	Poultry layers	
		Crossbred	Indigenous				Deshi	Improved
1.	Mumbai	415	408	10491	1297	213	13675	2654
2.	Thane	3509	57047	93462	57668	1920	570806	33479
3.	Raigad	2325	45796	26278	26789	1460	306759	16467
4.	Ratnagiri	4535	53241	16793	8910	52	318094	57096
5.	Sidhudurg	2610	21301	21206	7452	6	170295	13681
6.	Nashik	51772	117443	81306	202546	354729	398403	3100465
7.	Dhule	15884	38925	38627	96344	302141	130188	240152
8.	Nandurbar	3639	47940	29171	89192	15229	245157	563759
9.	Jalgaon	20074	81185	103134	142863	30524	78542	30543
10.	Ahmednagar	313784	104790	87898	332446	334573	703298	497744
11.	Pune	178365	62037	138981	213944	380315	208229	2303426
12.	Satara	69890	34955	138899	144262	311623	847092	66317
13.	Sangli	41907	35598	202535	144910	194683	469935	2216587
14.	Kolhapur	64012	16213	333986	80748	165662	395521	443315
15.	Aurangabad	34628	57808	39992	121809	97079	102395	193784
16.	Jalna	8824	50503	32489	71388	26831	71824	284809
17.	Buldhana	15683	69619	59531	104121	81901	6497	797
18.	Beed	57700	66812	88629	142872	91589	226370	68363
19.	Solapur	108018	88400	150398	310313	215605	801205	832601
20.	Latur	8241	52747	90400	45701	39717	53651	163983
21.	Osmanabad	39044	43863	64002	65114	37702	79585	336539
22.	Parbhani	2355	60966	49642	65632	24287	72881	31923
23.	Nanded	5638	116595	90175	115517	53015	164733	126110
24.	Hingoli	3248	43399	30261	51463	5781	53771	6333
25.	Amrawati	9285	75890	45204	86672	59409	71926	46138
26.	Akola	4179	42244	26727	54176	6831	37111	6073
27.	Washim	2201	45835	29914	54635	10648	54025	13305
28.	Yavatmal	6064	106180	42247	127730	20152	215032	5028
29.	Nagpur	24324	64620	33697	84245	9080	106838	5477
30.	Wardha	13874	42855	18179	48730	2472	40736	120714
31.	Bhandara	13521	24617	27999	49151	939	79606	4833
32.	Gondiya	3795	44723	25349	51947	400	73848	70809
33.	Chandrapur	4515	63142	24154	71375	10472	238479	9935
34.	Gadchiroli	1074	81957	15620	68493	22320	210855	3102
State Total		1138932	1959654	2307376	3340455	2909360	7617362	11916341

VETERINARY INSTITUTES

The number of veterinary institutes catering health cover and artificial insemination services in the state are as follows :

Sr. No.	Veterinary institute	Number
1.	Veterinary Polyclinics	29
2.	Veterinary Mini Polyclinics	171
3.	Veterinary Dispensaries Grade I (State + Z.P.)	1572
4.	Veterinary Dispensaries Grade II (State + Z.P.)	2896
5.	Artificial insemination Sub- Centers	4733
6.	Cattle breeding Farms (State level)	01
7.	Bull rearing centers (under MLDB, Akola)	02
8.	Bull Mother Farms (under MLDB, Akola)	07
9.	Sheep and Goat Farms(under MSGDC)	11
10.	Hatcheries	04
11.	Intensive Poultry Development Blocks	16
12.	Check Post	13
13.	Mobile Veterinary clinics	65
14.	Frozen Semen Laboratories (under MLDB, Akola)	03
15.	No. of Duck Breeding Farms	01
16.	No. of Registered Slaughter houses	339

4. OBJECT AND COVERAGE

The main objects of the survey are as follows:-

- (I) To estimate the production of major live stock products viz. Milk, Eggs, Wool and Meat.
- (II) To estimate the in milk and milch animals, sheep, goats and layers.
- (III) To workout the per day average milk yield of in milk animal and goat and to work out per day average egg production of layers, average annual wool yield of sheep.
- (IV) To study the various management practices of live stock and poultry, adopted by the farmers and the livestock owners.

SAMPLING PLAN

The work of collection of relevant statistical information was conducted throughout the State. For this purpose, all districts of the State were divided into 12 groups which have adjoining geographical boundaries and common topographical conditions. These groups of the districts are treated as strata and a stratified multistage random sampling design was adopted for survey work.

Sr. No.	GROUP No.	NAME OF THE DISTRICTS
1.	1	Brihan Mumbai.
2.	2	Thane, Raigad.
3.	3	Ratnagiri, Sindhudurg.
4.	4	Nashik, Dhule, Nandurbar, Jalgaon.
5.	5	Ahmednagar, Pune.
6.	6	Satara, Sangli, Kolhapur.
7.	7	Solapur, Beed, Osmanabad, Latur.
8.	8	Aurangabad, Jalna, Buldhana.
9.	9	Parbhani. Nanded, Hingoli.
10.	10	Akola, Washim, Amravati, Yavatmal.
11.	11	Wardha, Nagpur, Bhandara, Gondia.
12.	12	Chandrapur, Gadchiroli.

Rural/Urban wards form the primary sampling unit, the households having in milk animal, sheep/goat and poultry layers form the second stage units and the selected animals from the selected households form the third stage units.

As per the suggestions of Government of India, the sampling size selected for listing was enlarged from the year 1984-85 onwards and about 15 % of the total rural wards in the state excluding Brihan Mumbai were selected during the year 2012-2013. The selected wards were distributed among the districts of the State in proportion to the total livestock and poultry population as per the 2007 livestock Census, so that 1/3rd of the selected wards were covered during each season.

The data obtained for these villages was utilized for estimating the number of in milk/milch animals, poultrylayers, sheep, etc. for every season. Total 2498 Villages were observed during the year under report, in addition to villages observed in the survey.

The survey work was conducted during the three seasons of the year. Twenty villages were selected from each group of districts except the group of Brihan Mumbai, for survey during each season. Thus, in all 624 villages were covered during the year 2012-13. In addition to this, 240 cattle sheds from the group of Brihan Mumbai also were covered during the year under report.

For the sake of convenience, during each season cluster of 5 nearby villages was allotted to each Livestock Supervisor, thereby 28 Livestock Supervisors have covered 624 villages and the work of survey of 240 cattle sheds of Brihan Mumbai was separately conducted by another Livestock Supervisor.

PERIOD OF FIELD WORK

The data for present survey was collected during all the three seasons of the year 2012-13 as shown below :-

1. Summer season1st March 2012 to 30th June 2012.
2. Rainy season 1st July 2012 to 31st October 2012.
3. Winter season.....1st November 2012 to 28th February 2013.

PROGRAMME OF THE FIELD WORK

For collection of data regarding production and rearing practices of livestock and poultry, one survey supervisor was allotted 5 villages selected randomly a fresh for each season from a group of the district, such 4 Livestock Supervisors were working in each group. For Brihan Mumbai district, one Livestock Supervisor was working and he collected the data about milk production and allied information by visiting about 20 stalls during a month, selected randomly. For remaining groups of districts each Livestock Supervisor visited selected villages in 3 to 4 rounds and in a round he made 2 days halt, for collection of data in each selected village. During the first round he carries out house to house complete enumeration of livestock and poultry. After complete enumeration he collects data as per the norms given in the Table No. 5

TABLE No. 5
DETAILS OF DATA COLLECTION

Sr. No.	Schedule No.	Type of Information collected	Number of households observed per day
1.	B1	Milk production and bovine keeping practices.	08
2.	P1	Egg Production and poultry keeping practices.	20
3.	W1, W2	Sheep rearing practices and Wool production.	08
4.	S1	Goat milk production and goat rearing practices.	06
5.	T1	Meat production and house holding having livestock or poultry	20
6.	T2	Meat production and other by products obtained slaughter at district place slaughter house.

DETAILS OF DATA COLLECTED

In this report tabular information on milk, egg, wool and meat production estimates along with keeping practices of livestock and poultry is presented. This information is mainly regarding;-

- (I) Production and utilization of milk of milch animals/goats both for morning and evening.
- (II) Feed consumption of cattle per day.
- (III) Production and utilization of dung.
- (IV) Production and disposal of eggs.
- (V) Average feed consumption of poultry birds.
- (VI) Category wise number of animals slaughtered and average quantity of meat production per animal.

STAFF

The following staff completed the work assigned under the scheme during the year 2012-13 under report.

TABLE No. 6

Sr. No.	Name of the post	Scale	Number of Posts		
			Sanctioned	Filled	Vacant
1.	Assistant Commissioner of Animal Husbandry (MAHS Class – I)	Rs.15600-39100 G.P.Rs.5700	01	01	00
2.	Livestock Development Officer (MAHS Class – I)	Rs.15600-39100 G.P.Rs.5400	06	06	00
3.	Investigator	Rs.9300-34800 G.P.Rs.4300	03	02	01
4.	Statistical Assistant	Rs.5200-20200 G.P.Rs.2400	06	03	03
5.	Livestock supervisor	Rs.5200-20200 G.P.Rs.2400	36	28	08
6.	Senior Clerk	Rs.5200-20200 G.P.Rs.2400	01	00	01
7.	Junior clerk	Rs.5200-20200 G.P.Rs.1900	01	00	01
8.	Peon	Rs.4440-7440 G.P.Rs.1300	02	02	00
Total			56	42	14

The field data were collected by 28 Livestock supervisors only. As such additional survey work was carried out by the Livestock supervisors for the vacant posts in some of the districts.

The livestock Development officer supervised the work of Livestock supervisors by visiting the selected villages.

The data so collected were scrutinized, compiled, tabulated and analyzed by Statistical Assistants and Statistical Investigators. The Assistant Commissioner was the overall in-charge of the scheme for field work as well as administrative work.

The Deputy Director (statistics) Animal Husbandry gave valuable guidance in the conduct of survey and finalization of production estimates as well as the present report.

SUPERVISION

The assistant Commissioner and six Livestock Development Officer, under the scheme inspected the field work of Livestock supervisors. The Deputy Director (statistics) Animal Husbandry, District Deputy Commissioner of Animal Husbandry also conducts surprise check of the field work of livestock supervisors.

5. CHARACTERICS OF SAMPLE VILLAGES

During the year under report, data of 624 villages was received on items such as land possessed, livestock breeding, feeding and management practices followed, details regarding production and utilization of milk, egg, wool and meat.

The distribution of villages having various categories of livestock and poultry is presented in Table No. 7

TABLE No. 7

DISTRIBUTION OF VILLAGES HAVING LIVESTOCK / POULTRY

Sr. No.	Season	Percentage of villages having			
		Bovine	Poultry	Goats	Sheeps
1.	Summer	100	90.34	96.60	6.82
2.	Rainy	100	91.06	94.97	7.82
3.	Winter	100	86.93	93.18	7.95
	Overall	100	89.44	94.91	7.53

It is seen from Table No. 7 that bovine was found in all the villages, while poultry and goats were found in 89.4 and 94.9 percent villages respectively. Sheeps were found in only 7.5 percent villages because sheep rearing is not a common practice in most of the villages through out the State and the shepherds are nomadic. The sheep population is concentrated mainly in Pune, Ahmednagar, Solapur Satara, and Sangli districts of the State.

NUMBER OF HOUSEHOLDS PER VILLAGE

During the year, livestock and poultry were enumerated by livestock supervisors from a total of 93830 households from selected villages. The season wise distribution of these villages according to number of households per village is given in Table No. 8.

TABLE No. 8

DISTRIBUTION OF VILLAGES ACCORDING TO NUMBER OF HOUSEHOLDS

Sr. No.	No. of Households	Percentages of villages			
		Summer	Rainy	Winter	Overall
1.	Up to 100	3.57	4.47	2.84	3.63
2.	101 to 150	19.05	26.26	21.02	22.11
3.	151 to 200	37.51	37.43	41.48	38.81
4.	201 to 250	32.74	29.05	27.84	29.88
5.	251 to 300	6.55	1.67	5.11	4.45
6.	301 to 350	0.00	0.56	1.71	0.75
7.	351 to 400	0.60	0.56	0.00	0.39
Total		100.00(211)	100.00(206)	100.00(207)	100.00(624)
Average number of households per village		215	212	222	216

Note: figures in bracket indicate number of villages observed.

It is seen from the above table that about 3.6 percent villages had up to 100 households, 60.9 percent villages had in the range of 101 to 200 households. While 34.3 percent villages had in the range of 201 to 300 households and 1.1 percent villages had households in the range of 301 to 400 and above. The overall average number of households per village was 216.

HOUSEHOLDS REARING LIVESTOCK AND POULTRY

The total enumerated households were classified according to particular kind of livestock and poultry reared and the same is given in Table No. 9.

Generally, there is the tendency to keep milch animals only or in combination with poultry or/ and goats. The households keeping flocks of sheep do not seem to keep any other type of livestock or poultry. However; a few goats are kept in the sheep flocks to lead these flocks at the time of grazing or migration.

TABLE No. 9
DISTRIBUTION OF VILLAGES ACCORDING TO LIVESTOCK AND POULTRY REARED

Sr. No.	Particulars	Percentage of households rearing			
		Bovine	Poultry	Goats	Sheep
1.	Households rearing only one type	39.1	7.6	6.1	0.0
2.	Households rearing livestock and others in combination	60.7	25.7	23.2	0.1
Total		99.8	33.3	29.3	0.1

From the total households observed, it was found that about 99.1 percent households reared bovine, 33.3 percent reared poultry and 29.3 percent households reared goats either alone or combination with other type of livestock or poultry.

GENERAL FACILITIES FOR THE VILLAGES

Information regarding facilities for veterinary aid, distance from market for milk, egg, and etc. was collected for the selected villages and is given in Table No. 10. Marketing facilities for the livestock products play an important role in the rural economy. The households having one or two in milk cattle are benefited if there is a dairy for collection of the milk in that village. However, the households which keep 20-25 poultry birds and received about 12 to 15 eggs/day have to collect these eggs and then sell them at the time of the bazaar day. The local purchase of eggs in a village is not so common.

TABLE No.10
PERCENTAGES OF VILLAGES ACCORDING TO THEIR DISTANCE FROM THE VETERINARY FACILITY

Sr. No.	Facility	Percentages of villages for which it is available at a distance of					Average distance Km. (weighted average)
		0 Km.	0 to 3Km.	3 to 5Km.	5 to 10 Km.	Above 10 km.	
1.	Veterinary Aid	23.9	22.0	17.5	20.2	16.4	4.7
2.	Artificial Insemination	16.5	21.4	24.1	28.3	9.7	4.7
3.	Market for cattle	10.1	12.5	18.2	31.5	27.7	6.8
4.	Market for Milk & milk products	31.9	24.1	12.0	19.6	12.4	4.0
5.	Market for egg	12.8	28.3	21.9	17.5	19.5	5.1
6.	Market for wool	13.4	16.3	20.2	25.1	25.0	6.1
7.	Market for meat	16.9	24.5	20.4	21.8	16.4	5.0

It is observed that veterinary aid services were available in 23.9 percent village in the village itself and the average distance at which this facility was available 4.7 Kms. The artificial insemination facility was available in 16.5 percent villages in the village it self and average distance at which this facility was available 4.7 km. from the village.

The market for milk was available in the village it self in case of only 31.9 percent villages and average distance of this facility was 4.0 Kms. Veterinary aid was available to 63.4 Percent villages within 5 Kms. While the remaining 36.6 percent villages had it at a distance beyond 5 kms. As for artificial insemination facility it was available to 62.0 percent villages within 5 kms. while for remaining 38.0 percent villages it was available at a distance of more than 5 Kms. from the village.

6. MILK PRODUCTION AND BOVINE KEEPING PRACTICES

The estimate of milk production for 12 groups of districts including Brihan Mumbai, during each season was obtained for indigenous cows and buffaloes separately. It was based on (1) estimates of average daily milk yield per animal in-milk, (2) estimated number of animals in-milk and (3) number of days in the season. The results are based on 7704 cows and 5286 buffaloes for milk recording during the year.

ESTIMATED NUMBER OF IN-MILK AND MILCH ANIMALS

The 'Ratio' method of estimation was adopted to work out the estimated number of in-milk cows as well as in milk buffaloes. The ratio was worked out between the total number of in-milk animals enumerated and the corresponding numbers as per the 2007 Census in all the selected villages in respective group of districts. The estimates so obtained for different groups of districts were pooled together to obtain the estimated number for season. A similar procedure was adopted to obtain the estimated number of milch animals.

The estimated number of in milk and milch animals worked-out for different seasons and for groups of districts are presented in Table Nos.11, 12, 13 and 14 respectively.

TABLE No. 11

ESTIMATED NUMBER OF IN-MILK AND MILCH ANIMALS FOR SUMMER SEASON

Sr. No.	Group of Districts	Estimated No. of animals (Lakhs)			
		In-milk		Milch	
		Indigenous cows*	Buffaloes	Indigenous cows	Buffaloes
1.	Brihan Mumbai	0.01	0.11	0.03	0.13
2.	Thane, Raigad	1.05	1.27	2.27	2.14
3.	Ratnagiri, Sindhudurga	0.76	0.40	1.60	0.85
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.87	2.66	5.36	4.91
5.	Ahmednagar, Pune	1.68	2.39	2.88	3.01
6.	Satara, Sangli, Kolhapur	0.87	7.11	1.57	9.62
7.	Solapur, Latur, Osmanabad, Beed	2.54	4.14	3.69	5.29
8.	Aurangabad, Jalna, Buldhana	1.79	1.39	2.98	2.02
9.	Parbhani, Nanded, Hingoli	2.23	1.79	3.56	2.95
10.	Akola, Washim, Amravati, Yavatmal	2.72	1.52	5.02	2.80
11.	Wardha, Nagpur, Bhandara, Gondia	1.78	1.10	3.65	2.01
12.	Gadchiroli, Chandrapur	1.46	0.42	2.64	0.97
State Total		19.76	24.30	35.25	36.70
Crossbred and exotic cows for the State		12.96	—	18.23	—

* Indigenous includes N.D. Cows.

TABLE No. 12

ESTIMATED NUMBER OF IN-MILK AND MILCH ANIMALS FOR RAINY SEASON

Sr. No.	Group of Districts	Estimated No. of animals (Lakhs)			
		In-milk		Milch	
		Indigenous cows*	Buffaloes	Indigenous cows	Buffaloes
1.	Brihan Mumbai	0.01	0.11	0.03	0.12
2.	Thane, Raigad	1.05	1.27	2.25	2.17
3.	Ratnagiri ,Sindhudurg	0.76	0.41	1.60	0.88
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.90	2.68	5.39	4.95
5.	Ahmednagar ,Pune	1.70	2.40	2.91	3.03
6.	Satara, Sangli, Kolhapur	0.88	7.15	1.57	9.71
7.	Solapur , Latur, Osmanabad, Beed	2.57	4.16	3.69	5.35
8.	Aurangabad , Jalna, Buldhana	1.81	1.40	3.01	2.08
9.	Parbhani, Nanded, Hingoli	2.24	1.80	3.55	2.97
10.	Akola, Washim, Amravati, Yavatmal	2.75	1.53	5.15	2.82
11.	Wardha, Nagpur, Bhandara, Gondia	1.80	1.11	3.66	2.04
12.	Gadchiroli, Chandrapur	1.48	0.43	2.65	0.99
State Total		19.95	24.45	35.46	37.11
Crossbred and exotic cows for the state		13.31	--	18.69	--

* Indigenous includes N.D. Cows.

TABLE No. 13

ESTIMATED NUMBER OF IN-MILK AND MILCH ANIMALS FOR WINTER SEASON

Sr. No.	Group of Districts	Estimated No. of animals (Lakhs)			
		In-milk		Milch	
		Indigenous cows*	Buffaloes	Indigenous cows	Buffaloes
1.	Brihan Mumbai	0.01	0.11	0.02	0.12
2.	Thane, Raigad	1.06	1.28	2.64	2.17
3.	Ratnagiri , Sindhudurg	0.77	0.41	1.90	0.91
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.95	2.70	6.29	5.07
5.	Ahmednagar , Pune	1.72	2.43	3.39	3.07
6.	Satara, Sangli, Kolhapur	0.89	7.21	1.76	9.84
7.	Solapur , Latur, Osmanabad, Beed	2.60	4.20	4.34	5.38
8.	Aurangabad , Jalna, Buldhana	1.83	1.41	3.59	2.12
9.	Parbhani, Nanded, Hingoli	2.28	1.83	4.20	2.98
10.	Akola, Washim, Amravati, Yavatmal	2.79	1.54	5.91	2.91
11.	Wardha, Nagpur, Bhandara, Gondias	1.82	1.13	4.30	2.10
12.	Gadchiroli, Chandrapur	1.50	0.43	3.11	0.98
State Total		20.22	24.68	41.45	37.65
Crossbred and exotic cows for the state		14.48	--	21.42	--

* Indigenous includes N.D. Cows.

TABLE No. 14

ESTIMATED NUMBER OF IN-MILK AND MILCH ANIMALS FOR THE YEAR (OVERALL)

Sr. No.	Group of Districts	Estimated No. of animals (Lakhs)			
		In-milk		Milch	
		Indigenous cows*	Buffaloes	Indigenous cows	Buffaloes
1.	Brihan Mumbai	0.01	0.11	0.03	0.13
2.	Thane, Raigad	1.05	1.27	2.39	2.16
3.	Ratnagiri ,Sindhudurg	0.76	0.41	1.70	0.88
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.91	2.68	5.68	4.97
5.	Ahmednagar ,Pune	1.70	2.40	3.06	3.04
6.	Satara, Sangli, Kolhapur	0.88	7.16	1.63	9.72
7.	Solapur , Latur, Osmanabad, Beed	2.57	4.17	3.91	5.34
8.	Aurangabad , Jalna, Buldhana	1.81	1.40	3.19	2.07
9.	Parbhani, Nanded, Hingoli	2.25	1.81	3.77	2.96
10.	Akola, Washim, Amravati, Yavatmal	2.76	1.53	5.36	2.85
11.	Wardha, Nagpur, Bhandara, Gondia	1.80	1.11	3.87	2.05
12.	Gadchiroli, Chandrapur	1.48	0.43	2.80	0.98
State Total		19.98	24.48	37.39	37.15
Crossbred and exotic cows for the State		13.58	--	19.45	--

* Indigenous includes N.D. Cows

AVERAGE DAILY MILK YIELD PER ANIMAL IN-MILK AND PER MILCH ANIMAL

The estimated average yield per cow in-milk and per milch animal in respect of cows and buffaloes for Summer, Rainy and Winter Seasons are presented in Table Nos.15,16, and 17 respectively.

TABLE No. 15

AVERAGE DAILY MILK YIELD PER ANIMAL IN-MILK AND PER MILCH ANIMAL FOR SUMMER SEASON

Sr. No.	Group of Districts	Per day average milk yield (kg.)			
		Indigenous cows*		Buffaloes	
		In-milk	Milch	In-milk	Milch
1.	Brihan Mumbai	1.936	0.645	7.616	6.443
2.	Thane, Raigad	1.826	0.844	3.276	1.940
3.	Ratnagiri ,Sindhudurg	1.790	0.844	2.917	1.389
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.224	1.192	3.832	2.078
5.	Ahmednagar, Pune	2.108	1.231	3.679	2.923
6.	Satara, Sangli, Kolhapur	2.176	1.199	4.469	3.303
7.	Solapur , Latur, Osmanabad, Beed	1.726	1.188	3.775	2.951
8.	Aurangabad , Jalna, Buldhana	1.441	0.867	3.713	2.543
9.	Parbhani, Nanded, Hingoli	1.671	1.046	3.040	1.849
10.	Akola, Washim, Amravati, Yavatmal	1.308	0.709	3.028	1.639
11.	Wardha, Nagpur, Bhandara, Gondia	1.531	0.749	3.604	1.974
12.	Gadchiroli, Chandrapur	0.828	0.458	2.674	1.169
State Total		1.685	0.945	3.821	2.53
Crossbred and exotic cows for the state		6.844	4.866	--	--

* Indigenous includes N.D. Cows.

TABLE No. 16

**AVERAGE DAILY MILK YIELD PER ANIMAL IN-MILK AND PER MILCH ANIMAL
FOR RAINY SEASON**

Sr. No.	Group of Districts	Per day average milk yield (kg.)			
		Indigenous cows*		Buffaloes	
		In-milk	Milch	In-milk	Milch
1.	Brihan Mumbai	1.921	0.642	8.213	7.490
2.	Thane, Raigad	1.817	0.849	3.533	2.063
3.	Ratnagiri ,Sindhudurg	1.782	0.842	3.146	1.456
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.214	1.193	4.133	2.234
5.	Ahmednagar ,Pune	2.098	1.227	3.968	3.140
6.	Satara, Sangli, Kolhapur	2.165	1.210	4.819	3.552
7.	Solapur , Latur, Osmanabad, Beed	1.718	1.195	4.070	3.170
8.	Aurangabad , Jalna, Buldhana	1.434	0.864	4.004	2.695
9.	Parbhani, Nanded, Hingoli	1.663	1.051	3.278	1.988
10.	Akola, Washim, Amravati, Yavatmal	1.302	0.695	3.265	1.771
11.	Wardha, Nagpur, Bhandara, Gondia	1.524	0.749	3.887	2.116
12.	Gadchiroli, Chandrapur	0.824	0.458	2.883	1.242
State Total		1.677	0.943	4.120	2.714
Crossbred and exotic cows for the State		6.850	4.878	--	--

* Indigenous includes N.D. Cows.

TABLE No. 17

**AVERAGE DAILY MILK YIELD PER ANIMAL IN-MILK AND PER MILCH ANIMAL
FOR WINTER SEASON**

Sr. No.	Group of Districts	Per day average milk yield (kg.)			
		Indigenous cows		Buffaloes	
		In-milk	Milch	In-milk	Milch
1.	Brihan Mumbai	2.239	0.962	8.082	7.249
2.	Thane, Raigad	1.921	0.774	4.228	2.490
3.	Ratnagiri ,Sindhudurga	1.856	0.753	3.793	1.729
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.808	1.314	3.985	2.124
5.	Ahmednagar ,Pune	2.034	1.031	5.366	4.246
6.	Satara, Sangli, Kolhapur	2.498	1.267	4.952	3.629
7.	Solapur , Latur, Osmanabad, Beed	2.114	1.268	4.437	3.461
8.	Aurangabad , Jalna, Buldhana	1.935	0.986	3.831	2.547
9.	Parbhani, Nanded, Hingoli	2.986	1.621	3.783	2.318
10.	Akola, Washim, Amravati, Yavatmal	1.340	0.633	3.926	2.077
11.	Wardha, Nagpur, Bhandara, Gondia	1.375	0.582	4.217	2.265
12.	Gadchiroli, Chandrapur	1.131	0.545	4.030	1.785
State Total		2.041	0.996	4.492	2.945
Crossbred and exotic cows for the State		6.976	4.716	--	--

* Indigenous includes N.D. Cows.

TABLE No. 18

AVERAGE DAILY MILK YIELD PER ANIMAL IN-MILK AND PER MILCH ANIMAL (OVER ALL)

Sr. No.	Group of Districts	Per day average milk yield (kg.)			
		Indigenous cows*		Buffaloes	
		In-milk	Milch	In-milk	Milch
1.	Brihan Mumbai	1.900	0.750	7.965	7.060
2.	Thane, Raigad	1.855	0.822	3.677	2.164
3.	Ratnagiri ,Sindhudurga	1.809	0.813	3.285	1.524
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.415	1.233	3.984	2.145
5.	Ahmednagar ,Pune	2.080	1.163	4.336	3.436
6.	Satara, Sangli, Kolhapur	2.279	1.226	4.746	3.494
7.	Solapur , Latur, Osmanabad, Beed	1.852	1.217	4.093	3.194
8.	Aurangabad , Jalna, Buldhana	1.603	0.905	3.850	2.595
9.	Parbhani, Nanded, Hingoli	2.106	1.239	3.367	2.052
10.	Akola, Washim, Amravati, Yavatmal	1.317	0.679	3.405	1.829
11.	Wardha, Nagpur, Bhandara, Gondia	1.476	0.693	3.903	2.118
12.	Gadchiroli, Chandrapur	0.927	0.487	3.195	1.399
State Total		1.801	0.961	4.144	2.730
Crossbred and exotic cows for the State		6.891	4.820	--	--

* Indigenous includes N.D. Cows.

It is seen from the Table No. 18, that the over all average milk yield per day/Indigenous cow in milk was 1.801 Kg and that for exotic/cross bred cow in milk was 6.891 Kg. In case of buffaloes the same was 4.144 Kg.

The average milk yield in respect of cows as well as buffaloes in Brihan Mumbai is quite on the high side when compared to other groups of districts. This is because animals of improved breed are generally reared in Mumbai and better dairying practices are followed.

Gir, katherwadi in respect of cows and Murrah, Mehsana in respect of buffaloes are some of the breeds which are frequently observed in Mumbai.

The average milk yield per animal in-milk and per milch animal for Brihan Mumbai indicates abnormal less difference mainly because rearing of dry animals is a costly affair in Mumbai.

7. MILK PRODUCTION

The estimates of milk production for each group of districts for the three seasons and also for the entire year have been worked out for cows and buffaloes separately and shown in Table Nos. 19, 20, 21 and 22.

TABLE No. 19

ESTIMATED MILK PRODUCTION FOR SUMMER SEASON

Sr. No.	Group of Districts	Milk Production in '000'M.T.	
		Indigenous Cows Milk*	Buffaloes Milk
1.	Brihan Mumbai	0.238	10.339
2.	Thane, Raigad	23.345	50.543
3.	Ratnagiri ,Sindhudurga	16.505	14.401
4.	Nashik, Dhule, Nandurbar, Jalgaon	77.931	124.399
5.	Ahmednagar ,Pune	43.277	107.171
6.	Satara, Sangli, Kolhapur	23.004	387.718
7.	Solapur , Latur, Osmanabad, Beed	53.474	190.543
8.	Aurangabad , Jalna, Buldhana	31.536	62.783
9.	Parbhani, Nanded, Hingoli	45.396	66.418
10.	Akola, Washim, Amravati, Yavatmal	43.429	56.055
11.	Wardha, Nagpur, Bhandara, Gondia	33.321	48.489
12.	Gadchiroli, Chandrapur	14.754	13.859
State Total		406.210	1132.718
Crossbred and exotic cows for the State		1082.119	--

* Indigenous includes N.D. Cows

TABLE No. 20

ESTIMATED MILK PRODUCTION FOR RAINY SEASON

Sr. No.	Group of Districts	Milk Production in '000'M.T.	
		Indigenous Cows Milk*	Buffaloes Milk
1.	Brihan Mumbai	0.239	11.259
2.	Thane, Raigad	23.506	55.036
3.	Ratnagiri ,Sindhudurga	16.619	15.682
4.	Nashik, Dhule, Nandurbar, Jalgaon	79.017	135.972
5.	Ahmednagar ,Pune	43.836	117.192
6.	Satara, Sangli, Kolhapur	23.431	423.982
7.	Solapur , Latur, Osmanabad, Beed	54.269	208.494
8.	Aurangabad , Jalna, Buldhana	31.932	68.863
9.	Parbhani, Nanded, Hingoli	45.915	72.730
10.	Akola, Washim, Amravati, Yavatmal	44.051	61.444
11.	Wardha, Nagpur, Bhandara, Gondia	33.739	53.283
12.	Gadchiroli, Chandrapur	14.958	15.092
State Total		411.512	1239.029
Crossbred and exotic cows for the State		1121.43	--

* Indigenous includes N.D. Cows.

TABLE No. 21

ESTIMATED MILK PRODUCTION FOR WINTER SEASON

Sr. No.	Group of Districts	Milk Production in '000'M.T.	
		Indigenous Cows Milk*	Buffaloes Milk
1.	Brihan Mumbai	0.272	10.746
2.	Thane, Raigad	24.499	64.905
3.	Ratnagiri ,Sindhudurga	17.133	18.797
4.	Nashik, Dhule, Nandurbar, Jalgaon	99.234	129.101
5.	Ahmednagar ,Pune	42.000	156.332
6.	Satara, Sangli, Kolhapur	26.694	428.582
7.	Solapur , Latur, Osmanabad, Beed	65.975	223.643
8.	Aurangabad , Jalna, Buldhana	42.527	64.831
9.	Parbhani, Nanded, Hingoli	81.592	82.764
10.	Akola, Washim, Amravati, Yavatmal	44.921	72.611
11.	Wardha, Nagpur, Bhandara, Gondia	30.055	57.091
12.	Gadchiroli, Chandrapur	20.325	20.947
State Total		495.227	1330.350
Crossbred and exotic cows for the State		1212.150	--

* Indigenous includes N.D. Cows.

The estimated milk production of winter season as compared to that of summer and rainy season is generally, more in all the twelve groups. Further, the increase in estimated milk production of winter season over that of summer season is significant in case of 2, 4, 6, 8, 10 and 12th groups. This may be due to availability of lush greens to the livestock is more in winter season as compared to very limited supply of greens to the livestock in summer season.

TABLE No. 22

ESTIMATED MILK PRODUCTION FOR THE YEAR (OVER ALL)

Sr. No.	Group of Districts	Milk Production in '000'M.T.		
		Indigenous Cows Milk*	Buffaloes Milk	Total
1.	Brihan Mumbai	0.749	32.344	33.093
2.	Thane, Raigad	71.350	170.484	241.835
3.	Ratnagiri ,Sindhudurga	50.257	48.880	99.137
4.	Nashik, Dhule, Nandurbar, Jalgaon	256.183	389.472	645.655
5.	Ahmednagar ,Pune	129.112	380.695	509.807
6.	Satara, Sangli, Kolhapur	73.129	1240.283	1313.412
7.	Solapur , Latur, Osmanabad, Beed	173.718	622.680	796.398
8.	Aurangabad , Jalna, Buldhana	105.995	196.476	302.471
9.	Parbhani, Nanded, Hingoli	172.902	221.913	394.815
10.	Akola, Washim, Amravati, Yavatmal	132.401	190.110	322.511
11.	Wardha, Nagpur, Bhandara, Gondia	97.115	158.863	255.978
12.	Gadchiroli, Chandrapur	50.037	49.898	99.934
State Total		1312.948	3702.098	5015.046
Crossbred and exotic cows for the State		3415.703	--	--
Overall for Deshi, Exotic & Crossbred Cows		4728.652	--	--
Overall for Cows & Buffaloes		--	--	8430.749

* Indigenous includes N.D. Cows.

It is seen from the Table No. 22, that the total milk production from bovines for the state, during the year was estimated as 8430.749 ('000 M.T.) Of this, the contribution from cows was about 56.09 percent and remaining 43.91 percent was from buffalo class. Of the total cow milk production, 72.23 percent was contributed by exotic and crossbred cows and remaining 27.77 percent was from the indigenous cows.

Per capita per day availability of milk during the year was found to be 210 gms. Based on projected human population.

In order to study the seasonal variation of average milk yield and total milk production, the district group wise average milk yield and total milk production during Summer, Rainy and Winter seasons is given in the Table No.23 for indigenous cows.

TABLE No. 23

TABLE SHOWING AVERAGE PER DAY, PER ANIMAL MILK YIELD FOR COWS IN- MILK AND TOTAL MILK PRODUCTION DURING SUMMER, RAINY AND WINTER SEASONS FOR THE YEAR 2012-13

Sr. No	Group of Districts	Summer		Rainy		Winter	
		Daily average milk yield/ cow in- milk (Kg.)	Total milk production ('000'M.T.)	Daily average milk yield/ cow in- milk (Kg.)	Total milk production ('000'M.T.)	Daily average milk yield/ cow in- milk (Kg.)	Total milk production ('000'M.T.)
1.	Brihan Mumbai	1.936	0.238	1.921	0.239	2.239	0.272
2.	Thane, Raigad	1.826	23.345	1.817	23.506	1.921	24.499
3.	Ratnagiri ,Sindhurga	1.790	16.505	1.782	16.619	1.856	17.133
4.	Nashik, Dhule, Nandurbar, Jalgaon	2.224	77.931	2.214	79.017	2.808	99.234
5.	Ahmednagar , Pune	2.108	43.277	2.098	43.836	2.034	42.000
6.	Satara, Sangli, Kolhapur	2.176	23.004	2.165	23.431	2.498	26.694
7.	Solapur , Latur, Osmanabad,Beed	1.726	53.474	1.718	54.269	2.114	65.975
8.	Aurangabad , Jalna,Buldhana	1.441	31.536	1.434	31.932	1.935	42.527
9.	Parbhani,Nanded, Hingoli	1.671	45.396	1.663	45.915	2.986	81.592
10.	Akola, Washim, Amravati, Yavatmal	1.308	43.429	1.302	44.051	1.340	44.921
11.	Wardha, Nagpur, Bhandara, Gondia	1.531	33.321	1.524	33.739	1.375	30.055
12.	Gadchiroli, Chandrapur	0.828	14.754	0.824	14.958	1.131	20.325
State Total		1.685	406.210	1.677	411.512	2.041	495.227

The Table No. 23 indicates that in case of indigenous cows the seasonal variation is not very significant and in the case of state as a whole the average milk yield and total milk production is minimum in summer season and maximum in winter season. in the districts groups of Akola/Washim/Amrawati/Yaotmal/Gadchiroli and Chandrapur ,the average and total milk production during summer season in considerably low as in these districts the green fodder and water scarcity exist in majority of villages during summer season. In the case of crossbred cows there is seasonal variation, the average milk yield and total milk production being minimum during summer season.

In order to study the seasonal variation of average milk yield and total milk production, the district group wise average milk yield and total milk production during Summer, Rainy and winter seasons is given in the Table No.24 for buffaloes.

TABLE No. 24

TABLE SHOWING AVERAGE PER DAY, PER ANIMAL MILK YIELD FOR BUFFALOES IN- MILK AND TOTAL MILK PRODUCTION DURING SUMMER, RAINY AND WINTER SEASONS FOR THE YEAR 2012-13

Sr. No.	Group of Districts	Summer		Rainy		Winter	
		Daily average milk yield/ Buffalo In-milk (Kg.)	Total milk production (‘000’M.T)	Daily average milk yield/ Buffalo In-milk (Kg.)	Total milk production (‘000’M.T)	Daily average milk yield/ Buffalo In-milk (Kg.)	Total milk production (‘000’M.T)
1.	Brihan Mumbai	7.616	10.339	8.213	11.259	8.082	10.746
2.	Thane, Raigad	3.276	50.543	3.533	55.036	4.228	64.905
3.	Ratnagiri, Sindhudurga	2.917	14.401	3.146	15.682	3.793	18.797
4.	Nashik, Dhule, Nandurbar, Jalgaon	3.832	124.399	4.133	135.972	3.985	129.101
5.	Ahmednagar, Pune	3.679	107.171	3.968	117.192	5.366	156.332
6.	Satara, Sangli, Kolhapur	4.469	387.718	4.819	423.982	4.952	428.582
7.	Solapur, Latur, Osmanabad, Beed	3.775	190.543	4.070	208.494	4.437	223.643
8.	Aurangabad, Jalna, Buldhana	3.713	62.783	4.004	68.863	3.831	64.831
9.	Parbhani, Nanded, Hingoli	3.040	66.418	3.278	72.730	3.783	82.764
10.	Akola, Washim, Amravati, Yavatmal	3.028	56.055	3.265	61.444	3.926	72.611
11.	Wardha, Nagpur, Bhandara, Gondia	3.604	48.489	3.887	53.283	4.217	57.091
12.	Gadchiroli, Chandrapur	2.674	13.859	2.883	15.092	4.030	20.947
State Total		3.821	1132.718	4.120	1239.028	4.492	1330.351

The above table indicates that in case of buffalo class, the minimum daily average milk yield and minimum total milk production is observed in summer season and the same is increased by 7.83 and 9.39, 9.03 and 7.37 percent during the rainy and winter season respectively. The Brihan Mumbai result however, indicates absence of seasonal variation mainly due to improved dairying practices.

NUMBER OF GOATS OBSERVED FOR GOAT MILK PRODUCTION AND GOAT REARING PRACTICES

About 29385 goats from 25987 goat rearing keeper households were observed. In the rural areas, the goat rearing is a common practice. On an average, a goat keeper household keeps two or three goats. Usually, such households do not keep any other type of livestock except a few poultry birds. The goats are left for grazing throughout the day. Obviously, the feeding expenditure on goats is negligible.

ESTIMATED GOAT MILK PRODUCTION

The details about estimates of goat milk production for groups of districts in state, during three seasons and for the entire year are given in Table Nos. 25,26,27,and 28 respectively.

TABLE No. 25
ESTIMATED GOAT MILK PRODUCTION FOR SUMMER SEASON

Sr. No.	Group of Districts	Estimated Number of In-milk Goats (Lakhs)	Average daily milk yield/Goat In-milk (kg.)	Total milk production ('000'M.T.)
1.	Brihan Mumbai	0.01	0.228	0.028
2.	Thane, Raigad	0.88	0.228	2.449
3.	Ratnagiri ,Sindhudurga	0.17	0.170	0.357
4.	Nashik, Dhule, Nandurbar,Jalgaon	5.56	0.237	16.096
5.	Ahmednagar ,Pune	5.73	0.299	20.946
6.	Satara, Sangli, Kolhapur	3.88	0.167	7.886
7.	Solapur , Latur, Osmanabad,Beed	5.92	0.227	16.361
8.	Aurangabad , Jalna,Buldhana	3.11	0.206	7.801
9.	Parbhani,Nanded, Hingoli	2.44	0.211	6.281
10.	Akola,Washim,Amravati, Yavatmal	3.40	0.162	6.723
11.	Wardha, Nagpur,Bhandara,Gondia	2.45	0.231	6.906
12.	Gadchiroli,Chandrapur	1.47	0.130	2.324
State Total		35.02	0.220	94.158

TABLE No. 26
ESTIMATED GOAT MILK PRODUCTION FOR RAINY SEASON

Sr. No.	Group of Districts	Estimated Number of in milk Goats (Lakhs)	Average daily milk yield/Goat In-milk (kg.)	Total milk production ('000'M.T.)
1.	Brihan Mumbai	0.01	0.249	0.031
2.	Thane, Raigad	0.90	0.245	2.706
3.	Ratnagiri ,Sindhudurga	0.17	0.183	0.385
4.	Nashik, Dhule, Nandurbar,Jalgaon	5.66	0.255	17.762
5.	Ahmednagar ,Pune	5.83	0.322	23.100
6.	Satara, Sangli, Kolhapur	3.94	0.179	8.694
7.	Solapur, Latur, Osmanabad, Beed	6.01	0.244	18.033
8.	Aurangabad , Jalna,Buldhana	3.17	0.221	8.616
9.	Parbhani,Nanded, Hingoli	2.48	0.227	6.923
10.	Akola,Washim, Amravati, Yavatmal	3.45	0.175	7.412
11.	Wardha, Nagpur, Bhandara, Gondia	2.49	0.248	7.612
12.	Gadchiroli,Chandrapur	1.49	0.140	2.562
State Total		35.62	0.237	103.836

TABLE No. 27
ESTIMATED GOAT MILK PRODUCTION FOR WINTER SEASON

Sr. No.	Group of Districts	Estimated Number of In-milk Goats (Lakhs)	Average daily milk yield/Goat In-milk (kg.)	Total milk production ('000'M.T.)
1.	Brihan Mumbai	0.01	0.250	0.031
2.	Thane, Raigad	0.93	0.234	2.613
3.	Ratnagiri ,Sindhudurga	0.17	0.227	0.474
4.	Nashik, Dhule, Nandurbar, Jalgaon	5.85	0.242	16.976
5.	Ahmadnagar ,Pune	6.05	0.245	17.785
6.	Satara, Sangli, Kolhapur	4.08	0.244	11.952
7.	Solapur , Latur, Osmanabad, Beed	6.23	0.260	19.419
8.	Aurangabad , Jalna, Buldhana	3.28	0.235	9.232
9.	Parbhani, Nanded, Hingoli	2.57	0.229	7.068
10.	Akola, Washim, Amravati, Yavatmal	3.57	0.237	10.165
11.	Wardha, Nagpur, Bhandara, Gondia	2.58	0.210	6.505
12.	Gadchiroli, Chandrapur	1.55	0.190	3.523
State Total		36.87	0.239	105.743

It is observed from the Table Nos.25, 26, and 27 that the seasonal variations do not have any significant effect on average daily milk yield of the goats.

TABLE No. 28
ESTIMATED GOAT MILK PRODUCTION FOR THE YEAR (OVER ALL)

Sr. No.	Group of Districts	Estimated Number of In- milk Goats (Lakhs)	Average daily milk yield/Goat In-milk (kg.)	Total milk production ('000'M.T.)
1.	Brihan Mumbai	0.01	0.242	0.090
2.	Thane, Raigad	0.91	0.236	7.767
3.	Ratnagiri ,Sindhudurga	0.17	0.193	1.216
4.	Nashik, Dhule, Nandurbar, Jalgaon	5.70	0.244	50.835
5.	Ahmadnagar ,Pune	5.87	0.289	61.831
6.	Satara, Sangli, Kolhapur	3.97	0.197	28.531
7.	Solapur , Latur, Osmanabad, Beed	6.05	0.244	53.814
8.	Aurangabad , Jalna, Buldhana	3.18	0.221	25.649
9.	Parbhani, Nanded, Hingoli	2.50	0.222	20.273
10.	Akola, Washim, Amravati, Yavatmal	3.47	0.192	24.299
11.	Wardha, Nagpur, Bhandara, Gondia	2.51	0.230	21.023
12.	Gadchiroli, Chandrapur	1.50	0.153	8.409
State Total		35.84	0.232	303.737

It is observed from the Table No. 28 that goat milk production for the state was estimated as 303.737 ('000 M.T.) during the year. The average milk yield per goat in milk per day was about 0.232 grams.

UTILIZATION OF MILK

The information about utilization of milk on the previous day of the visit in the bovine keeper (Milk producer) households is presented in Table No.29

TABLE No. 29

UTILIZATION OF MILK IN BOVINE KEEPER HOUSEHOLDS

Sr. No.	Category	Percentage of milk			
		Consumed as fluid milk	Sold as fluid milk	Converted to milk products	Spoiled
1.	Cow milk	28.663	67.872	3.392	0.073
2.	Buffalo milk	15.128	80.792	3.966	0.113
3.	Goat milk	99.473	0.000	0.527	0.000

On an average 29 percent of cow milk was utilized at home and 68 percent was sold out. The same was about 15 percent and 81 percent respectively, in case of buffalo milk. In case of goat milk, what is produced is almost consumed fully at home.

DISTRIBUTION OF IN MILK ANIMALS ACCORDING TO DAILY MILK YIELD IN DIFFERENT RANGES

The animals observed for milk production were classified according to different ranges and presented in Table No. 30

TABLE No. 30

PERCENTAGE DISTRIBUTION OF IN MILK ANIMALS ACCORDING TO DAILY MILK YIELD

Sr. No.	Category	Season	Daily milk yield (Grams.)						
			Up to 500	501-1000	1001-2000	2001-3000	3001-5000	Above 5000	Total
1.	Indigenous Cow	Summer	11.16	16.5	56.16	8.01	8.28	--	100
		Rainy	6.7	25.11	32.17	23.55	11.83	0.85	100
		Winter	16.66	15.26	33.04	25.44	9.06	0.58	100
		Over all	11.5	18.94	40.44	18.99	9.71	0.48	100
2.	Crossbred Cow	Summer	4.47	13.8	9.93	16.7	25.59	29.7	100
		Rainy	2.31	4.15	17.34	25.37	19.71	31.44	100
		Winter	1.17	8.73	23.05	37.62	25.9	3.75	100
		Over all	2.54	8.88	16.77	26.54	23.73	21.63	100
3.	Buffalo	Summer	2.81	0.64	5.54	19.89	52.95	18.3	100
		Rainy	7.75	7.27	4.23	3.04	45.88	31.93	100
		Winter	2	4.09	11.54	3.26	38.83	40.36	100
		Over all	4.18	3.99	7.09	8.73	45.89	30.19	100

It is observed that in case of indigenous cows about 30 percent cows yield daily less than 1000 gms. While about only 0.48 percent are high yielder, their daily yield being above 5000 gms. In case of exotic and crossbred cows, yield below 500 gms. is conspicuous by its absence. High yielder, (daily yield more than 5000 gms.) in this class are about 22 percent. As regards buffaloes, only 8 percent are low yielder (daily yield below 1000 gms.) while the remaining 92 percent yield daily above 1000 gms. Buffaloes producing daily more than 5000 gms. Of milk are about 30 percent.

MILK PRODUCTION AND MILK PROCURMENT

The estimated milk production in the state during 2012-13 was 8734.486 ('000 M.T.) while Procurement of milk by government and Co-operative dairy Societies was 1600.357 ('000 M.T.). (18.32 %). During 2012-13 sixty milk processing plants were functioning in the state.

In addition to these processing plants, 78 Government and 41 Co-operative milk chilling centers were in operation. The average daily collection of milk of Government and Co-operative Dairies together in the state during 2012-2013 was about 35 lakh liters.

The following table shows region wise milk production 2012-13 and milk procured in the State during 2012-13.

TABLE No. 30 (A)
REGIONWISE MILK PRODUCTION AND MILK PROCUREMENT

Sr. No.	Region	Milk Production ('000'M.T.)	Milk Procurement ('000'M.T.)	Milk Procurement In %
1.	Mumbai	423.479	3.387	0.80
2.	Nashik	2180.73	319.956	14.67
3.	Pune	3360.652	1121.049	33.36
4.	Aurangabad	1608.251	95.583	5.94
5.	Amravati	595.828	9.048	1.52
6.	Nagpur	565.546	51.334	9.08
Total		8734.486	1600.357	18.32

8. FEEDING PRACTICES IN BOVINE

Data of feed and fodder fed to the animals were collected from the selected households having bovines. The data were collected for the following types of animals (bovines) (i) in-milk (ii) dry even not calved even ones, (iii) adult males, (iv) young stock up to 3 years.

During the year under report, data were collected from 14459 households having 42624 cattle and 35991 buffaloes. The season wise details about the number of animals observed for feeding practices are given in Table No. 31

TABLE No. 31
NUMBER OF ANIMALS OBSERVED FOR FEEDING PRACTICES

Category of animal	Indigenous				Crossbreed				Buffalo			
	Summer	Rainy	Winter	Total	Summer	Rainy	Winter	Total	Summer	Rainy	Winter	Total
In- milk	4655	3658	1887	10200	2020	2565	2704	7289	10080	3426	16549	30054
Dry+notcalved even once	1040	1119	1054	3213	701	729	756	2186	551	596	596	1743
Adult males	4025	4687	38	8750	53	14	2698	2765	46	61	61	168
Young stock up to 3 years	1986	2134	997	5117	722	722	1659	3104	1560	1233	1233	4026
Total	11706	11598	3976	27280	3496	4031	7818	15344	12237	5316	18439	35991

AVERAGE QUANTITY OF FEED / FODDER FED PER DAY

The data was collected about the feed /fodder supplied to the various categories of bovine in the selected bovine keeper house holds. The season wise details of average quantity of feed/ fodder fed per animal per day are presented in Table No.32. These averages are based on all the animals observed, including those kept on grazing alone.

Generally, it is observed that, the animal's do not get sufficient greens during summer season as a result of which the estimated milk yield is the lowest in comparison to the other two seasons. In some of the groups of districts, the livestock owners are not much inclined to grow greens on their fields probably due to limited supply of water.

TABLE No. 32
SEASONWISE AVERAGE QUANTITY OF FEED / FODDER FED PER BOVINE PER DAY

Season	Type Of Feed	Average Feed fed per day per animal (K.g.)											
		Indigenous				Crossbreed				Buffaloes			
		In milk	Dry+NC	Adult Males	Young	In milk	Dry+NC	Adult Males	Young	In milk	Dry+NC	Adult Males	Young
Summer	Green	3.148	1.773	1.833	0.721	6.355	4.594	4.100	1.683	6.567	3.344	0.975	1.217
	Dry	7.273	6.917	8.948	2.378	6.915	6.654	3.675	2.203	9.821	8.869	10.044	3.095
	Conc.	1.085	0.287	0.521	0.194	1.846	1.052	0.544	0.352	1.747	1.214	1.250	0.453
Rainy	Green	8.369	6.265	10.217	2.051	18.537	7.263	8.500	2.550	9.662	9.149	7.813	2.528
	Dry	2.700	4.343	5.039	1.501	3.439	5.857	9.882	1.114	5.628	3.453	6.378	1.925
	Conc.	1.189	0.088	0.432	0.463	1.830	0.993	0.000	0.353	1.947	0.567	0.732	0.441
Winter	Green	4.136	4.376	14.929	2.191	5.765	3.899	7.461	1.399	10.750	4.831	4.343	1.665
	Dry	5.455	4.160	10.386	1.443	10.345	8.354	12.455	2.450	8.283	9.311	14.404	2.279
	Conc.	2.578	1.116	—	0.933	1.853	0.516	1.000	0.907	2.118	1.072	2.500	1.776
Overall	Green	5.217	4.138	8.993	1.654	10.219	5.252	6.687	1.877	8.993	5.774	4.377	1.803
	Dry	5.143	5.140	8.125	1.774	6.900	6.955	8.671	1.923	7.911	7.211	10.275	2.433
	Conc.	1.617	0.497	0.318	0.530	1.843	0.854	0.515	0.537	1.937	0.951	1.494	0.890

It is seen from the table that cows and buffaloes in-milk are fed better than other categories of animals. Further, during rainy season the livestock owners appear to feed comparatively less of dry fodder to their livestock irrespective of age, while during the other two seasons the feeding of dry fodder to the cattle is quit sufficient. So also, there is no significant difference in the feeding schedule of cattle and buffalo. The quantity of any type of feed fed to cattle and buffaloes during all the seasons do not vary significantly.

9. PRODUCTION AND UTILIZATION OF DUNG

The data about production and utilization of dung on the previous day of the visit was collected. Seasonwise results are presented in Table No. 33. Here, the dung collected in the stalls is only considered.

TABLE No. 33

UTILIZATION OF DUNG COLLECTED FROM BOVINES AT STALLS

Sr. No.	Season	Average quantity of dung collected per day/ bovine(Kg.)	Estimated annual quantity of dung collected ('000'M.T.)	Percentage utilization				
				For manure	For dung cakes	Gobar gas	Other purposes	Total
1.	Summer	4.919	-	83.8	12.16	0.82	3.22	100
2.	Rainy	4.076	-	91.56	3.9	1.22	3.32	100
3.	Winter	5.008	-	85.73	10.61	1.01	2.65	100
Overall		4.668 (78615)	38131.62	87.03	8.89	1.02	3.06	100

Note :- Figure in bracket indicates number of animals observed.

The average quantity of dung collected in stalls and household cattle shed was about 4.668Kg. per animal per day. It is observed that the dung produced is mainly used as manure, in rural areas. The quantity of collected in stalls during the year for the State was estimated as about 38132 ('000 M.T.).

10. EGG PRODUCTION AND POULTRY REARING PRACTICES SAMPLE SIZE OBSERVED

For collection of data about egg production and poultry rearing practices, a sample of 20 households was observed during one round from each of the villages having poultry out of the total 624 selected villages. The details are as given below.

During the year, data on egg production were collected for 73313 layers and data on rearing practices followed were collected for 165355 poultry birds from 24473 poultry keeper households.

TABLE No. 34

NUMBER OF HOUSEHOLDS OBSERVED FOR REARING POULTRY BIRDS

Sr. No.	Season	No. of Households observed	Number of poultry birds Observed					Total
			Cocks	Hens	Cockerels	Pullets	Chicks	
1.	Summer	9806	7222	26379	7276	7926	14313	63116
2.	Rainy	7953	4012	24479	5523	6778	7821	48613
3.	Winter	6714	7420	22455	6520	6772	10459	53626
Total		24473	18654	73313	19319	21476	32593	165355

TABLE No. 35

AVERAGE NUMBER OF POULTRY BIRDS REARED PER 100 POULTRY KEEPER HOUSEHOLDS

Sr. No.	Season	Number of birds per 100 poultry keeper households					Total
		Cocks	Hens	Cockerels	Pullets	Chicks	
1.	Summer	74 (11)	269 (42)	74 (12)	81 (13)	146 (23)	644 (100)
2.	Rainy	50 (8)	308 (50)	69 (11)	85 (14)	98 (16)	611 (100)
3.	Winter	111 (14)	334 (42)	97 (12)	101 (13)	156 (20)	799 (100)
Total		76 (11)	300 (44)	79 (12)	88 (13)	133 (20)	676 (100)

Note : Figures in brackets indicates percentages to total poultry.

The average number of poultry birds reared per 100 poultry keeper households was maximum 799 during Winter season while it was minimum in Rainy season (*i.e.* 611). On an average, there were 676 birds' per 100 poultry keeper households consisting of 76 cocks, 300 hens, 79 cockerels, 88 pullets and 133 chicks. The overall combination of poultry birds reared per 100 poultry keeper households was observed to be 11 percent cocks, 44 percent hens, 12 percent cockerels, 13 percent pullets and 20 percent chicks.

11. ESTIMATED NUMBER OF LAYERS, LAYING PERCENTAGE AND EGG PRODUCTION

The total egg production from deshi birds, for each group of districts, for the three seasons of the year was estimated on the basis of the data collected. The egg production from improved layers was estimated from the data collected from commercial poultry farms. This improved egg production was estimated for the state as a whole and on yearly basis. The details are given in the Table numbers 36, 37, 38 and 39.

TABLE No. 36
ESTIMATED EGG PRODUCTION FROM DESHI LAYERS DURING SUMMER SEASON

Sr. No.	Group of Districts	Estimated No. of layers (Lakhs)	Laying Percentage	Total Egg Production(Lakhs)
1.	Brihan Mumbai	0.14	34.03	5.81
2.	Thane, Raigad	9.07	31.53	348.94
3.	Ratnagiri ,Sindhudurga	5.07	31.63	195.65
4.	Nashik, Dhule, Nandurbar, Jalgaon	8.81	32.65	350.89
5.	Ahmednagar ,Pune	9.44	33.79	389.20
6.	Satara, Sangli, Kolhapur	17.71	34.39	743.13
7.	Solapur , Latur, Osmanabad, Beed	12.00	34.15	499.92
8.	Aurangabad , Jalna, Buldhana	1.86	31.25	70.92
9.	Parbhani, Nanded, Hingoli	3.01	33.59	123.34
10.	Akola, Washim, Amravati, Yavatmal	3.92	32.34	154.68
11.	Wardha, Nagpur, Bhandara, Gondia	3.10	33.34	126.08
12.	Gadchiroli, Chandrapur	4.66	30.13	171.32
State as a whole		78.79	33.08	3179.88
Improved Layers		129.57	74.61	11794.55

TABLE No. 37
ESTIMATED EGG PRODUCTION FROM DESHI LAYERS DURING RAINY SEASON

Sr. No.	Group of Districts	Estimated No. of layers(Lakhs)	Laying Percentage	Total Egg Production (Lakhs)
1.	Brihan Mumbai	0.14	33.93	5.85
2.	Thane, Raigad	9.18	31.88	359.94
3.	Ratnagiri ,Sindhudurga	5.13	32.05	202.22
4.	Nashik, Dhule, Nandurbar, Jalgaon	8.92	32.98	361.87
5.	Ahmednagar ,Pune	9.55	34.22	401.93
6.	Satara, Sangli, Kolhapur	17.93	34.38	758.20
7.	Solapur , Latur, Osmanabad, Beed	12.16	34.49	515.92
8.	Aurangabad , Jalna, Buldhana	1.89	31.56	73.37
9.	Parbhani, Nanded, Hingoli	3.06	33.88	127.52
10.	Akola, Washim, Amravati, Yavatmal	3.96	32.79	159.70
11.	Wardha, Nagpur, Bhandara, Gondia	3.14	33.60	129.77
12.	Gadchiroli, Chandrapur	4.72	30.48	176.98
State as a whole		79.78	33.36	3273.27
Improved Layers		130.86	74.89	12053.81

TABLE No. 38

ESTIMATED EGG PRODUCTION FROM DESHI LAYERS DURING WINTER SEASON

Sr. No.	Group of Districts	Estimated No. of layers(Lakhs)	Laying Percentage	Total Egg Production (Lakhs)
1.	Brihan Mumbai	0.14	34.33	5.77
2.	Thane, Raigad	9.56	31.84	365.22
3.	Ratnagiri ,Sindhudurga	5.34	32.82	210.28
4.	Nashik, Dhule, Nandurbar, Jalgaon	9.28	31.46	350.34
5.	Ahmednagar ,Pune	9.93	34.58	412.06
6.	Satara, Sangli, Kolhapur	18.66	33.80	756.88
7.	Solapur , Latur, Osmanabad, Beed	12.65	33.63	510.47
8.	Aurangabad , Jalna, Buldhana	1.97	32.95	77.90
9.	Parbhani, Nanded, Hingoli	3.17	33.11	125.94
10.	Akola, Washim, Amravati, Yavatmal	4.12	32.38	160.11
11.	Wardha, Nagpur, Bhandara, Gondia	3.27	33.99	133.38
12.	Gadchiroli, Chandrapur	4.90	30.92	181.83
State as a whole		82.99	33.04	3290.18
Improved Layers		132.82	75.73	12069.375

TABLE No. 39

ESTIMATED EGG PRODUCTION FROM DESHI LAYERS DURING THE YEAR (OVERALL)

Sr. No.	Group of Districts	Estimated No. of layers (Lakhs)	Laying Percentage	Total Egg Production (Lakhs)
1.	Brihan Mumbai	0.14	34.10	17.42
2.	Thane, Raigad	9.27	31.74	1074.10
3.	Ratnagiri ,Sindhudurga	5.18	32.17	608.16
4.	Nashik, Dhule, Nandurbar, Jalgaon	9.00	32.36	1063.10
5.	Ahmednagar ,Pune	9.64	34.20	1203.19
6.	Satara, Sangli, Kolhapur	18.1	34.18	2258.21
7.	Solapur , Latur, Osmanabad, Beed	12.27	34.08	1526.30
8.	Aurangabad , Jalna, Buldhana	1.91	31.87	222.19
9.	Parbhani, Nanded, Hingoli	3.08	33.52	376.80
10.	Akola, Washim, Amravati, Yavatmal	4.00	32.50	474.49
11.	Wardha, Nagpur, Bhandara, Gondia	3.17	33.64	389.23
12.	Gadchiroli, Chandrapur	4.76	30.51	530.13
State as a whole		80.52	33.15	9743.32
Improved Layers		131.08	75.07	35917.735
Overall for Deshi and Improved Layers		211.60		45661.06

The total egg production for the state, during the year, was estimated as 45661.06 lakhs. Out of this the contribution from deshi layers was about 21.33 percent and from improved layers 78.66 percent.

The overall eggs obtained per deshi layer per year were 121 and from improved layer were 274 Per capita per annum availability of eggs was 40 during the year under report, on the basis of projected human population.

UTILIZATION OF EGGS IN POULTRY KEEPER HOUSEHOLDS

From the poultry keeper households, data regarding production and disposal of eggs on the previous day of the visit, ere also collected.

It is found from the data that out of the total eggs produced 58 percent were consumed at home for table purpose, while 14 percent were kept for hatching. About 27 percent eggs were sold out for table purpose. It is noticed that there was about 1 percent breakage and spoilage in the total number of eggs produced.

12. WOOL PRODUCTIONS

NUMBER OF SHEEP OBSERVED FOR WOOL PRODUCTION

A total of 26828 sheep from 269 flocks were observed for wool production and sheep rearing practices. The details are given in Table No. 40. The shepherd community rears sheep flocks with goats. Shepherds usually do not keep any other livestock with their sheep flocks.

TABLE No. 40

NUMBER OF SHEEP OBSERVED

Sr. No.	Type of Flock	No. of Flocks	No. of Sheep				
			Rams	Ewes	Lambs		Total
					Male	Female	
1.	Stationary	242	3538	18523	1168	2192	25421
2.	Migratory	27	150	889	88	280	1407
Total		269	3688	19412	1256	2472	26828

It is observed from the table No.40 that about 90 percent sheep were from stationary flocks and remaining 10 percent sheep were from migratory flocks.

MIGRATORY ASPECTS

It is a general practice that the flocks from water and grazing scarcity areas leave their villages from October on words *i.e.* during winter season after Diwali festival. These flocks remain in the areas having water and grazing facilities and moderate climate.

These migratory flocks return to their native places at the beginning of Rainy season .The maximum migration period is about five months. The shepherds usually follow fixed routes, their places for night halt also are fixed .They move along with their families. They fold their sheep flocks during nights in the fields and owner of these fields given them grains and some amount depending upon the number of sheep in the flocks.

WOOL PRODUCTION

The sheep of the state grow a coarse type of wool on their bodies. The sheep are shorn twice during a year. The first shearing is done during June and July. The second shearing is done after six month, of the first shearing. The estimated wool production during each shearing season is presented in Table No. 41.

TABLE No. 41
ESTIMATED WOOL PRODUCTION

	Estimated No. of sheep (lakh)	Estimated No, of sheep shorn(lakh)	Average wool yield per sheep shorn(Kg.)	Total wool production(M.T.)
1st Shearing:-				
(i)Ram+wether	3.15	2.99	0.33	99.268
(ii) Ewes	17.38	17.03	0.33	553.475
(iii) Lambs	9.91	5.15	0.18	93.215
Total	30.44	25.17	0.296	745.958
2nd Shearing				
(i)Ram+wether	3.16	2.99	0.35	105.054
(ii) Ewes	17.36	17.02	0.33	556.652
(iii) Lambs	9.94	5.22	0.18	94.841
Total	30.46	25.23	0.300	756.547
Overall				
(i)Ram+wether	3.15	2.99	0.683	204.322
(ii) Ewes	17.37	17.03	0.652	1110.127
(iii) Lambs	9.93	5.18	0.363	188.056
Total	30.45	25.20	0.596	1502.505

The estimated number of Rams, Wethers, Ewes and Lambs for first shearing season was 3.15 lakhs, 17.38 lakhs and 9.91 lakhs respectively. The same for the second shearing season were 3.16 lakhs, 17.36 lakhs and 9.94 lakhs respectively. Shearing is not done during summer season.

The overall average estimated wool yield per sheep shorn worked out to be 596 grams. The estimated wool production for the state during the year was about 1503 M.T.

13. MEAT PRODUCTION

Information of the animal slaughtered at the recognized slaughter houses is collected. There are 339 recognized slaughter houses in the state. Unauthorized slaughter of animals is also done at many places. The number of such illicit slaughter is estimated. The district wise number of registered slaughter houses in the State is presented in Table No. 42.

The meat production from different species of livestock was estimated for the State and on the yearly basis. The details are given in the Table No. 43. The data of animals slaughtered under each category is based on the report received from the concerned Panchayat Samitis, Municipal Corporations and Municipalities.

TABLE No. 42
NUMBER OF REGISTERED SLAUGHTER HOUSES IN THE STATE

Sr. No.	District	Number of registered slaughter houses
1.	Brihan Mumbai	1
2.	Thane	3
3.	Raigad	0
4.	Sindhudurg	0
5.	Nashik	6
6.	Dhule	3
7.	Nandurbar	4
8.	Jalgaon	13
9.	Ahmednagar	7
10.	Pune	11
11.	Satara	4
12.	Sangali	1
13.	Kolhapur	15
14.	Solapur	4
15.	Latur	0
16.	Osmanabad	11
17.	Beed	13
18.	Aurangabad	14
19.	Jalna	8
20.	Buldhana	51
21.	Parbhani	17
22.	Nanded	17
23.	Hingoli	11
24.	Akola	17
25.	Washim	14
26.	Amrawati	26
27.	Yavatmal	25
28.	Wardha	6
29.	Nagpur	20
30.	Bhandara	0
31.	Gondia	0
32.	Gadchiroli	7
33.	Chandrapur	10
State Total		339

TABLE No. 43**ESTIMATED MEAT PRODUCTION**

Sr. No.	Species	Estimated number of animals slaughtered(Lakh)	Average meat production per animal (kg.)	Total meat production ('000') M. T.
1.	Cattle	2.99	125.179	37.372
2.	Buffalo	3.71	139.324	51.677
3.	Sheep	27.57	12.280	33.857
4.	Goat	59.29	11.901	70.567
5.	Pig	6.66	27.689	18.428
6.	Poultry	3006.21	1.260	378.782
Total		--	--	590.683

It is seen from the Table No. 43 that the average meat yield per animal is little more in sheep than that of goat. Similarly, the average meat yield per animal is more in buffalo than that of cattle.

CATEGORYWISE MEAT PRODUCTION IN MAHARASHTRA STATE DURING 2012-2013

Of the total estimated meat production, the contribution from the cattle is about 6.33 percent. Where as from buffaloes it is 8.75 percent, from goats 11.95 percent from sheep 5.73 percent and from poultry 64.13 percent. The contribution of pigs in meat production is very low about 3.12 percent.

TABLE No. 44

**COMPARATIVE STATEMENT SHOWING ESTIMATED ANNUAL PRODUCTION OF
MILK, EGG, WOOL AND MEAT IN MAHARASHTRA STATE FROM THE YEAR 1970 -71
TO 2012-13**

Sr. No.	Year	Milk ('000' M. T.)	Eggs (Crores)	Wool (M.T.)	Meat ('000'M.T.)
1.	1970-71	1062	69	1025	70
2.	1971-72	1036	66	1119	70
3.	1972-73	949	67	991	76
4.	1973-74	1003	70	936	76
5.	1974-75	1195	73	970	79
6.	1975-76	1280	77	1016	78
7.	1976-77	1304	78	890	83
8.	1977-78	1522	81	923	93
9.	1978-79	1540	91	1047	106
10.	1979-80	1635	103	1125	122
11.	1980-81	1756	115	1217	147
12.	1981-82	1909	124	1245	160
13.	1982-83	2009	129	1304	158
14.	1983-84	2228	135	1309	151
15.	1984-85	2358	143	1311	160
16.	1985-86	2466	151	1339	159
17.	1986-87	2459	159	1357	154
18.	1987-88	2657	172	1373	160
19.	1988-89	2800	180	1388	147
20.	1989-90	3266	196	1411	149
21.	1990-91	3735	210	1435	136
22.	1991-92	3955	215	1464	146
23.	1992-93	4102	229	1488	147
24.	1993-94	4250	234	1511	161
25.	1994-95	4811	250	1532	170
26.	1995-96	4991	260	1548	173
27.	1996-97	5127	269	1569	173
28.	1997-98	5193	277	1581	199
29.	1998-99	5609	294	1596	203
30.	1999-2000	5706	304	1610	207
31.	2000-01	5850	310	1628	211
32.	2001-02	6093	319	1645	215
33.	2002-03	6251	329	1659	218
34.	2003-04	6377	336	1674	225
35.	2004-05	6567	344	1620	230
36.	2005-06	6769	352	1640	236
37.	2006-07	6978	340	1667	243
38.	2007-08	7210	346	1677	250
39.	2008-09	7455	355	1707	536
40.	2009-10	7678	386	1726	545
41.	2010-11	8044	422	1448	563
42.	2011-12	8469	439	1469	585
43.	2012-13	8734	457	1503	591

14. ANNEXURE
TABLE No. 1
DISTRICTWISE MILK PRODUCTION IN MAHARASHTRA STATE
FOR COWS OTHER THAN CROSSBREED COWS FOR THE YEAR 2012-2013

Sr. No.	District	Approximate No. of in-milk cows (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (LakhKg.)
MUMBAI REGION				
1.	Brihan Mumbai	0.010	1.900	7.495
2.	Thane	0.584	1.855	396.087
3.	Raigad	0.468	1.855	317.413
4.	Ratnagiri	0.544	1.809	359.262
5.	Sindhudurg	0.217	1.809	143.308
Total		1.823	1.839	1223.565
NASHIK REGION				
6.	Nashik	1.197	2.415	1053.422
7.	Dhule	0.397	2.415	349.380
8.	Nandurbar	0.489	2.415	430.345
9.	Jalgaon	0.828	2.415	728.683
10.	Ahmednagar	1.066	2.080	811.039
Total		3.977	2.324	3372.869
PUNE REGION				
11.	Pune	0.631	2.080	480.081
12.	Satara	0.354	2.279	294.513
13.	Sangali	0.361	2.279	300.336
14.	Kolhapur	0.164	2.279	136.441
15.	Solapur	0.905	1.852	610.780
Total		2.415	2.067	1822.151
AURANGABAD REGION				
16.	Aurangabad	0.588	1.603	344.528
17.	Jalna	0.513	1.603	300.583
18.	Parbhani	0.622	2.106	477.130
19.	Beed	0.682	1.852	460.278
Total		2.405	1.803	1582.519

Sr. No.	District	Approximate No. of in-milk cows (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (LakhKg.)
LATUR REGION				
20.	Latur	0.540	1.852	364.443
21.	Osmanabad	0.447	1.852	301.678
22.	Nanded	1.189	2.106	912.070
23.	Hingoli	0.443	2.106	339.821
Total		2.619	2.006	1918.012
AMRAWATI REGION				
24.	Amrawati	0.775	1.317	372.588
25.	Akola	0.430	1.317	206.726
26.	Washim	0.466	1.317	224.034
27.	Buldhana	0.708	1.603	414.839
28.	Yavatmal	1.083	1.317	520.662
Total		3.462	1.376	1738.849
NAGPUR REGION				
29.	Nagpur	0.657	1.476	354.667
30.	Wardha	0.436	1.476	235.365
31.	Bhandara	0.251	1.476	135.497
32.	Gondia	0.455	1.476	245.622
33.	Chandrapur	0.642	0.927	217.788
34.	Gadchiroli	0.833	0.927	282.582
Total		3.274	1.231	1471.520
Maharashtra state Total		19.980	1.800	13129.490

Note: - The district wise figures of milk production are calculated on the basis of average milk production per animal for the concerned group of districts and proportion of in-milk animals in particular district as per 2007 livestock Census. Hence, the production figures are approximate ones.

TABLE No. 2

**DISTRICTWISE MILK PRODUCTION IN MAHARASHTRA STATE FOR CROSSBRED
COWS FOR THE YEAR 2012-2013**

Sr. No.	District	Approximate No. of in-milk C.B.cows (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (Lakh Kg.)
MUMBAI REGION				
1.	Brihan Mumbai	0.000	0.000	0.000
2.	Thane	0.043	6.891	107.586
3.	Raigad	0.032	6.891	80.680
4.	Ratnagiri	0.053	6.891	134.470
5.	Sindhudurg	0.032	6.891	80.684
Total		0.160	6.891	403.420
NASHIK REGION				
6.	Nashik	0.620	6.891	1559.952
7.	Dhule	0.192	6.891	484.130
8.	Nandurbar	0.044	6.891	107.580
9.	Jalgaon	0.235	6.891	591.704
10.	Ahmednagar	3.753	6.891	9440.435
Total		4.844	6.891	12183.801
PUNE REGION				
11.	Pune	2.128	6.891	5352.270
12.	Satara	0.834	6.891	2097.881
13.	Sangali	0.504	6.891	1264.102
14.	Kolhapur	0.759	6.891	1909.609
15.	Solapur	1.283	6.891	3226.866
Total		5.508	6.891	13850.728
AURANGABAD REGION				
16.	Aurangabad	0.417	6.891	1048.935
17.	Jalna	0.107	6.891	268.956
18.	Parbhani	0.032	6.891	80.683
19.	Beed	0.684	6.891	1721.336
Total		1.240	6.891	3119.910

Sr. No.	District	Approximate No. of in-milk C.B.cows (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (Lakh Kg.)
LATUR REGION				
20.	Latur	0.096	6.891	242.059
21.	Osmanabad	0.471	6.891	1183.420
22.	Nanded	0.064	6.891	161.372
23.	Hingoli	0.043	6.891	107.586
Total		0.674	6.891	1694.437
AMRAWATI REGION				
24.	Amrawati	0.107	6.891	268.958
25.	Akola	0.053	6.891	134.474
26.	Washim	0.021	6.891	53.787
27.	Buldhana	0.182	6.891	457.231
28.	Yavatmal	0.075	6.891	188.272
Total		0.438	6.891	1102.722
NAGPUR REGION				
29.	Nagpur	0.289	6.891	726.189
30.	Wardha	0.160	6.891	403.432
31.	Bhandara	0.160	6.891	403.432
32.	Gondia	0.043	6.891	107.586
33.	Chandrapur	0.053	6.891	134.474
34.	Gadchiroli	0.011	6.891	26.899
Total		0.716	6.891	1802.012
Maharashtra State Total		13.580	6.891	34157.030

Note : - The district wise figures of milk production are calculated on the basis of average milk production per animal for the concerned group of districts and proportion of in-milk animals in particular district as per 2007 livestock Census. Hence, the production figures are approximate ones.

TABLE No. 3
DISTRICTWISE MILK PRODUCTION IN MAHARASHTRA STATE FOR BUFFALOES
FOR THE YEAR 2012-2013

Sr. No.	District	Approximate No. of in-milk Buffalo (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (Lakh Kg.)
MUMBAI REGION				
1.	Brihan Mumbai	0.111	7.965	323.434
2.	Thane	0.991	3.677	1326.135
3.	Raigad	0.283	3.677	378.705
4.	Ratnagiri	0.183	3.285	220.865
5.	Sindhudurg	0.222	3.285	267.935
Total		1.790	3.853	2517.074
NASHIK REGION				
6.	Nashik	0.856	3.984	1242.594
7.	Dhule	0.412	3.984	598.071
8.	Nandurbar	0.313	3.984	454.360
9.	Jalgaon	1.102	3.984	1599.695
10.	Ahmednagar	0.930	4.336	1471.514
Total		3.613	4.069	5366.234
PUNE REGION				
11.	Pune	1.476	4.336	2335.436
12.	Satara	1.476	4.746	2557.856
13.	Sangali	2.143	4.746	3713.744
14.	Kolhapur	3.538	4.746	6131.230
15.	Solapur	1.587	4.093	2372.043
Total		10.220	4.587	17110.309
AURANGABAD REGION				
16.	Aurangabad	0.425	3.850	598.154
17.	Jalna	0.344	3.850	484.153
18.	Parbhani	0.520	3.367	636.134
19.	Beed	0.941	4.093	1406.486
Total		2.230	3.839	3124.927

Sr. No.	District	Approximate No. of in-milk Buffalo (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (Lakh Kg.)
LATUR REGION				
20.	Latur	0.961	4.093	1436.379
21.	Osmanabad	0.677	4.093	1011.892
22.	Nanded	0.960	3.367	1174.402
23.	Hingoli	0.334	3.367	408.594
Total		2.932	3.767	4031.267
AMRAWATI REGION				
24.	Amrawati	0.485	3.405	604.216
25.	Akola	0.283	3.405	352.563
26.	Washim	0.313	3.405	389.937
27.	Buldhana	0.627	3.850	882.453
28.	Yavatmal	0.445	3.405	554.384
Total		2.153	3.542	2783.553
NAGPUR REGION				
29.	Nagpur	0.354	3.903	504.372
30.	Wardha	0.194	3.903	276.407
31.	Bhandara	0.293	3.903	417.461
32.	Gondia	0.274	3.903	390.390
33.	Chandrapur	0.263	3.195	308.781
34.	Gadchiroli	0.162	3.195	190.199
Total		1.540	3.714	2087.610
Maharashtra State Total		24.483	4.143	37020.970

Note :- The district wise figures of milk production are calculated on the basis of average milk production per animal for the concerned group of districts and proportion of in-milk animals in particular district as per 2007 livestock census. Hence, the production figures are approximate ones.

TABLE No. 4
DISTRICTWISE MILK PRODUCTION IN MAHARASHTRA STATE FOR GOATS
FOR THE YEAR 2012-13

Sr. No.	District	Approximate No. of in-milk Goats (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (Lakh Kg.)
MUMBAI REGION				
1.	Brihan Mumbai	0.012	0.242	0.901
2.	Thane	0.619	0.236	53.242
3.	Raigad	0.284	0.236	24.428
4.	Ratnagiri	0.093	0.193	6.498
5.	Sindhudurg	0.081	0.193	5.662
Total		1.089	0.228	90.731
NASHIK REGION				
6.	Nashik	2.170	0.245	193.632
7.	Dhule	1.035	0.245	92.354
8.	Nandurbar	0.962	0.245	85.840
9.	Jalgaon	1.530	0.245	136.524
10.	Ahmednagar	3.570	0.289	376.042
Total		9.267	0.261	884.392
PUNE REGION				
11.	Pune	2.300	0.289	242.268
12.	Satara	1.553	0.197	111.722
13.	Sangali	1.553	0.197	111.719
14.	Kolhapur	0.860	0.197	61.868
15.	Solapur	3.325	0.244	295.755
Total		9.591	0.235	823.333
AURANGABAD REGION				
16.	Aurangabad	1.299	0.221	104.576
17.	Jalna	0.767	0.221	61.748
18.	Parbhani	0.711	0.222	57.674
19.	Beed	1.530	0.244	136.092
Total		4.307	0.229	360.089

Sr. No.	District	Approximate No. of in-milk Goats (Lakhs)	Average daily milk yield (kg.)	Annual Milk Production (Lakh Kg.)
LATUR REGION				
20.	Latur	0.485	0.244	43.140
21.	Osmanabad	0.710	0.244	63.154
22.	Nanded	1.239	0.222	100.574
23.	Hingoli	0.548	0.222	44.483
Total		2.982	0.231	251.350
AMRAWATI REGION				
24.	Amrawati	0.934	0.192	65.376
25.	Akola	0.579	0.192	40.527
26.	Washim	0.589	0.192	41.192
27.	Buldhana	1.120	0.221	90.166
28.	Yavatmal	1.370	0.192	95.894
Total		4.592	0.199	333.156
NAGPUR REGION				
29.	Nagpur	0.905	0.230	75.830
30.	Wardha	0.518	0.230	43.403
31.	Bhandara	0.528	0.230	44.225
32.	Gondia	0.558	0.230	46.772
33.	Chandrapur	0.764	0.153	42.887
34.	Gadchiroli	0.734	0.153	41.203
Total		4.007	0.201	294.320
Maharashtra State Total		35.840	0.232	3037.370

Note :- The district wise figures of milk production are calculated on the basis of average milk production per animal for the concerned group of districts and proportion of in-milk animals in particular district as per 2007 livestock census. Hence, the production figures are approximate ones.

TABLE No. 5

**APPROXIMATE MILK PRODUCTION IN MAHARASHTRA STATE DURING
THE YEAR 2012-13 (IN LAKH KG).**

Sr. No.	Districts	Indigenous Cows	Crossbred Cows	Buffaloes	Goats	Total Milk Production
MUMBAI REGION						
1.	Brihan Mumbai	7.495	0.000	323.434	0.901	331.830
2.	Thane	396.087	107.586	1326.135	53.242	1883.051
3.	Raigad	317.413	80.680	378.705	24.428	801.225
4.	Ratnagiri	359.262	134.470	220.865	6.498	721.095
5.	Sindhudurg	143.308	80.684	267.935	5.662	497.589
Total		1223.565	403.420	2517.074	90.731	4234.790
NASHIK REGION						
6.	Nashik	1053.422	1559.952	1242.594	193.632	4049.600
7.	Dhule	349.380	484.130	598.071	92.354	1523.936
8.	Nandurbar	430.345	107.580	454.360	85.840	1078.125
9.	Jalgaon	728.683	591.704	1599.695	136.524	3056.605
10.	Ahmednagar	811.039	9440.435	1471.514	376.042	12099.031
Total		3372.869	12183.801	5366.234	884.392	21807.297
PUNE REGION						
11.	Pune	480.081	5352.270	2335.436	242.268	8410.054
12.	Satara	294.513	2097.881	2557.856	111.722	5061.972
13.	Sangli	300.336	1264.102	3713.744	111.719	5389.902
14.	Kolhapur	136.441	1909.609	6131.230	61.868	8239.148
15.	Solapur	610.780	3226.866	2372.043	295.755	6505.444
Total		1822.151	13850.728	17110.309	823.333	33606.520
AURANGABAD REGION						
16.	Aurangabad	344.528	1048.935	598.154	104.576	2096.193
17.	Jalna	300.583	268.956	484.153	61.748	1115.439
18.	Parbhani	477.130	80.683	636.134	57.674	1251.621
19.	Beed	460.278	1721.336	1406.486	136.092	3724.192
Total		1582.519	3119.910	3124.927	360.089	8187.445

Sr. No.	Districts	Indigenous Cows	Crossbred Cows	Buffaloes	Goats	Total Milk Production
LATUR REGION						
20.	Latur	364.443	242.059	1436.379	43.140	2086.021
21.	Osmanabad	301.678	1183.420	1011.892	63.154	2560.144
22.	Nanded	912.070	161.372	1174.402	100.574	2348.417
23.	Hingoli	339.821	107.586	408.594	44.483	900.484
Total		1918.012	1694.437	4031.267	251.350	7895.066
AMRAVATI REGION						
24.	Amravati	372.588	268.958	604.216	65.376	1311.138
25.	Akola	206.726	134.474	352.563	40.527	734.291
26.	Washim	224.034	53.787	389.937	41.192	708.950
27.	Buldhana	414.839	457.231	882.453	90.166	1844.690
28.	Yavatmal	520.662	188.272	554.384	95.894	1359.212
Total		1738.849	1102.722	2783.553	333.156	5958.281
NAGPUR REGION						
29.	Nagpur	354.667	726.189	504.372	75.830	1661.058
30.	Wardha	235.365	403.432	276.407	43.403	958.608
31.	Bhandara	135.497	403.432	417.461	44.225	1000.614
32.	Gondia	245.622	107.586	390.390	46.772	790.369
33.	Chandrapur	217.788	134.474	308.781	42.887	703.930
34.	Gadchiroli	282.582	26.899	190.199	41.203	540.883
Total		1471.520	1802.012	2087.610	294.320	5655.462
Maharashtra State Total		13129.490	34157.030	37020.970	3037.370	87344.860

Note :- 1Kg. =0.9727 litre

TABLE No. 6
EGGS PRODUCTION IN MAHARASHTRA STATE DURING THE YEAR
2012-13 (FIGURES IN LAKHS)

Sr. No.	Districts	Desi Poultry		Improved Poultry		Total Egg Production
		Approx.No. of layers	Egg Production	Approx.No. of layers	Egg Production	
MUMBAI REGION						
1.	BrihanMumbai	0.14	17.46	0.03	8.01	25.47
2.	Thane	6.03	698.90	0.37	101.03	799.93
3.	Raigad	3.24	375.59	0.18	49.69	425.28
4.	Ratnagiri	3.36	396.19	0.63	172.29	568.48
5.	Sindhudurg	1.82	212.10	0.15	41.28	253.38
Total		14.59	1700.24	1.36	372.30	2072.54
NASHIK REGION						
6.	Nashik	4.21	497.13	34.10	9355.91	9853.04
7.	Dhule	1.37	162.45	2.64	724.68	887.13
8.	Nandurbar	2.59	305.90	6.20	1701.19	2007.09
9.	Jalgaon	0.83	98.02	0.34	92.17	190.19
10.	Ahmednagar	7.44	928.60	5.48	1501.98	2430.58
Total		16.44	1992.10	48.76	13375.93	15368.03
PUNE REGION						
11.	Pune	2.20	274.93	25.34	6950.78	7225.71
12.	Satara	8.95	1097.73	0.73	200.12	1297.85
13.	Sangli	4.97	628.84	24.38	6647.94	7276.78
14.	Kolhapur	4.18	529.26	4.88	1337.74	1867.00
15.	Solapur	8.47	1053.82	9.16	2512.43	3566.25
Total		28.77	3584.58	64.49	17649.01	21233.59
AURANGABAD REGION						
16.	Aurangabad	1.08	125.91	2.13	584.76	710.67
17.	Jalna	0.76	88.32	3.13	859.43	947.75
18.	Parbhani	0.78	94.26	0.35	96.33	190.59
19.	Beed	2.39	297.74	0.75	206.29	504.03
Total		5.01	606.23	6.36	1746.81	2353.04

Sr. No.	Districts	Deshi Poultry		Improved Poultry		Total Egg Production
		Approx.No. of layers	Egg Production	Approx.No. of layers	Egg Production	
LATUR REGION						
20.	Latur	0.57	70.56	1.80	494.83	565.39
21.	Osmanabad	0.84	104.68	3.70	1015.53	1120.21
22.	Nanded	1.73	213.06	1.39	380.55	593.61
23.	Hingoli	0.57	69.55	0.07	19.11	88.66
Total		3.71	457.85	6.96	1910.02	2367.87
AMRAVATI REGION						
24.	Amravati	0.76	90.29	0.51	139.22	229.51
25.	Akola	0.39	46.58	0.07	18.33	64.91
26.	Washim	0.57	67.82	0.15	40.15	107.97
27.	Buldhana	0.07	7.99	0.01	2.41	10.40
28.	Yavatmal	2.28	269.94	0.06	15.17	285.11
Total		4.07	482.62	0.80	215.28	697.90
NAGPUR REGION						
29.	Nagpur	1.12	138.21	0.06	16.53	154.74
30.	Wardha	0.43	52.71	1.33	364.26	416.97
31.	Bhandara	0.84	102.98	0.05	14.58	117.56
32.	Gondia	0.78	95.53	0.78	213.67	309.20
33.	Chandrapur	2.53	281.43	0.11	29.98	311.41
34.	Gadchiroli	2.23	248.84	0.03	9.37	258.21
Total		7.93	919.70	2.36	648.39	1568.09
Maharashtra State Total		80.52	9743.32	131.09	35917.74	45661.06

TABLE No. 7
DISTRICT WISE WOOL PRODUCTION IN MAHARASHTRA STATE DURING
THE YEAR 2012-13

Sr. No.	Districts	Estimated number of sheep shorn (in Lakhs)	Estimated Wool production (M.T.)
MUMBAI REGION			
1.	Brihan Mumbai	N	N
2.	Thane	0.02	0.992
3.	Raigad	0.01	0.754
4.	Ratnagiri	0.01	0.140
5.	Sindhudurg	N	N
Total		0.04	1.886
NASHIK REGION			
6.	Nashik	3.07	183.196
7.	Dhule	2.62	156.037
8.	Nandurbar	0.13	7.865
9.	Jalgaon	0.26	15.763
10.	Ahmednagar	2.90	172.787
Total		8.98	535.648
PUNE REGION			
11.	Pune	3.29	196.409
12.	Satara	2.70	160.934
13.	Sangli	1.69	100.542
14.	Kolhapur	1.43	85.554
15.	Solapur	1.87	111.346
Total		10.98	654.785
AURANGABAD REGION			
16.	Aurangabad	0.84	50.136
17.	Jalna	0.23	13.856
18.	Parbhani	0.21	12.542
19.	Beed	0.79	47.300
Total		2.07	123.834

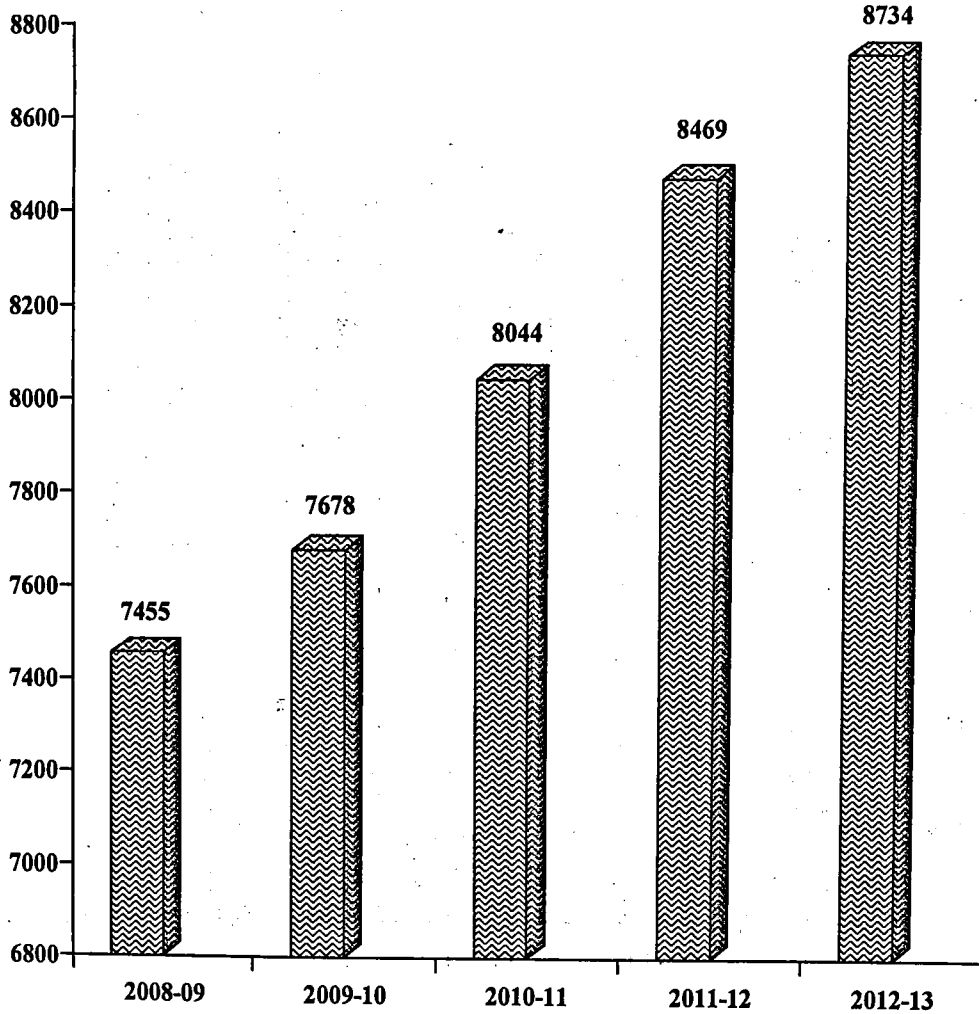
Sr. No.	Districts	Estimated number of sheep shorn (in Lakhs)	Estimated Wool production (M.T.)
LATUR REGION			
20.	Latur	0.34	20.511
21.	Osmanabad	0.33	19.471
22.	Nanded	0.46	27.379
23.	Hingoli	0.05	2.986
Total		1.18	70.347
AMRAVATI REGION			
24.	Amravati	0.51	30.681
25.	Akola	0.06	3.528
26.	Washim	0.09	5.499
27.	Buldhana	0.71	42.297
28.	Yavatmal	0.17	10.407
Total		1.54	92.412
NAGPUR REGION			
29.	Nagpur	0.08	4.689
30.	Wardha	0.02	1.277
31.	Bhandara	0.01	0.485
32.	Gondia	0.01	0.206
33.	Chandrapur	0.09	5.408
34.	Gadchiroli	0.20	11.527
Total		0.41	23.592
Maharashtra State		25.20	1502.504

Note :- 1. N = Negligible

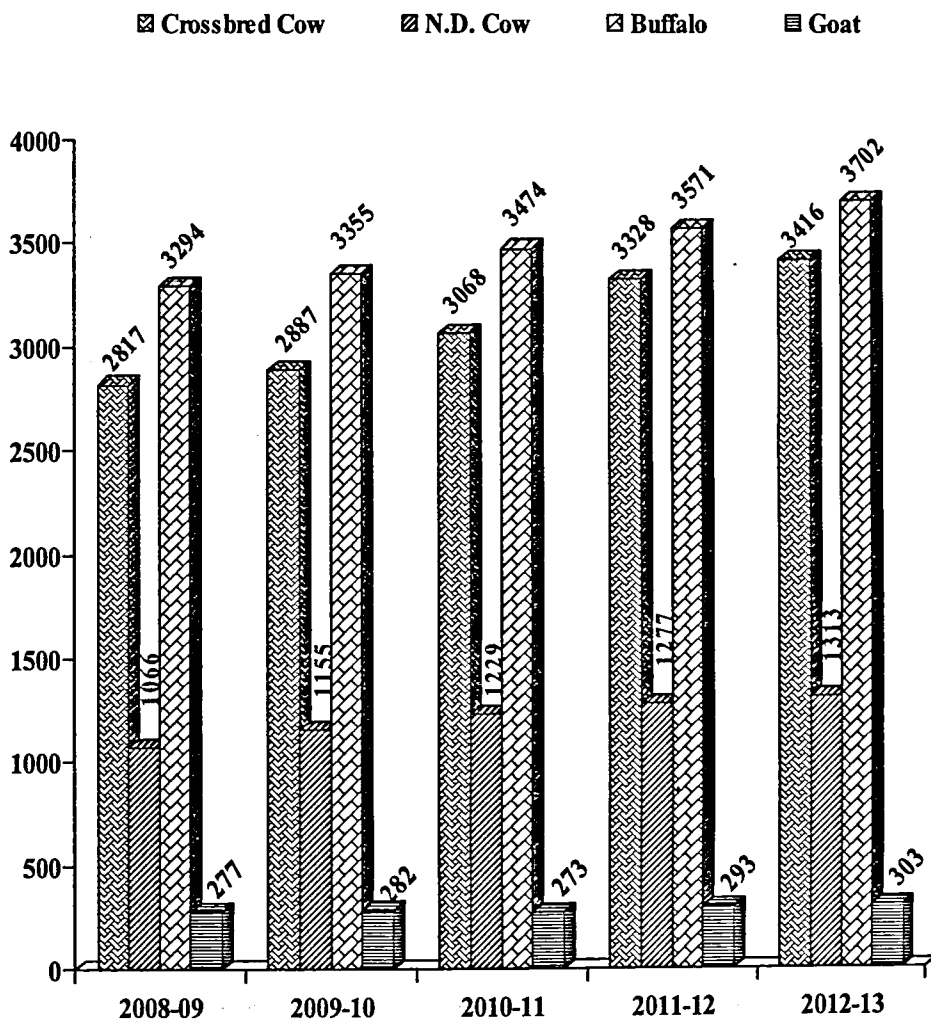
2. The wool production is estimated on the basis of estimated number of sheep shorn and estimated average wool yield per sheep shorn during the year.
3. The estimated average yield per sheep shorn during the year 2012-13 is 596 gms.
4. The district wise wool production figures are approximate one.

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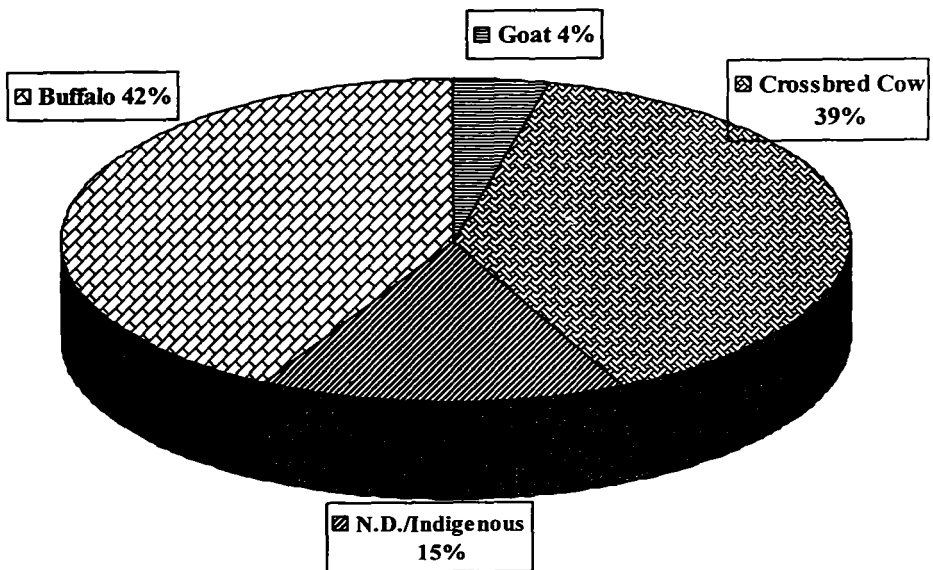
Estimated Milk Production ('000' tonne)
Maharashtra State
2008-2009 to 2012-2013



Comparative Milk Production (000 Tns.) Maharashtra State 2008-09 to 2012-2013

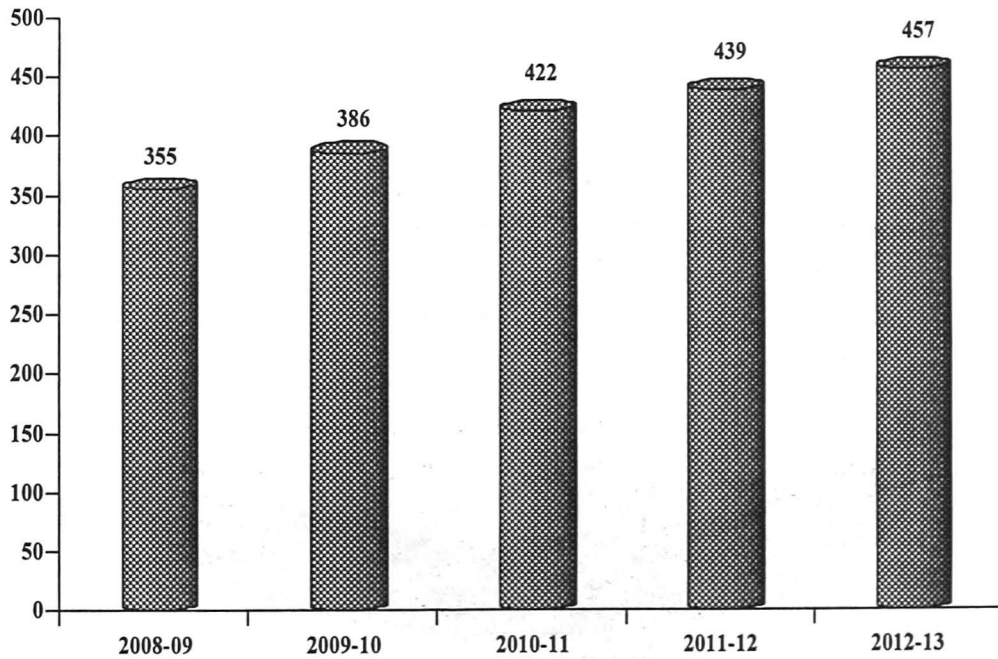


**Species Wise Milk Production (%)
Maharashtra State 2012-2013**

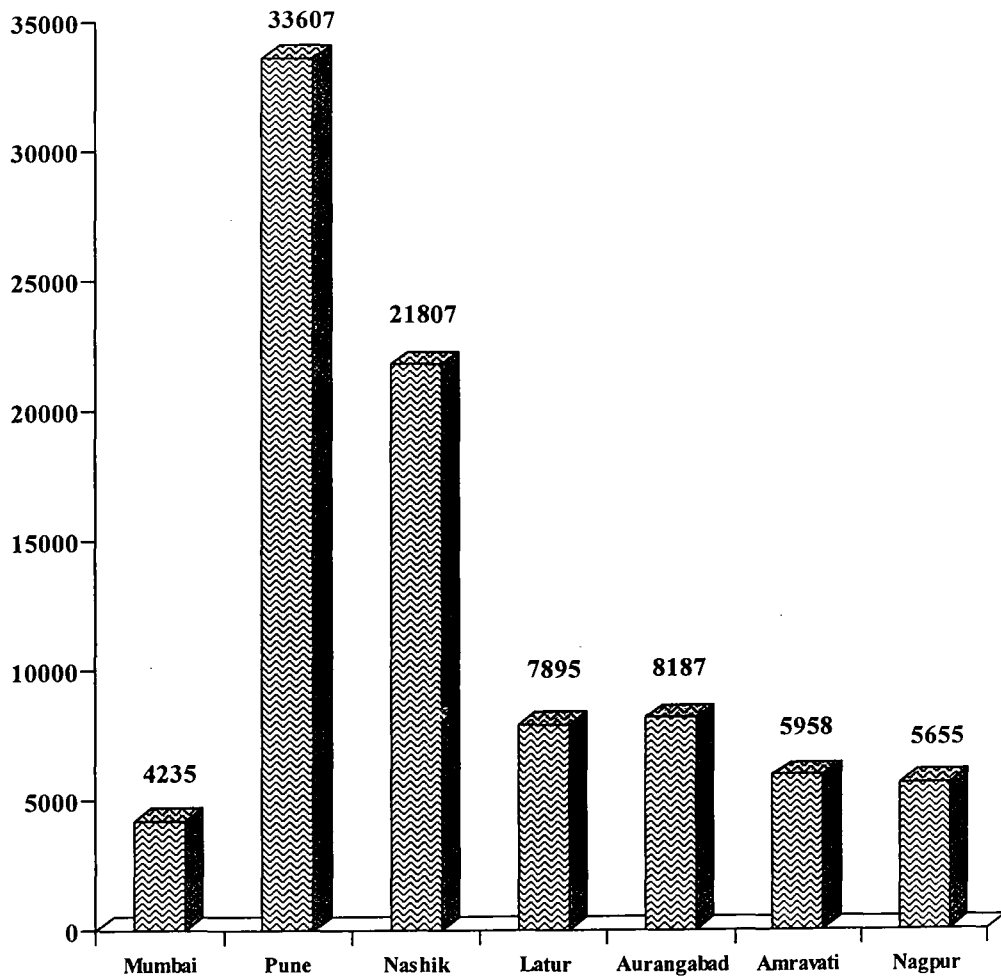


Goat 4% Crossbred Cow 39% N.D./Indigenous 15% Buffalo 42%

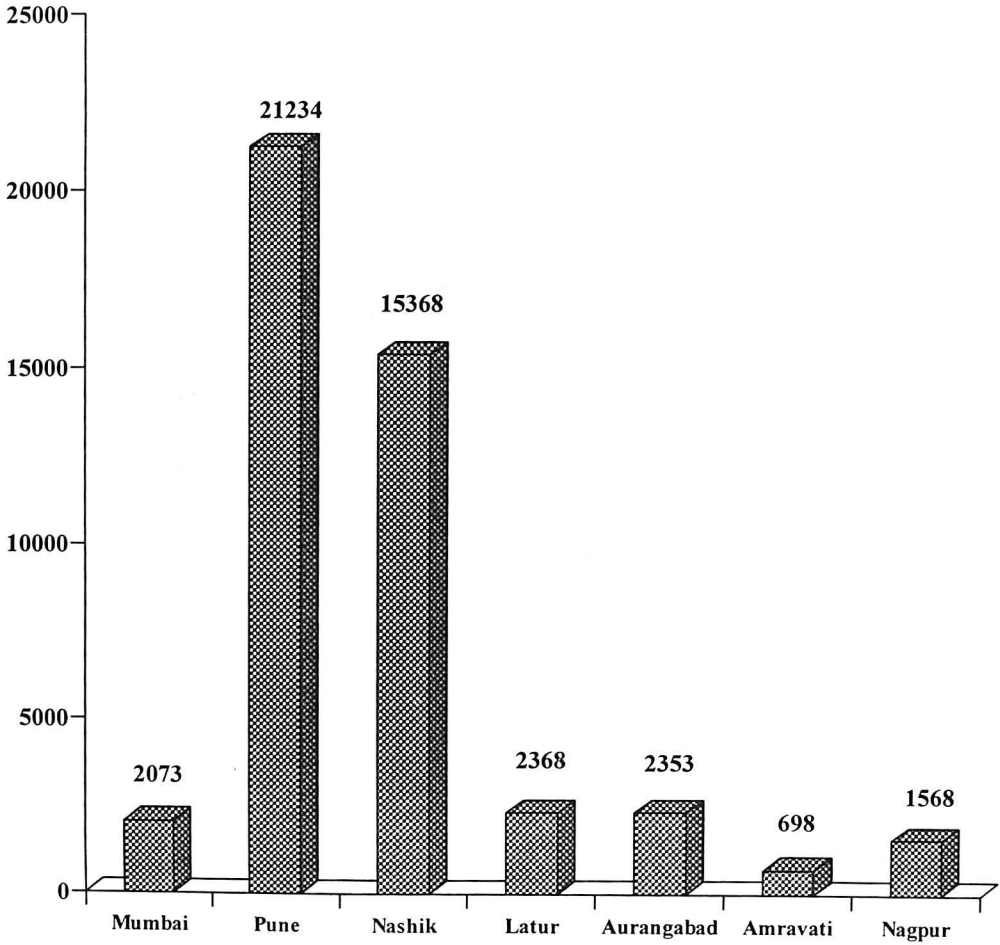
**Estimated Egg Production (Crores)
Maharashtra State 2008-2009 to 2012-2013**



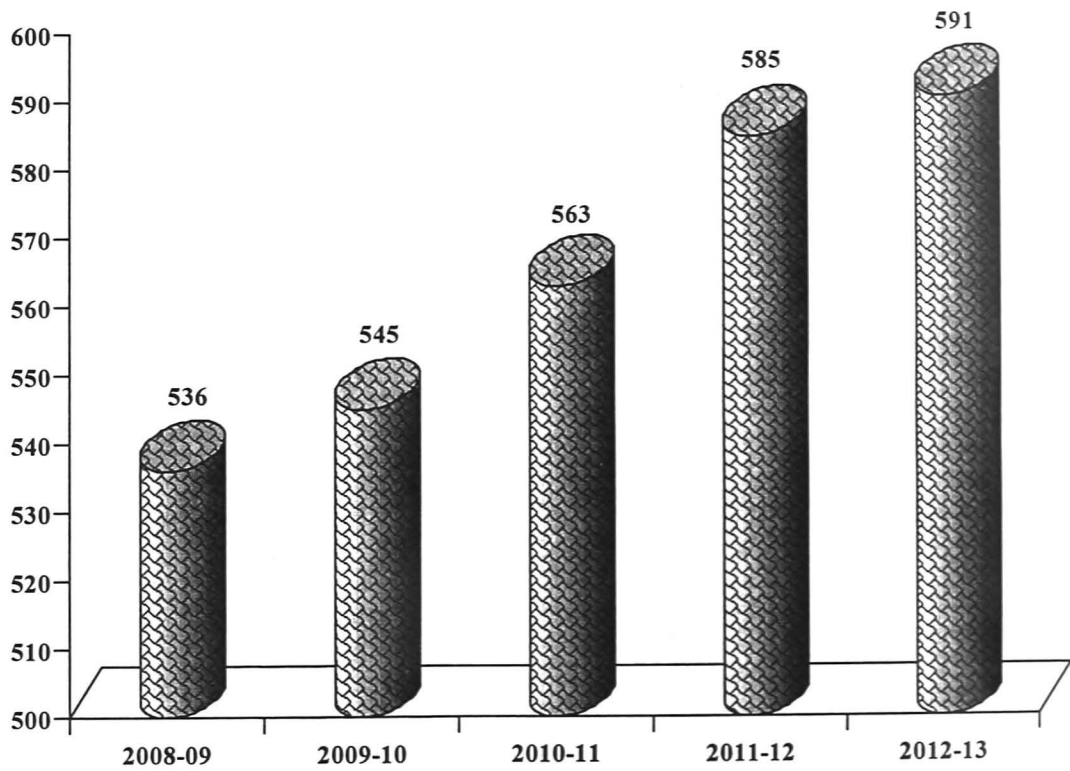
**Region Wise Milk Production (Lakh Kg.)
Maharashtra State 2012-2013**



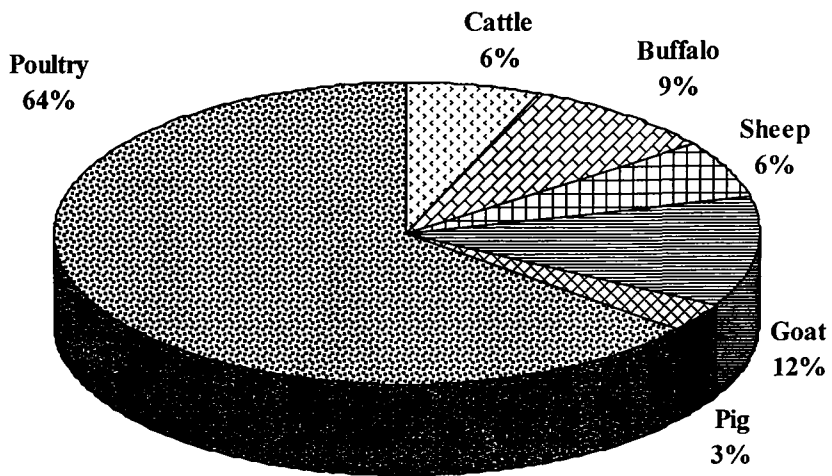
Region Wise Egg Production (Lakh) Maharashtra State 2012-2013



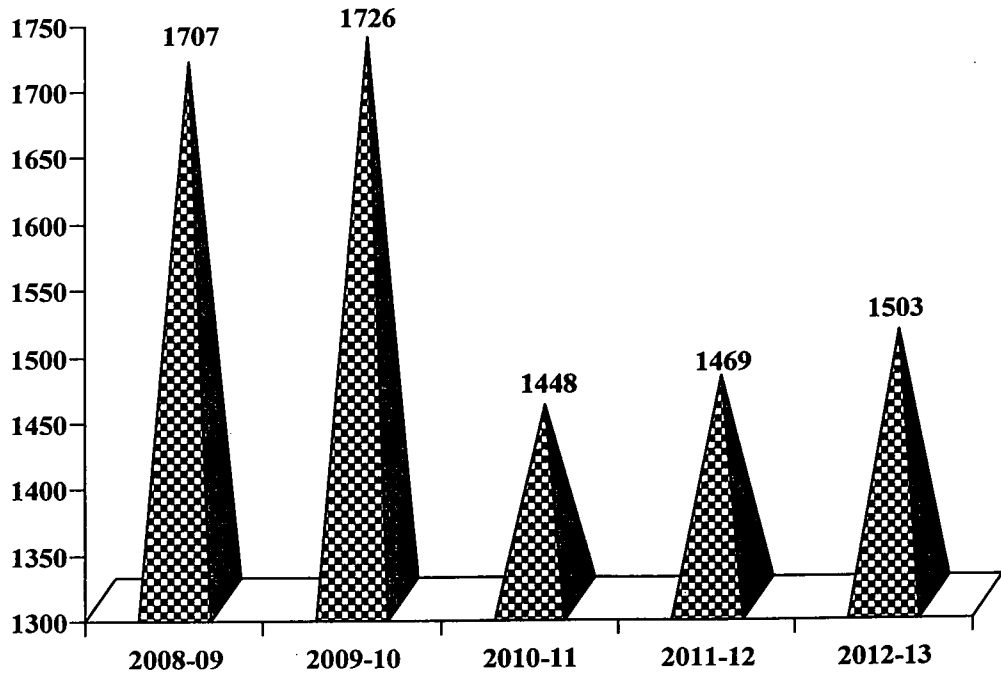
**Estimated Meat Production ('000' Tns)
Maharashtra State 2008-2009 to 2012-2013**



**Species Wise Meat Production (%)
Maharashtra State 2012-2013**



**Estimated Wool Production ('000' Kg.)
Maharashtra State 2008-2009 to 2012-2013**



मुद्रणस्थळ - शासकीय फोटोझिको मुद्रणालय, पुणे - १