Government of Kerala

REPORTS ON INTEGRATED SAMPLE SURVEY 2018-19

ANIMAL HUSBANDRY DEPARTMENT

STATISTICS DIVISION

GOVERNMENT OF KERALA

REPORTS ON

INTEGRATED SAMPLE SURVEY

2018-19

Prepared by

STATISTICS DIVISION

DEPARTMENT OF ANIMAL HUSBANDRY

THIRUVANANTHAPURAM

PREFACE

The Integrated Sample Survey is a comprehensive database on the production of major livestock products Milk, Egg and Meat. It is unique in the sense that the only available source of MLP production. The Integrated Sample Survey is a centrally sponsored scheme designed for the estimation of seasonal as well as annual data on Production of Major Livestock products-Milk, Egg and Meat. It is being carried out in the State round the year ,along with the rest of the country, on seasonal basis since 1977-78 by the Statistical Division of the Directorate of Animal Husbandry with the field level support of the technical staff of the Department utilizing the methodology developed by the Indian Agricultural Statistics Research Institute, Government of India, New Delhi.

I would like to place on merit the efforts made by the statistics wing of the Animal husbandry department who compiled and consolidated the report. The word of appreciation is also extended to the earnest service of the field level officers and the District Animal Husbandry Administration for their effective coordination. Thanks are also due to the farmers who co-operated with the survey by providing correct information to the enumerators.

I hope this report which provides basic statistics of animal husbandry sector will be of great use for Research Scholars, Planners, Administrators and it will help them to take corrective measures for the sustainable development in livestock sector. Suggestions for the improvement of the content of the publication is welcomed.

Sd/-

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Director of Animal Husbandry

Thiruvananthapuram,

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CHAPTER 1

INTRODUCTION

1.0 Kerala General Information

Kerala is one among the smaller states of India covering a geographical area of 38,863 square kilometers only. It is located between 8^0 18' and 12^0 48' North Latitude and 74^0 52' and 77^0 22' East Longitude. The state may be divided in to three geographical regions – Highlands, Lowlands and Midlands. The Highland slope down from the Western Ghats and constitute a natural boundary in the east. Major plantations like Tea, Coffee, Rubber, Cardamom and other spices are grown here. The Lowlands in the coastal area is made up of the river deltas, backwaters and the Arabian Sea shore. The state has a coastal line of length 580 kilometers. Mainly Coconut and Paddy are grown here. The Midlands is made up of undulating hills and villages. It lies between the Highlands and Lowlands. Cashew, Coconut, Tapioca, Banana, Ginger, Pepper and vegetables of different varieties are grown in thisarea.

1.1 Soil Structure

The various types of soil seen in the state are the hilly and forest soil in the eastern parts, the Sandy soil in the Midlands, the laterite soil in the Midlands, the Black soil seen in Palakkad district, the Peat or Kari soil of Alappuzha district, the Alluvial soil seen some parts of Kottayam, Idukki, Ernakulam and Thrissur districts and the Red soil found in the extreme tip of Thiruvananthapuram Taluk.

1.2 Climate And Rainfall

The major sources of rainfall in the State are South West Monsoon (June to September) and the North-East Monsoon (October to September). The normal rainfall in the State is 3097mm. Even though Kerala is very close to the equator, the climate remains more or less moderate, as the seashore is not far away in most parts of theState.

1.3 Population And Sex Ratio

According to the 2011 census, the human population in Kerala is 3,33,87,677 of which the female population is 1,73,66,387. The sex ratio indicates 1084 females for 1000 males. Kerala had a literacy of 93.91% (excluding children below 6 years) as per the 2011 census.

1.4 Animal Husbandry sector

The Animal Husbandry sector is of great importance in the economy of Kerala. Themajor share of wealth of the rural population of the state is animal wealth. The animal wealth of the state is mainly concentrated in the rural areas. Therefore, any development in the animal husbandry sector will serve to boost the rural economy of the state, like wise a slow down in this sector will pose a threat to the rural economy. The majority of the Livestock population in the State is concentrated in rural areas. The progress in livestock will directly reflect a more balanced development in rural economy and uplifting of weaker sections of the society. A large manpower is also involved in livestock rearing and related activities. This sector provides the people of Kerala with immense employment opportunity with minimum investment, thereby increasing their income. The Animal Husbandry Department thus aims to improve the wealth of the state, improve the employment opportunities in the Animal Husbandry Sector, thereby improving the income of the economically backward sections of thesociety.The main objectives of the Animal Husbandry Department is to strengthen the livestock population of the State both quantitatively and qualitatively and convert the State in to a disease controlled zone by controlling/eradicating animal diseases. Prevention of disease includes control of contagious diseases by systematic vaccination. For that, the department introduces so many schemes such as Rinderpest Eradication Programme, Disease Free Zone Schemes, animal Disease Control Programmeetc.To achieve the aim of increasing milk and meat production, cattle development programmes have been imparted in the State. Among them the most important is crossbreeding activities. Besides, this the department have goat rearing

programmes, buffalo rearing programmes, pig and rabbit breeding programmes, poultry development programmes etc. The department also imparts training to farmers on how to incorporate scientific managements of production so that it can ultimately enhance production. Training were also given to women for preparing themselves to take up domestic units of livestock and poultry of manageable size to supplement family income. Provide technical knowledge and relevant information on various schemes implemented in the Animal Husbandry sector with a view to uplift the weaker sectionof the society. Help the unemployed youth to gain self-employment. Various training offered by the department are dairy farming, goat farming, duck farming, pig farming, broiler production, layer management, backyard poultry production, quail farming, chick sexing etc.

CHAPTER 2

INTEGRATED SAMPLE SURVEY

The production of major Livestock Products (MLP), namely, milk, eggs, and meat is estimated on the basis of annual sample surveys being conducted through out India under the Central Sector Scheme "**Integrated Sample Survey**". The scheme is implemented by Department of Animal Husbandry, Dairying & Fisheries, Government of India (GoI) through State Animal Husbandry Departments. All the States and Union Territories are implementing the scheme. The state of kerala too had been implementing the scheme from 1977-78 onwards for the timely availability of reliable and current data relating to various livestock indicators. As such Integrated Sample Survey has become an essential data base for evolving, monitoring and evaluating various developmental schemes in this sector. Time series data on milk yield per lactating animal and total number of lactating animals helps the Animal Husbandry Department to assess the impact of departmental efforts, particularly towards an increasing livestock population and livestock products, disease control, genetic up-gradation and feed &fodder management. Further, reliable production estimates of MLP and the estimates of feed and fodder consumption are vital for preparing the estimates of value of output and the estimates of GDP from this sector. Again for formulating the export-import policies of major livestock products both at central and state level this time series data has been utilizedsignificantly.

The Quinquennial live stock census, usually conducted in every five years gives the live stock numbers only.Since the livestock and poultry numbers are subjected to considerable changes annually or even seasonally, the trend in such changes could be measured only through conducting sample surveys. With a view to assess the periodical changes in the sector, Government of India introduced "Integrated Sample Survey" scheme, which provides 50% of salary component to statistical set up in the state. The scheme envisages collection of data on milk, egg, meat, wool and other live stock products which is meant for the preparation of seasonal and annual reports. The

scheme is being implemented in the state since 1977-78 as per the guidelines issued from the AHS, Government of India. The estimates of production of milk, egg, meat, wool based on the survey are used for planning and other related purposes by both Central and State Governments/ Agencies. Emphasis is also given to the preparation of state level as well as district level estimates of the production of live stock products and its cost of production. **The estimate made through the survey is the only source of data available for the purpose.**

2.1 MAN POWER FOR INTEGRATED SAMPLE SURVEY

As per the approved pattern of Government of India following are the staff allotted for the implementation of the scheme in the state.

No	Name of Post	In position
	Head Quarters Level	
1	Joint Director (Statistics)	1
2	Deputy Director (Statistics) (Entitled/sanctioned-2)	0
3	Assistant Director/Research Officer(Entitled/sanctioned-4)	2
4	Research Assistant/Statistical Assistant	4
	District Level	
5	Enumerator	28
6	Field Officer(Supervisor)/Data Entry Operator	3
7	Data Entry Operators	14
	Total	**52**

Data collection is being done by the Livestock Inspectors and enumerators. The complete enumeration is done by the Live Stock Inspectors (LSI) of the Department

attached to the Veterinary Dispensary/ Integrated Cattle Development Project (ICDP). They apart from their routine work has to do the sample survey as a part time work for which they were given additional remuneration. Hence different samples are allocated for different seasons almost all Live Stock Inspectors are involved in the data collection in one season or other. The supervision of the work done by the Livestock Inspectors are usually done by the Veterinary Surgeon of the concerned Veterinary Dispensary. Livestock Inspectors will do the work of listing of live stock and the Enumerators (Primarily Livestock Inspectors meant for the survey) attached to the district offices will do the detailed enumeration for yield estimation and cost of production. They will be supervised by three Field Officers with regional jurisdiction. The Joint Director (Statistics) attached to the Directorate of Animal Husbandry is having the overall supervision of the conduct of the survey. The Joint Director (Statistics) and the Research Officers attached to the Directorate of Animal Husbandry conducts periodical inspection of the field work and also arrange district level training to the field officials. Further these officers are entrusted with the duty of imparting training to the 28 enumerators and 2500 livestock inspectors of entire state. The Statistical wing in the District offices of Animal Husbandry and the Directorate of Animal Husbandry are entrusted with the task of compilation, consolidation, estimation and presentation of the data.

Livestock Inspectors and Enumerators are the basic workforce of Integrated Sample Survey. Two Enumerators were posted in a district exclusively for the Integrated Sample Survey. These Enumerators and Field Officers are collecting data from the field in the entire season, through out the year. On an average one enumerator has to collect data from 5 panchayath wards. It may be noted that the Enumerators are initially doing the complete enumeration (Listing) work in the five wards alloted to them and there after they have to collect the details regarding the yield rate of various breeds of the animal the feed consumption pattern, the utilization pattern ,the production cost etc from the selected sample households in each rounds. As the season is divided in to four rounds, it is imperative that the enumerator has to visit the sample household of each sub sample every month. On an average, a panchayath ward of

Kerala consists of 500 households. Every enumerator had to visit roughly 2500 households per season (4 months) and had to visit roughly 40 households per ward per month for taking detailed enumeration. Altogether the enumerators had to visit 200 households per month for detailed enumeration. As the samples occur at the different locations of the district the enumerators were given a district wise jurisdiction.

Field Officers are assigned regional jurisdiction. Out of three Field Officers, two of them had to inspect four districts each while the other Field Officer had to inspect six districts. These Field Officers are verifying the second and third stage sampling and also visiting the sample house holds for verifying the data collected by the Enumerators in their respective districts. These Field Officers perform extensive travel from their head quarters in order to conduct field level inspection. The Joint Director (Statistics) and Research Officers conduct statewide Field Inspections to ensure the quality of field data. Besides, the District Animal Husbandry Officers, Deputy Directors and Veterinary Surgeons also do conduct random check of the fieldwork. For ensuring quality data a district level monitoring mechanism under the Deputy Director of each district is being introduced. As such the entire department staffs in one way or other is associated with the conduct of Integrated Sample Survey.

2.2 DETAILS OF SAMPLING

As per the guidelines issued by Government of India, the survey is being done in 15% samples, of total panchayath wards of the state, in a year, thereby 5% each in each season. As the survey is continuous every year 15% is replaced by another 15% of total wards using simple random sampling without replacement method. Unlike other states where villagewards are the first stage sample, in Kerala it is drawn from the rural panchayath wards. There are 16680 rural panchayath wards in the state. Thus the number of samples in a season is 837. District wise break up is given below.

Sl. No	Name of District	No. of samples	
		In a season	In an year
1	Thiruvananthapuram	65	195
2	Kollam	64	191
3	Alappuzha	41	122
4	Pathanamthitta	60	178
5	Kottayam	59	177
6	Idukky	41	123
7	Eranakulam	69	205
8	Thrissur	75	225
9	Malappuram	77	231
10	Palakkad	95	285
11	Kozhikode	67	200
12	Wayanad	23	69
13	Kannur	68	204
14	Kasaragod	33	99
	Total	**837**	**2504**

2.3 COVERAGE AND PERIOD OF SURVEY

The Survey is conducted in all the fourteen districts of the state on a seasonal basis. A year is divided in to 3 seasons as per the specification below:

Summer Season	1st March to 30th June
Rainy Season	1st July to 31st October
Winter Season	1st November to 28th / 29th February

The Survey is conducted in the entire rural and urban areas of States/UTs. The survey is conducted in the selected sample rural panchayath wards of Kerala / and also selected municipal/corporation urban wards. From all these wards listing of all households, and household enterprises, non household enterprises, institutions pursuing annual husbandry and related activities were done, further slaughter houses, butcher shops and related activities were also enumerated.

2.4 METHODOLOGY OF THE SURVEY

Sampling Design: A Stratified multistage Simple Random Sampling With out Replacement design is adopted for the sample survey. The primary stage unit of sampling is the Local Self Government ward. The secondary stage unit is the households in the selected ward.The animal / bird in the selected households will be the ultimate stage unit. The districts form the strata.

2.5 SAMPLE FRAME

The list of latest Livestock Census villages constitutes the. For the estimation of livestock numbers, 15% (5% of each season) of the Panchayath wards will be selected in the form of two independent sub-samples in a State for complete enumeration of livestock and poultry population (5% in each season) by using Simple Random Sampling Without Replacement (SRSWOR) These 15% sample wards are allocated to different districts in proportion to the population as per the latest livestock census. These Sample wards are divided into two independent sub samples - Sub Sample 1 and Sub Sample 2. One third of this will be covered in each season. From these wards selected for complete enumeration, 10 wards (4 Panchayath wards and one urban ward) each are again selected for detailed study for each season in order to collect the information on yield at the district level. Equal number of sample villages from each sub-sample will be allocated among the three seasons. Based on the primary data collected from the sample wards, district wise estimates are prepared for each season. By pooling district wise estimates, the state level estimates for each season is obtained. The annual estimates are reached at by pooling the three Seasonalestimates.

Each month in a season is termed as round and there are four rounds in each season. The households possessing in milk bovine / goats and laying birds are selected for detailed study which is the ultimate stage unit-the animals from the households are selected in the following pattern:

Major livestock product	Category	Total number of HH to be selected from a selected ward	Total number of animals that has to be selected	Total no of wards taken for detailed in a district	Total number of HH to be selected (District seasonly)	Total number of HHs to be selected (District yearly)	Total number of HHs to be selected (State yearly)
Milk	Cattle	2 HHs for 4 different cattle species Total 8 HHs	2 animals from each species (16 animals)	10	80	240	3360
	Buffalo	2 HHs for 2 different Buffalo species Total 4 HHs	2 animals from each species (4 animals)	10	40	120	1680
	Goat	2 HHs	2 animals	10	20	60	840
Egg		20 HHs	All layers in the selected HH	10	200	600	8400
Meat	All household/Butcher shops having butchering + Commercial Poultry Farm						

HH – House hold

2.6 Milk Yield Data

From a detailed sample ward, 12 households having in milk bovines are selected for collecting the milk yield data in a season (having representation of two households rearing exotic cattle,two households rearing crossbred cattle, two households rearing indigenous cattle, two households rearing non descript cattle, two households rearing indigenous buffaloes, two households rearing non descript buffaloes). As ten wards of a district are selected for detailed survey, altogether 120 households are taken for detailed study in a district for collecting the bovine milk yield data in a season. As there are three seasons in a reference year 360 households are taken for data collection in a district for milk yield data. Thus 5040 households from the entire state are taken in to consideration for assessing the bovine milk yield data. As inter substitution are possible within the same category, the deficient households are substituted from the available categories. The milk yield in both morning and evening of the milking

animals are collected,and the process is repeated for the entire season consisting of 4 rounds (4 months),and finally consolidating the average of four months as the milk yield of the selected animal.

Similarly 2 households having in milk goats are selected for collecting the milk yield data for goat milk in a season from a selected ward. Thus altogether 20 households are taken for detailed study in a district for collecting the goat milk yield data in a season. As three seasons are there in a reference year 60 households are taken for data collection in a district for goat milk yield data .Thus 840 households from the entire state are taken in to consideration for assessing the goat milk yield data.

2.7 Egg Yield Data

From a detailed sample ward; 20 households having poultry layers are selected for collecting egg yield data. The households thus selected should have proper representation ofdesi fowl, improved fowl, desi duck and improved duck of that selected ward. Thus 200 households are taken for detailed study in a district for collecting the egg yield data in a season .Altogether as three seasons are there in a reference year, 600 households are taken for data collection in a district for egg yield data .Thus 8400 households from the entire state are taken in to consideration for assessing the egg yield data. Eggs laid by all the poultry layers during the 24 hours prior to the enumerator's visit in the households are collected.

2.8 Meat Yield Data

The number of animals/birds slaughtered in the households, butcher shops and the quantity of meat produced are also collected. The meat production from the broiler farms is also being accounted for the estimates of annual meat production in the state. Both commercial meat production and meat production in the households are separately calculated. The sum of the above will give the total meat production.

2.9 TYPES OF DATA COLLECTION

The detailed information regarding Milk, Egg and Meat Production was collected from the selected households of selected wards.

(1) The information collected in respect of milk production is as follows.

1. Milk yield of selected animals on the day of visit both morning and evening (data is collected for 4 consecutive months).
2. Feed consumption of animals on the day of visit.
3. Age wise/Utility wise details of animals.
4. Productions and utilization of milk products on the previous day of visit.
5. Collection and utilization of milk and dung of the animals of the selected households.

(2) The information collected regarding Poultry are asfollows:

1. Production, purchase and utilization of eggs during the previous day of visit.
2. Feed supply and disposal of birds.
3. Particulars of desi/improved birds.

(3) The information collected regarding Meat are asfollows:

1. Animals of different species slaughtered in selected slaughterhouses
2. Details of animals slaughtered in during the last four months byhouseholds
3. Details of animals slaughtered in during the last four months by butchers and other agencies with in the ward and within a radius of 2 kilometers.
4. Average quantity of meat obtained per animal of different species.

CHAPTER 3

LIVESTOCK CENSUS

The estimates of Integrated Sample Survey are exclusively based on the quinquniel livestock census. Through Integrated Sample Survey we are observing the increase or decrease of livestock population from the last census on which the ISS year estimates are based (here the 19th livestock census 2012). The MLP estimates are evolved after generating the ratio between the current productive populations of the selected wards to the productive livestock population of those wards during census 2012. As such in this report it is essential to have a reference to the findings of 19th livestock census 2012.

3.1 COMPARISON OF LIVESTOCK OVER THE CENSUS YEARS

17th livestock census 2003 (in millions)	18th livestock census 2007 (in millions)	19th livestock census 2012 (in millions)
3.48	**3.58**	**2.73**

Thus it is evident that in Kerala livestock population has been showing decreasing trend down the years. On comparing the 17th and 18th livestock census there exist a rate of increase of 2.87 percentage in Cattle Population, while 18th and 19th Livestock Census shows a higher decrease of 23.74% in Cattle Population**.**

3.2 REASON FOR DECLINE OF CATTLE AND BUFFALO POPULATION

The trend in livestock population of Kerala has been examined on the basis of quinquennial livestock Census data. Kerala has witnessed a declining phase of the livestock, especially cattle and buffallo populaion over the census period from 2007 and 2012.

It is assumed that the factors attributed to the decline are scarcity of cheap and quality fodder, rapid increase in the price of feed and feed ingredients, non availability of

family labour, inflow of cheap and low quality livestock products from neighbouring states, under exploitation of production potential of animals, and threat from contagious diseases like FMD etc.

The major reasons for the decline in cattle and buffalo populaion can be shortlisted as follows.

1) Decline of cultivable land and grazing land.

The density of kerala population is three times higher than the national average, means number of people living within a square kilometer is three times higher than the number of people dwelling in the rest of the country. This necissitated large scale urbanisation which eventually decreased the grazing land and cultivable land. kerala population are scattered through out the state unlike other states where people lives in hamlets.This eventually has increased the demand for land for residential purpose.The increse of demand for residential land give way to the decline of cultivable land and more particularily grazing land.

2) The reduction in the availabilty of straw

The paddy cultivation in kerala has shown a rapid decline over the years, resulting in the scarcity of straw which was once cheap and plenty in rural kerala. The livestock farmers find it difficult to maintain their cattles as they have to be fed the cattles with the straw from the neighbouring state which was highly expensive.

3) The rapid increase in the price of feed and feedingredients

Another factor for the decline in cattle and buffallo populaion was the increase in the price of feed and feed ingredients. As kerala has been depending too much on the neighbouring states for the feed and feed ingredients, the high prices fixed by the monopolistic cattle feeds manufactures of the other states ,made it difficult to the livestock farmers to maintain cattle.

4) The rise in the cost of veterinarypharmaceuticals

The rise in the cost of veterinary pharmaceuticals has shown a remarkable increase over the years which made it difficult for the livestock farmers to maintain cattle

5) The rearing of cattle less remunerative owing to huge wagerate

Another factor for the decline in cattle and buffallo populaion was the huge wage rate that existed in kerala. As such cattle rearing has become less remunerative compared to even casual labour of other sectors. With a flourishing construction and service sectors, Kerala workforce enjoyed a huge wage rate compared to the labourers of other states. Further the educated new generation shows an aversion or disinclination to the traditional agricultural or livestockpractices.

All the above factors contributed to the decline of cattle population over the census periods.

However milk production in the state has increased substancially over the years, inspite of the reduction in the cattle population, owing to the distinctive measures adopted by the state government to increase the yield rates of cattle and buffaloes by artificial insemination, scientific management practices, and better veterinaryservices.

3.3 Category wise Comparison of livestock over the Census Years

Sl No.	Category of Animals	17th livestock census 2003 (in 000 nos)	18th livestock census 2007 (in 000 nos)	Percentage change from 17th census	19th livestock census 2012 (in 000 nos)	Percentage change from 18th census
1	Exotic/Crossbred Cattle	1735	1621.25	-6.56	1251.58	-22.8
2	Indegenous Cattle	387	118.87	-69.28	77.05	-35.18
	Total Cattle	**2122**	**1740.12**	**-18**	**1328.63**	**-23.65**
3	Buffalo	65	58.15	-10.54	102.27	75.87
	Total Bovine	**2187**	**1798.26**	**-17.78**	**1430.9**	**-20.43**
4	Goats	1213	1729.13	42.55	1246.08	-27.94
	Poultry					

5	Fowls	10992	14218.83	29.36	21711.14	52.69
6	Ducks	661	994.86	50.51	1709.22	71.81
7	Turkey and Other poultry	563	471.82	-16.2	861.57	82.61
	Total Poultry	**12216**	**15686**	**28.41**	**24281.93**	**54.8**

3.4 Distribution of different species of livestock in 19th census

Sl No.	Category of Animals	Total (in 000 numbers)	% in Total livestock
1	*Cattle*	1328.63	48.56
2	Buffallo	102.27	3.74
3	*Goat*	1246.08	45.56
4	Pig	55.78	2.04
5	Sheep	1.45	0.053
6	Horses & ponies	0.22	0.00
7	Mules	0.23	0.00
8	Donkey	0.50	0.00
9	Camels	0.01	0.00
	Total livestock	**2735.16**	**100**

Out of the available livestock in the state, Cattle holds the major share of 48.56%, followed by Goat population which is of 45.56%. Contrary to the northern States of India, where the buffallo population holds the major share of the livestock population, in Kerala buffallo population holds only 3.74% share of the of the total livestock population.

3.5 Cross Section of Cattle Population.

Sl No.	Category of Animals	Total (in 000 numbers)	% in Total Cattle
1	Exotic/Crossbred	1251.58	94.20
2	Indigenious	77.05	5.80
	Total Cattle	**1328.63**	**100**

3.6 District wise break up of Livestock Population 2012

Sl. No.	Name of District	Cattle			Buffaloes	Sheep	Goats
		Crossbred	Indigenous	Total			
1	Thiruvananthapuram	97679	793	98472	3752	31	163980
2	Kollam	100910	1369	102279	5792	9	111342
3	Pathanamthitta	63783	551	64334	2846	18	51066
4	Alappuzha	75301	620	75921	5973	0	55158
5	Kottayam	80786	894	81680	6141	9	94297
6	Idukki	82933	7141	90074	5690	23	98503
7	Ernakulam	102107	4675	106782	12777	50	123538
8	Thrissur	99882	2865	102747	18650	94	128130
9	Palakkad	153567	12337	165904	9191	1157	113031
10	Malappuram	77928	2619	80547	19855	9	137718
11	Kozhikode	96073	8658	104731	4343	12	43962
12	Kannur	98298	1483	99781	813	3	56445
13	Wayanad	70315	2362	72677	5166	21	35150
14	Kasaragod	52020	30678	82698	1280	10	33757
State Total		1251582	77045	1328627	102269	1446	1246077

The table above reveals the district wise break up of livestock population in the census 2012. In Kerala there were 1251582 crossbred cattle and 77045 indegeneous cattle and altogether there were 1328627 livestock cattle in the state during 2012 Cattle Census.

CHAPTER 4

MILK PRODUCTION AND UTILIZATION 2018-19

MILK PRODUCTION 2018-2019
2548.68 Thousand metric tonnes

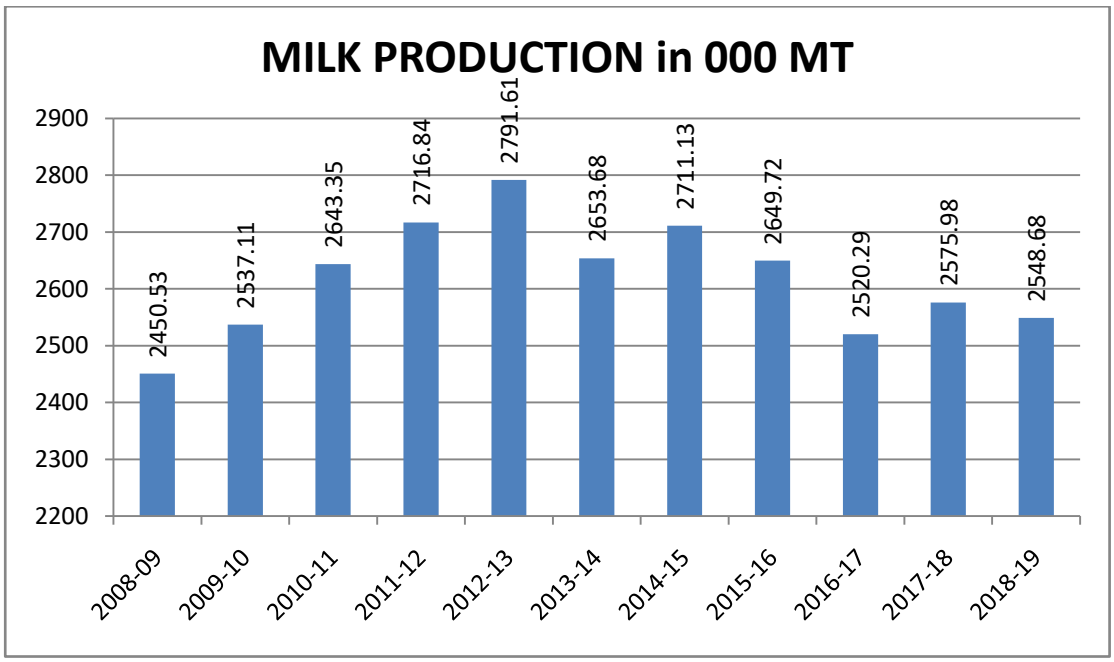
During the year under consideration (2018-2019), it is estimated that 2548.68thousandmetric tonnes of milk is produced in the state in place of 2575.98 thousandmetric tonnes produced during 2017-18 showing a decline of 1.06 percentage.

Milk Production of the State over the years

YEAR	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
MILK PRODUCTION in 000 MT	2450.53	2537.11	2643.35	2716.84	2791.61	2653.68	2711.13	2649.72	2520.29	2575.98	2548.68
% Change from previous year	9.00	3.53	4.19	2.78	2.75	-4.94	2.16	-2.27	-4.88	2.21	-1.06

It is evident that the general trend in the milk production of the state is of an increasing nature over the years. But during certain dull years the milk production shows a marginal decrease also. During 2015-16 and 2016-17 milk production has decreased by 2.27 and 4.88 percentage respectively and in 2017-18 milk production has increased by 2.21 percentage and in the reference year 2018-19milk production hasdecreased by 1.06 percentage from the previous year.

A trend showing the milk production status over the past years is depicted in the Graph below



Number of wards and households observed for milk production in Kerala under Integrated Sample Survey 2018-19

Season	Number of wards covered for Detailed Enumeration	No. of households covered for Detailed Enumeration
Summer	140	1685
Rainy	140	1812
Winter	140	1825
Annual	420	5322

During the year under consideration, detailed study was conducted in 420 selected wards. For detailed survey eight rural wards and two urban wards are selected in each season per District. From the selected wards households were selected for recording milk yield .From a detailed sample ward, 12 households having in milk bovines are to be selected for collecting the milk yield data in a season (altogether 12 households for milk yield from a selected wardhaving representation of two households rearing exotic cattle, two households rearing crossbred cattle, two households rearing indigenous cattle, two households rearing non descript cattle, two households rearing indigenous buffaloes and two households rearing non descript buffaloes). As ten wards of a district are selected for detailed survey, altogether 120 households are to be taken for detailed study in a district for collecting the bovine milk yield

data in a season. As three seasons are there in a reference year 360 households are to be taken for data collection in a district for milk yield data. Annually 5040 households are to be taken from the entire state for assessing the bovine milk yield data. As intersubstitution are possible within the same category, the deficient households are substituted from the available categories.

In the reference year 4902 households are taken from the entire state for assessing the bovine milk yield data. The milk yield of both morning and evening of the milking animals are collected and the process is repeated for the entire season consisting of 4 rounds (4 months), and finally consolidating the average of four months as the milk yield of the selected animal.

Similarly 2 households having in milk goats are to be selected for collecting the milk yield data for goat milk in a season from a selected ward. Thus altogether 20 households are to be taken for detailed study in a district for collecting the goat milk yield data in a season. As three seasons are there in a reference year 60 households are to be taken for data collection in a district for goat milk yield data. Thus 840 households from the entire state are to be taken in to consideration for assessing the goat milk yield data. In the reference year 2018-19, 420 households are taken from the entire state for assessing the goat milk yield data.

In the reference year 5322households are taken from the entire state for assessing both bovine as well as goat milk yield data.

From 4902 selected households, the lactation and milk yield details of 4214 cows and 60 buffaloes and from 420 households 2015 goats were observed. The milk yield per animal per day was estimated from these data.

From these 5322 households detailed survey was done and estimates had been prepared. The information collected in respect of milk production are as follows: Milk yield of selected animals on the day of visit both morning and evening (data is collected for 4 consecutive months), Feed consumption of animals on the day of visit, Particulars of animals such as number of lactation completed etc, Productions and utilization of milk products on the previous day of visit, Collection and utilization of milk and dung of the animals of the selected households.

It may be noted that the Enumerators are initially doing the complete enumeration (Listing) work for the selected wards allotted to them and there after they will select the households

for detailed study through simple random methods and once the households are selected they will visit those households to collect the details regarding the yield rate of various breeds of the animal, the feed consumption pattern, the utilization pattern, the production cost etc from the selected sample households in each rounds. As the season is divided in to four rounds, it is imperative that the enumerators have to visit the sample household of each sub sample every month.

Total milk production in Kerala during the year 2018-19

The estimates of Integrated Sample Survey were done seasonally and later seasonal estimates are pooled together to form the annual estimates. The three seasonal estimates were evolved at the end of the respective seasons and the annual estimates are done at the end of the reference year (March -February).

Season	Cows				Buffaloes		Goat	Grand Total
	Exotic/ Crossbred	Indigenous	Non Descript	Total	Indigenous	Non Descript		
Summer	780.323	0.767	9.107	790.20	3.705	0.678	38.985	833.57
Rainy	827.300	0.769	6.845	834.91	2.727	1.280	42.114	881.03
Winter	783.548	0.439	5.950	789.94	2.906	0.879	40.356	834.08
Annual 18-19	2391.171	1.975	21.902	2415.05	9.338	2.837	121.455	2548.68
2017-18	2416.036	2.047	24.457	2442.54	9.746	2.926	120.769	2575.98
% Variation	-1.03	-3.52	-10.45	-1.13	-4.19	-3.04	0.57	-1.06

If we examine the seasonal estimate data it is obvious that during rainy season the milk production is in its highest, followed by winter season and then by summer season. During summer season the milk production is estimated to be 833.57 (000MT) and in rainy season it increases to 881.03 (000MT) and in winter season it decreases to 834.08 (000MT). All the seasonal estimates are pooled together to arrive at the annual production which is 2548.68 (000MT) and it is about 1.06 percent lower than the annual production in the previous year.

Percentage Share of Milk Production

Category	Milk Production (In tonnes)	Percentage Shareof Milk Production
Crossbred Cow	2391171.191	93.82
Indigenous Cow	1975.131	0.08
Non Descript Cow	21902.434	0.86
Indigenous Buffalo	9338.011	0.37
Non Descript Buffalo	2836.624	0.11
Goat	121455.123	4.76
Total Milk Production	**2548678.514**	**100**

If we analyze the percentage share of milk production, it is the milk from cattle which holds the highest share in the total milk production in the state. The cattle milk constitute 94.76 percentage of total milk production, while goat milk and buffalo milk constitute 4.76 percentage and 0.48 percentage respectively. Further analysis reveals that among the cattle it is the crossbred cattle milk, which contributes about 93.82 percentage of the total milk production. This is obvious as about 94 percentage of the total cattle in the state is crossbred, owing to the large scale artificial insemination programme successfully implemented by the Department. Again it is noteworthy that only 0.08 percentage of total milk production is contributed by indigenous cattle as the indigenous cattle population is significantly low in the state and Vechoor cow is the only recognized indigenous breed in the state. However the non descript cattle population have more significant contribution that of 0.86 percentage as there are many non descript cattle breeds in the state especially in the northern districts of the state.

As far as buffalo milk is concerned it holds only 0.48 percentage of the total milk production of the state. This is quite contrary to the all India pattern, where buffalo milk holds prime share in the milk production of the country.

Species wise Milk Production comparison from previous Year

Category	Milk Production (In tonnes) 2018-19	Milk Production (In tonnes) 2017-18	Percentage Variationin Milk Production
Crossbred Cattle	2391171.191	2416035.962	-1.03
Indigenous Cattle	1975.131	2047.384	-3.53
Non Descript Cattle	21902.434	24457.061	-10.45
Indigenous Buffalo	9338.011	9746.396	-4.19
Non Descript Buffalo	2836.624	2926.851	-3.08
Goat	121455.123	120768.673	0.57
Total Milk Production	**2548678.514**	**2575982.327**	**-1.06**

The comparison of Species wise Milk Production from previous year reveals that there is a declining trend in all categories except Goat. The overall decrease is calculated as 1.06 percentage. Last year the the total milk production is estimated to be 2575.98 (000MT) and in the current year 2548.68 (000MT) is recorded. If we examine species wise milk production, the crossbred cattle category has shown adecrease of 1.03 percentage from last year milk production of crossbred cattle. In the reference year the milk production of indigenous category is estimated to be 1.975(000MT) which shows a decrease of 3.53percentage from the previous year. The milk production of Non descript Cattle is recorded as 21.902 (000MT) which shows adecrease of 10.45percentagefrom the previous year. The milk production of Indigenous and Non Descript buffaloes are recorded as 9.338 (000MT) and 2.837 (000MT) respectively. As compared to previous year Indigenous buffalo milk production andNon Descript buffalo milk production has decreased by 4.19and 3.08 percentage respectively. In case of goats, the milk production has shown anincreasing trend of 0.57 percentage from the previous year.

Average milk yield per day per animal inmilk during the year 2018-19 (In Kg.)

Season	Cows			Buffaloes		Goats
	Crossbred	Indigenous	Non Descript	Indigenous	Non Descript	
Summer	10.15	2.19	3	5.38	4.11	0.72
Rainy	10.20	2.44	3.17	5.33	4.27	0.68
Winter	10.14	2.14	3.18	5.34	4.23	0.68
Overall 2018-19	10.16	2.26	3.12	5.35	4.20	0.69
2017-18	10.19	2.09	3.11	5.27	4.21	0.67
% Variation	-0.29	8.13	0.32	1.52	-0.24	2.99

Government have initiated various programmes for the improved productivity of milk over the periods. From the table it can be seen that the average yield per day of crossbred cow in milk is 10.16 Kgscompared to 10.19Kgs recorded during 2017-18, showing a decrease of 0.29 percentage from the previous year. Again the average milk yield of indigenous cow is 2.26Kgs compared to 2.09Kgs recorded last year, highlighting anincrease of 8.13 percentage from the previous year.The yield rate of Non Descript category is 3.12 Kgs during 2018-19 and in 2017-18 the yield rate is 3.11 Kgsshowing an increase of 0.32 percentage from the previous year.During 2018-19 the yield rate of Indigenous buffalo is 5.35Kgs and in the case of Non descript buffalo the yield rate is 4.20 Kgs.While the yield rate of indigenous buffalo shows anincreasing trend of 1.52 percentage, the yield rate of Non Descript buffalo shows adeclining trend of 0.24 percentage from the previous year. Regarding goat, the yield rate recorded in the current year is 0.69Kgcompared to 0.67 Kg of the previous year.

Estimated Number of Animals 2018-19 (In Nos.)

Category	Estimated Number of animals 2018-19 (In Nos.)	Estimated Number of animals 2017-18 (In Nos.)	Percentage Variationin Estimated Number of animalsfrom previous year
Crossbred Cattle	644312	649399	-0.78
Indigenous Cattle	2682	2679	0.11
Non Descript Cattle	19367	21570	-10.21
Indigenous Buffalo	4861	5072	-4.16
Non Descript Buffalo	1842	1903	-3.21
Goat	480017	489799	-2
Total	**1153081**	**1170422**	**-1.48**

The estimated number of inmilk animals in the current year is arrived at by identifying the ratio of increase/decrease of inmilk livestock population of the current year from the quinquennial livestock census. The general trend is that almost all species of livestock population except indigenous cattle is decreasing in the state. The indigenous cattle population is seen as increasing when compared to the previous year estimate.

The per capita availability of milk

The per capita availability of milk in Kerala during 2018-19 is 189 gm per day, which is much lower than the national per capita availability of milk which is 394gm per day. The per capita availability of milk of Kerala from 2014-15 to 2018-19 is given in the table below.

Per capita availability of milk during 2014-15 to 2018-19 (In Gms.)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	206	200	189	192	189
India	322	337	355	375	394

Milk Production Time series Analysis

Estimates of Milk production during 2014-15 to 2018-19(In 000 MT)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	2711.13	2649.82	2520.34	2575.98	2548.68
India	146313.55	155490.50	165404.38	176347.35	187749.46

Number of Animals In milk of Exotic/Crossbred cows during 2014-15 to 2018-19 (In 000 Nos)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	805.04	668.56	630.45	649.40	644.31
India	14147.22	15411.63	15962.63	16761.66	17674.96

Average yield per In milk Animal of Exotic/Crossbred cows during 2014-15 to 2018-19 (In Kg/day)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	8.62	10.18	10.25	10.19	10.16
India	7.15	7.45	7.51	7.71	7.95

Milk Production of Exotic/Crossbred cows during 2014-15 to 2018-19 (In 000 MT)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	2531.44	2483.86	2358	2416.04	2391.17
India	36938.92	41931.24	43778.61	47151.43	51259.13

Number of In milk of Non Descript/Indigenous cows during 2014-15 to 2018-19 (In 000 Nos)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	7.34	23.87	21.26	24.25	22.05
India	31801.95	31752.22	33165.62	34143.53	35166.85

Average yield per In milk Animal of Non Descript/Indigenous cows during 2014-15 to 2018-19 (In Kg/day)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	0.94	2.76	3.02	2.99	2.97
India	2.54	2.74	2.84	2.93	3.01

Milk Production of Non Descript / Indigenous cows during 2014-15 to 2018-19 (In 000 MT)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	2.52	24.08	23.46	26.50	23.88
India	29484.53	31714.15	34320.27	36482.14	38574.46

Number of Animals In milk of Buffaloes during 2014-15 to 2018-19 (In 000 Nos)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	50.50	7.05	6.55	6.97	6.70
India	39725.23	41190.08	42569.46	43187.60	44767.06

Average yield per In milk Animal fromBuffaloes during 2014-15 to 2018-19 (In Kg/day)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	3.39	5.04	5.11	4.98	5.04
India	5.15	5.09	5.23	5.47	5.62

Milk Production from Buffaloes during 2014-15 to 2018-19 (In 000 MT)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	62.41	12.96	12.21	12.67	12.17
India	74709.90	76459.00	81266.30	86261.68	91817.14

Number of Animals In milk Goats during 2014-15 to 2018-19 (In 000 Nos)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	462.81	508.35	503.65	489.80	480.02
India	30928.80	32464.58	34513.15	36135.62	36834.31

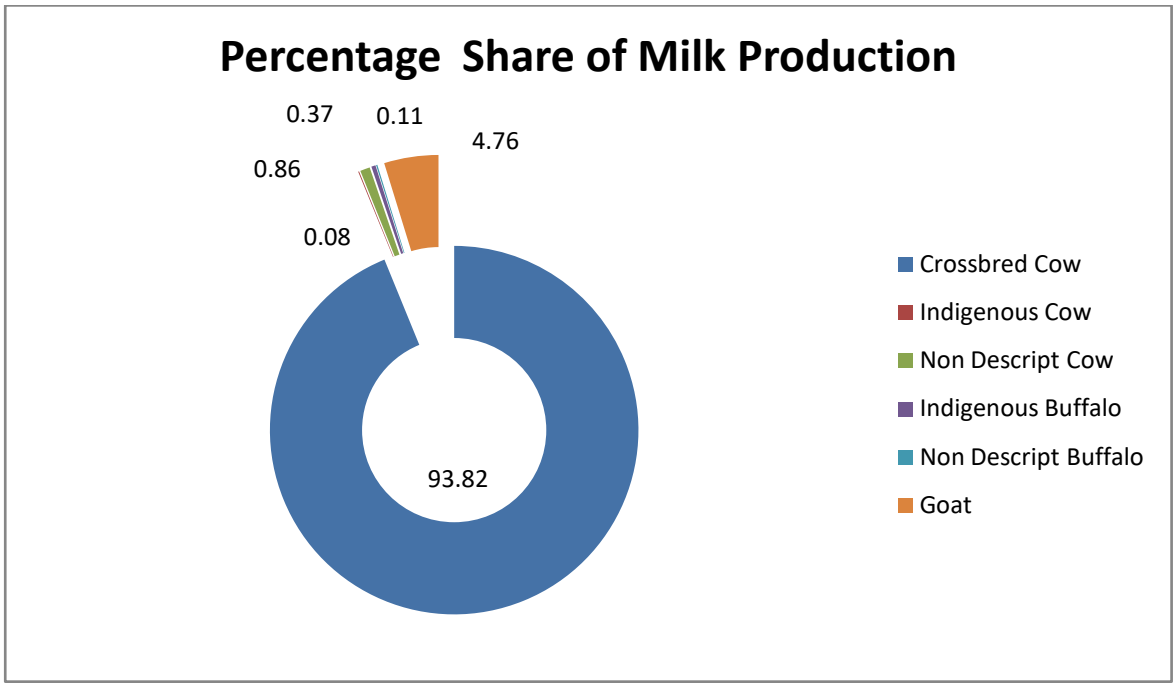
Average yield per In milk Animal of Goats during 2014-15 to 2018-19 (In Kg/day)

	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	0.68	0.70	0.69	0.67	0.69
India	0.46	0.45	0.46	0.47	0.45

Milk Production of Goats during 2014-15 to 2018-19 (In 000 MT)

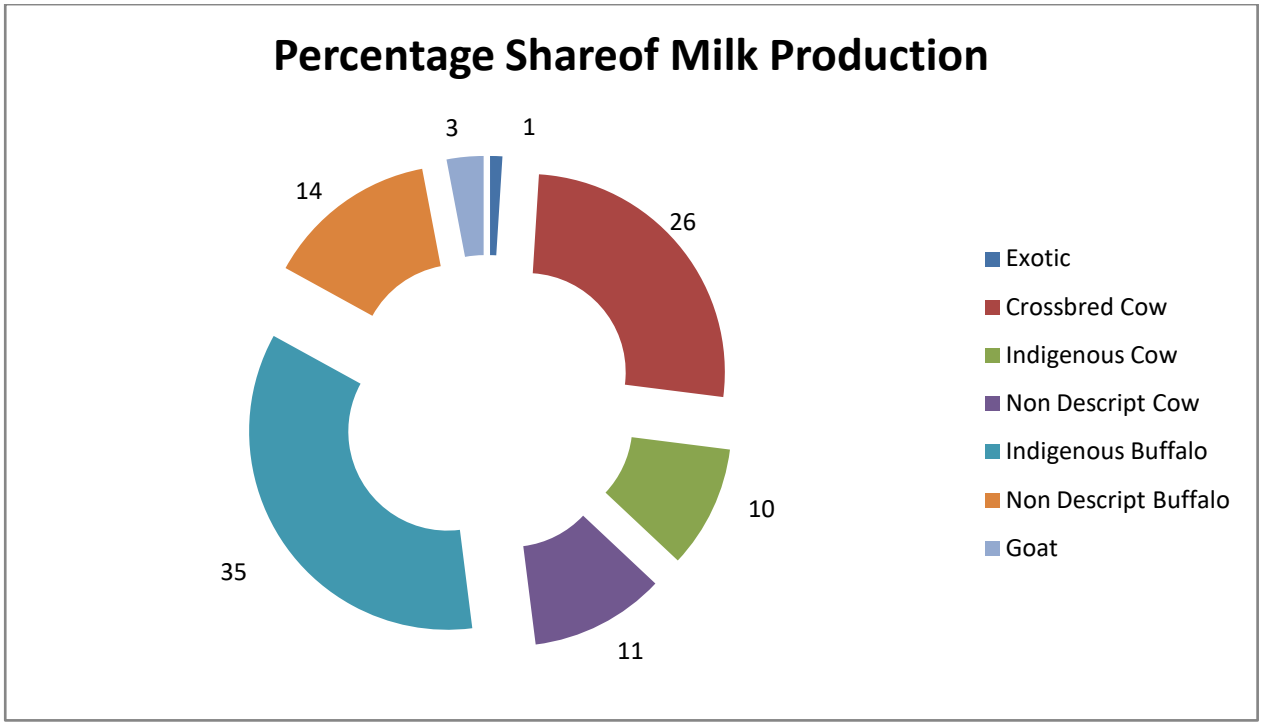
	2014-15	2015-16	2016-17	2017-18	2018-19
Kerala	114.77	128.92	126.67	120.77	121.46
India	5180.18	5377.59	5752.39	6165.50	6098.73

The Graph of Species-wise Milk Contribution of Kerala 2018-19



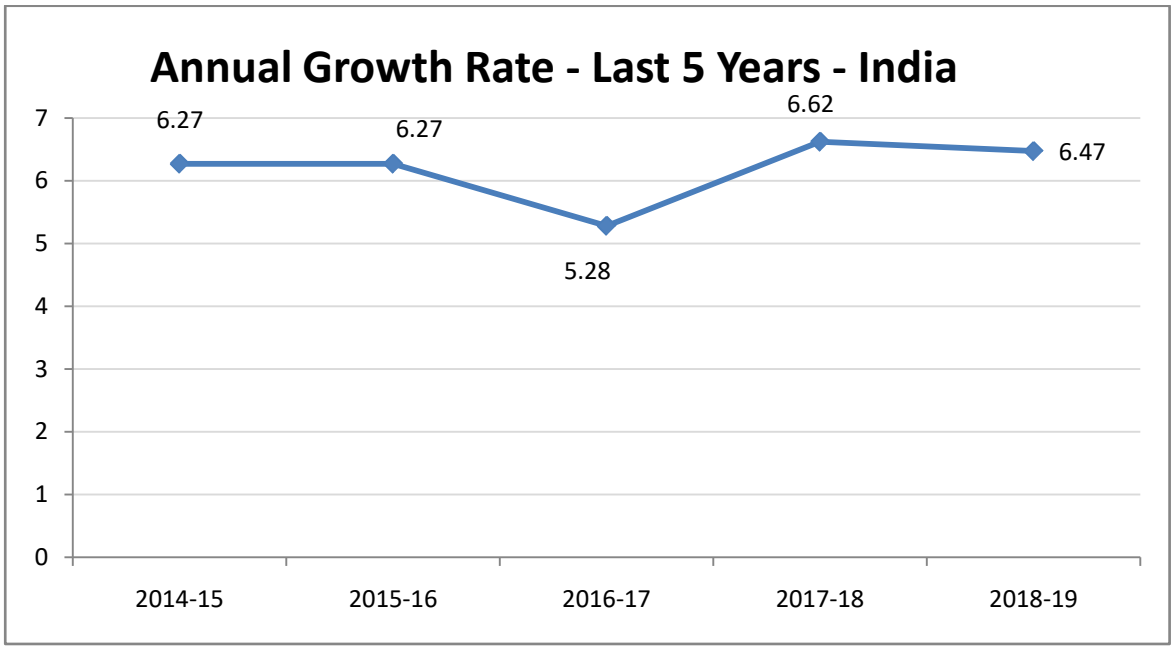
The Graph shows the Species-wise contribution of milk production by Cattle, Buffalo and Goat. The analysis shows 93.82% of the milk production is contributed by crossbred cattle followed by goat which has 4.76% of total milk production. The remaining contribution are relatively negligible and shows 1.42 percentage. The share of remaining species are as follows-. Indigenous cattle contribute 0.08% of the total milk production whereas Non-descript cattle contribute 0.86% of milk production, Indigenous Buffaloes contributes0.37% of the total milk production and non-descript buffaloes contribute 0.11%of milk production.

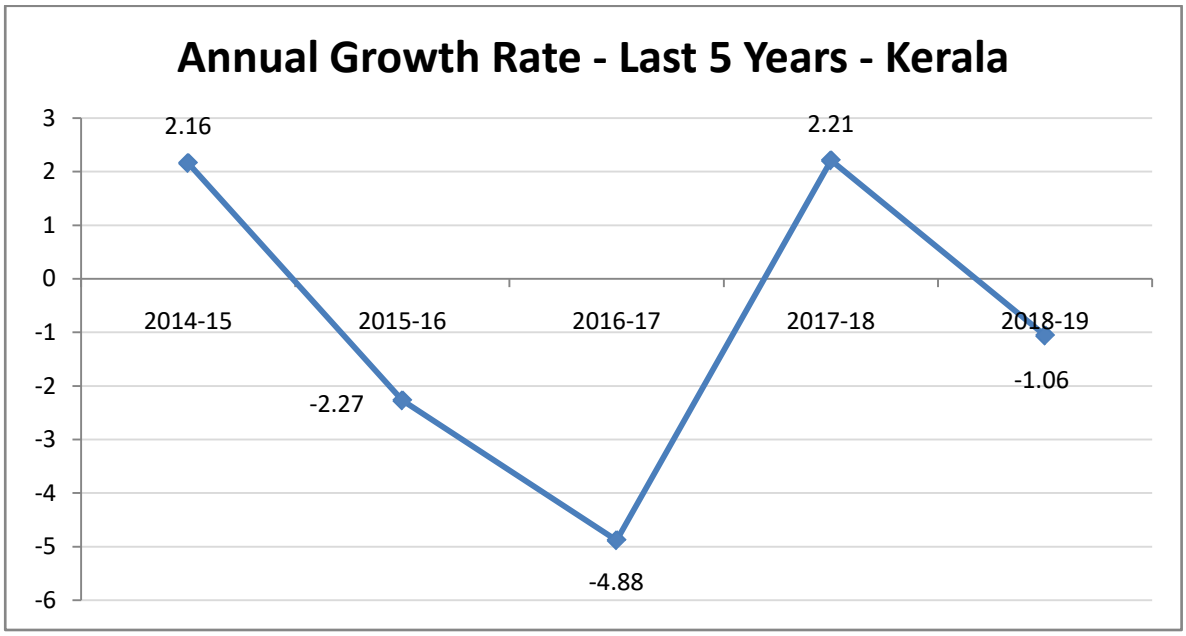
The Graph of Species-wise Milk Contribution of All India 2018-19

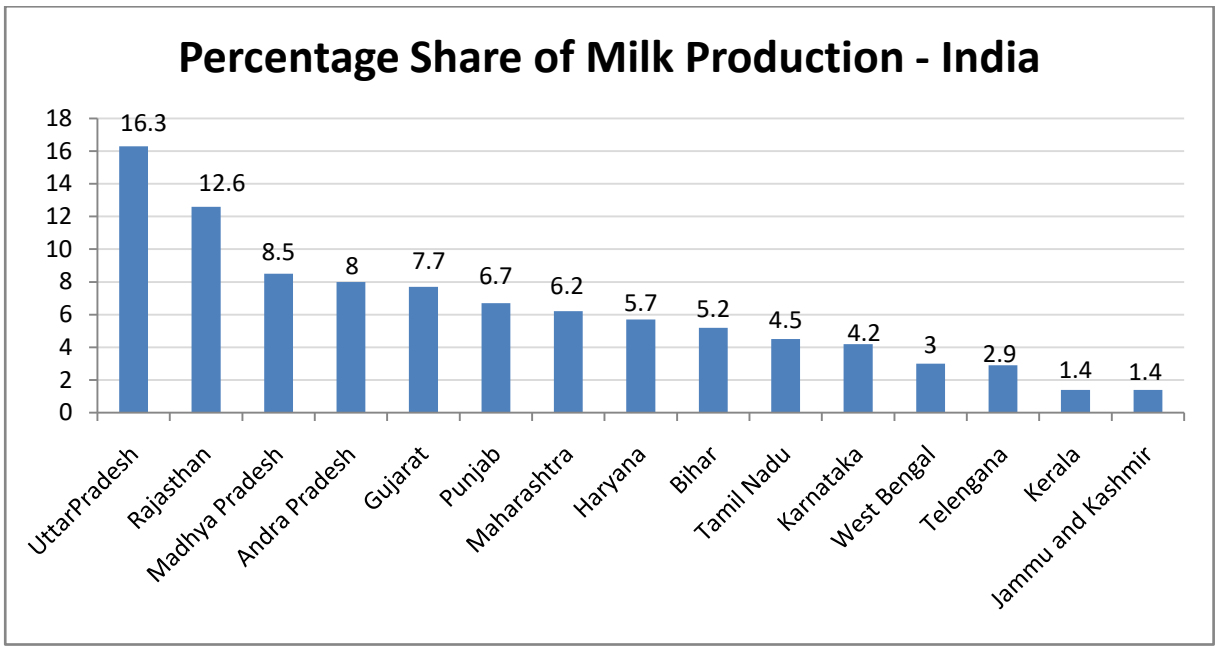


The Graph shows the contribution of milk production by Cattle, Buffalo and Goat in the whole country. The analysis shows nearly 35% of the milk production is contributed by Indigenous Buffaloes followed by 26% by crossbred cattle. The Indigenous cattle contribute 10% of the total milk production in the country whereas Non-Descript cattle contribute11%of milk production and Non-Descript buffaloes contribute 14%of milk production. Goat milk shares a contribution of 3% in the total milk production across the country.

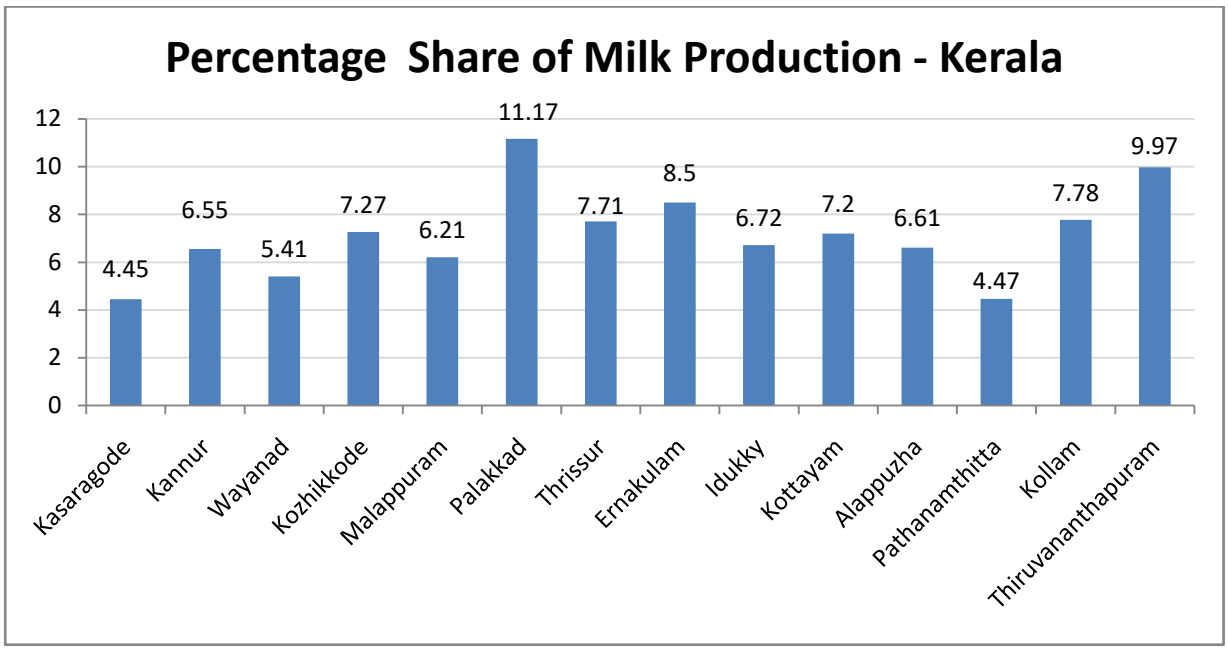
Graph below indicates the annual growth rate of milk production for the past five reference periods. The annual growth rate shows a steady increase from the year 2013-14 and in the current year the milk production registered an annual growth of 6.47%.







The state-wise share of milk production vis-a-vis total milk production in the country are given in the Graph above. The largest producer of milk is Utter Pradesh which produces 16.3% of the total milk production in the country followed by Rajasthan which produces 12.6% of the total milk production. Madhya Pradesh and Andhra Pradesh stand as the third and fourth largest milk producer states which produce 8.5% and 8% of the totalmilk production respectively.Kerala stands fourteenth with 1.4% of the total milk production of the country.



The table and its corresponding graph above signifies the district wise milk production. On analysis it is evident that Palakkad District is the highest milk producing district in the state. The district is contributing 11.17percentage of the total milk produced in the state during

2018-2019. This feature is due to the fact that Palakkad owns the largest livestock population compared to other districts of the state. The second largest milk producing district is Thiruvananthapuram district with 9.97 percentage, followed by Ernakulam district which contributes 8.5percentage of the total milk produced in the state during 2018-19. If we consider the least contributors it is the Kasaragod district which has only 4.45 percentage of the total milk production, followed by Pathanamthitta and Wayanad districts with 4.47 and 5.41 percentage respectively and then by Malappuram with 6.21 percentage of the total milk produced in the state during 2018-19.

Further analysis on the breed wise contribution reveals that the crossbred cattle has the highest share among the in milk breeds of the state. Similar to the case of district wise milk production contribution, the highest milk producing districts of crossbred cattle are Palakkad, followed by Thiruvananthapuram and Ernakulam and least contributing districts are Kasaragod followed byPathanamthitta.

But the indigenous category reveals a different picture. As indigenous cattle are very minimum in number its district wise share has also little relevance. Any how it is seen that the highest contribution from indigenous cattle is from Kasargod followed by Ernakulam and least contribution is from Idukki.

As regards to district wise buffalo milk production contribution is concerned, Alappuzhais the highest buffalo milk producing district with 12.42 percentage of total buffalo milk production in the state, followed by Ernakulamwith 11.11 percentage. The least production came from Kasargod district with 1.33 percentage, followed by Kannur with1.48percentage of total buffalo milk production.

It is evident from the analysis of goat milk production that Thrissur is the highest goat milk producing district with 11.43percentage followed by Thiruvananthapuram with 11.25 percentage and then by Malappuram with 10.99%. Kasargod is the least goat milk producing district with 2.76 percentage followed by Pathanamthitta which is contributing 2.99 percentage of the total goat milk production.

District wise Milk production

Sl No.	Name of District	Cow				Buffalo		Goat	Annual Production	
		Crossbred	Indigenous	Non Descript	Total	Indigenous	Non Descript		2018-19	2017-18
1	Kasaragode	103188.774	498.536	6105.788	109793.098	9.486	152.927	3351.786	113307.297	109739.340
2	Kannur	161066.776	136.215	1030.403	162233.394	167.746	12.891	4489.296	166903.327	167373.982
3	Wayanad	133409.291	9.771	572.074	133991.136	107.778	145.477	3696.809	137941.200	146938.936
4	Kozhikkode	175408.019	52.347	2070.765	177531.131	88.802	132.311	7538.648	185290.892	184994.185
5	Malappuram	142911.383	142.688	465.199	143519.270	1243.313	33.874	13352.278	158148.735	156322.738
6	Palakkad	270334.869	119.177	4492.481	274946.527	564.260	235.616	8859.992	284606.395	279425.679
7	Thrissur	180354.225	229.993	656.079	181240.297	1121.807	150.368	13879.563	196392.035	206964.827
8	Ernakulam	203458.544	379.711	705.273	204543.528	804.173	548.650	10713.877	216610.228	220178.414
9	Idukki	156287.222	1.546	3243.903	159532.671	1021.371	137.915	10607.402	171299.359	164559.858
10	Kottayam	169604.33	12.571	487.979	170104.880	595.574	615.743	12118.222	183434.419	191242.091
11	Alappuzha	158433.265	2.502	655.245	159091.012	1178.587	333.982	7749.751	168353.332	159980.254

12	Pathanamthitta	109757.644	19.137	317.473	110094.254	227.460	89.726	3636.187	114047.627	142597.413
13	Kollam	188051.013	38.693	984.101	189073.807	1296.153	12.937	7802.001	198184.898	209442.634
14	Thiruvananthapuram	238905.836	332.244	115.671	239353.751	911.501	234.207	13659.311	254158.770	236221.976
State Total		**239171.19**	**1975.131**	**21902.434**	**2415048.76**	**9338.011**	**2836.624**	**121455.123**	**2548678.514**	**2575982.327**

Utilization Pattern Of Milk During 2018-2019

The milk produced in the surveyed villages were observed to study utilization pattern, which is given in the following table.

Annual	**Estimated Milk Production (in 000 MTs)**	**Percentage of Utilization**		
		Sold	**Kept for Conversion**	**Consumed**
Cow Milk	2415.05	89.98	1.89	8.13
Buffalo Milk	12.17	91.86	0.00	8.14
Goat Milk	121.46	9.38	0.00	90.62
Total	**2548.68**	**88.10**	**1.24**	**10.66**

In the surveyed households it was observed that 0.26% of milk produced was consumed, 2.23% was kept for conversion and **18.43%** was sold either to organized dairy or to private vendors.

Percentage of utilization of dung.

The Percentage pattern of disposal of dung during the year 2018-19 is furnished below

Season	Utilization				Percentage rate		
	For Manure	For Dung Cake	in other ways	Total	For Manure	For Dung Cake	in other ways
Summer	27.9	0	2.37	30.27	92.17	0	7.83
Rainy	29.7	0	0.52	30.22	98.28	0	1.72
Winter	30.75	0	2.22	32.97	93.27	0	6.73
Over all	29.44	0	1.7	31.14	94.54	0	5.46

From the above Table, it is evident that 94.54% of the dung produced is utilized as manure and remaining 5.46% is utilized for other purposes.

CHAPTER 5

EGG PRODUCTION AND UTILIZATION 2018-19

Poultry development is one of the important activities in livestock sector. The total egg production in the country was at 1832 million in the year 1950-51 and since then the production of egg continues to rise over the period, as, there is a steady increase in production of egg up to the year 1999-2000. From the year 1999-2000 onwards the production of egg in the country improved substantially and it reached 69731 million numbers in the year 2012-13. Egg and egg products are the essential food items of human beings which provide sufficient nutritional supplements especially to the children. The egg production in the state also increased substantially over the years. The government have initiated number of measures which helped in improving the production of egg over the period. As such there is a consistent increase in the production of eggs over the years. The egg production has increased substantially over the years owing to the distinctive measures adopted by the state government such as, supplying improved breeds of hen and duck which has high yield rates compared to the desi breeds, by initiating scientific management practices through the Kerala State Poultry Development Corporation, providing technical as well as financial support to low, medium and large scale farmers engaged in poultry sector, and providing better veterinary services.

Egg Production 2018-19
22905.98526 Lakh Numbers

Number of wards and households observed for egg production in Kerala during the year 2018-19.

Season	Number of wards covered	No. of households covered	Number of layers covered	
			Desi	Improved
Summer	140	2325	7904	13726
Rainy	140	2527	8194	15214
Winter	140	2488	7955	14429
Annual	420	7340	24053	43369

During the year under consideration, detailed study was conducted in 420 selected wards. For detailed survey eight rural wards and two urban wards are selected in each season per District. From the selected wards households were selected for recording egg yield. From a detailed sample ward, 20 households having poultry layers are to be selected for collecting egg yield data. The households thus selected will have proper representation of desi fowl, improved fowl, desi duck and improved duck of that selected ward. Thus 200 households are tobe taken from ten wards for detailed study in a district for collecting the egg yield data in a season. Altogether as three seasons are there in a reference year 600 households are to be taken for data collection in a district for egg yield data. Thus 8400 households from the entire state are to be taken in to consideration for assessing the egg yield data. Eggs laid by all the poultry layers of the selected household during the last seven days prior to the enumerator's visit in that household are collected.

Here in 2018-2019, data has been collected from 7340 selected households. The production of eggs from that of desi fowl, improved fowl, desi duck, improved duck and its utilization details were observed. The egg yield per layer per week was estimated from these data.

From these 7340 households detailed survey was done and estimates had been prepared. The information collected in respect of egg production are as follows: Production, purchase and utilization of eggs during the previous week of visit (data is collected for 4 consecutive months), Feed supply and disposal of birds, particulars of desi/improved birds etc. It may be noted that the Enumerators are initially doing the complete enumeration

(Listing) work for the selected wards alloted to them and there after they will select the households for detailed study through simple random methods and once the households are selected they will visit those households to collect the details regarding the production details of layers, the utilization pattern of eggs produced etc from these selected sample households in each rounds. As the season is divided in to four rounds, it is imperative that the enumerators have to visit the sample household of each sub sample every month.

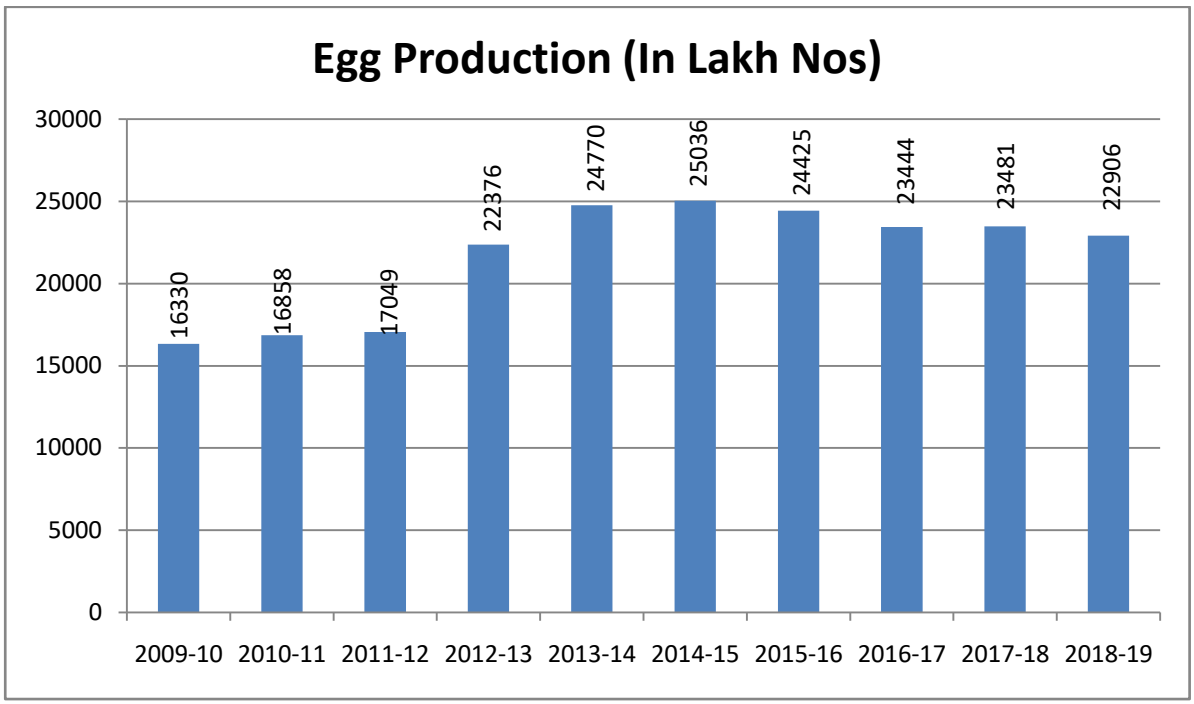
During the year under consideration (2018-2019), it is estimated that **22905.98526** lakh numbers of egg is produced in the state in place of **23480.66573** lakh numbers of egg produced during 2017-18 showing a decline of 2.45 percentage.

Egg Production Of The State Over The Years

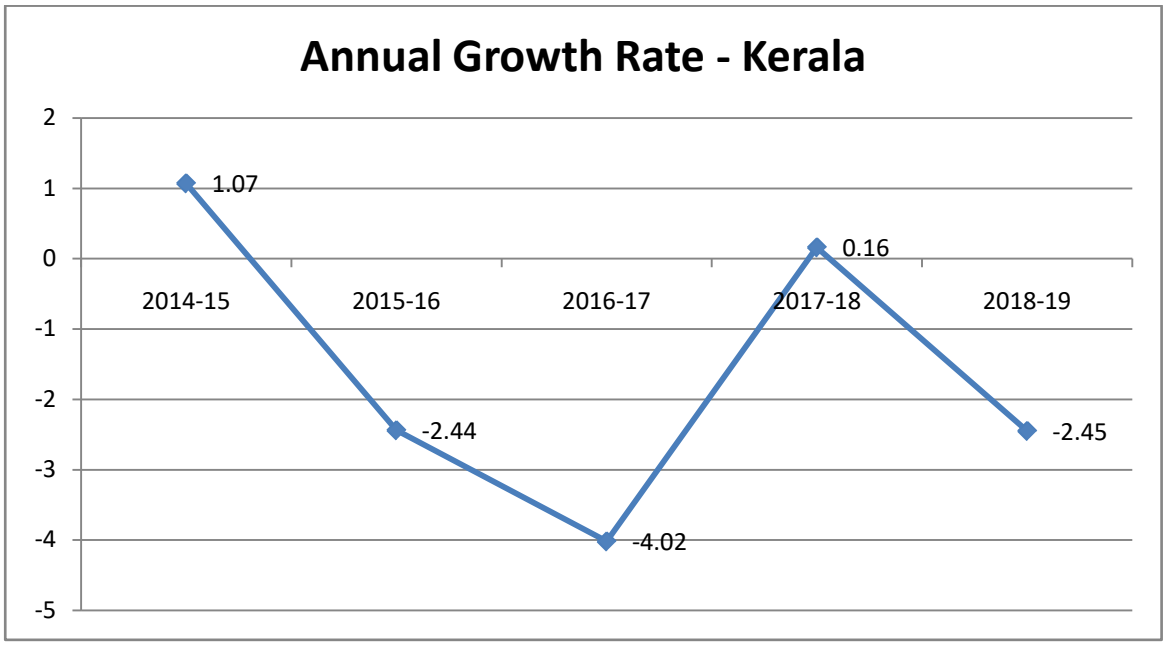
YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Egg Production (In Lakh Nos)	16330	16858	17049	22376	24770	25036	24425	23444	23481	22906
% Change from previous year	8.39	3.23	1.13	31.25	10.7	1.07	-2.44	-4.02	0.16	-2.45

It is evident that the general trend in the egg production of the state is of an increasing nature over the years.But during 2015-16 and 2016-17 egg production has shown a decreasing trend from the previous years. In 2015-16 and 2016-17 egg production has decreased by 2.44 percentage and 4.02 percentage respectively. During 2017-18, egg production has shown an increase of 0.16 percentage, but in the year under reference egg production has shown a decline of 2.45 percentage from that of its previous year. The egg production during 2017-18 was 23481 lakh numbers and that of 2018-19 was 22906 lakh numbers signifying a decrease of 2.45 percentage compared to 2017-18.

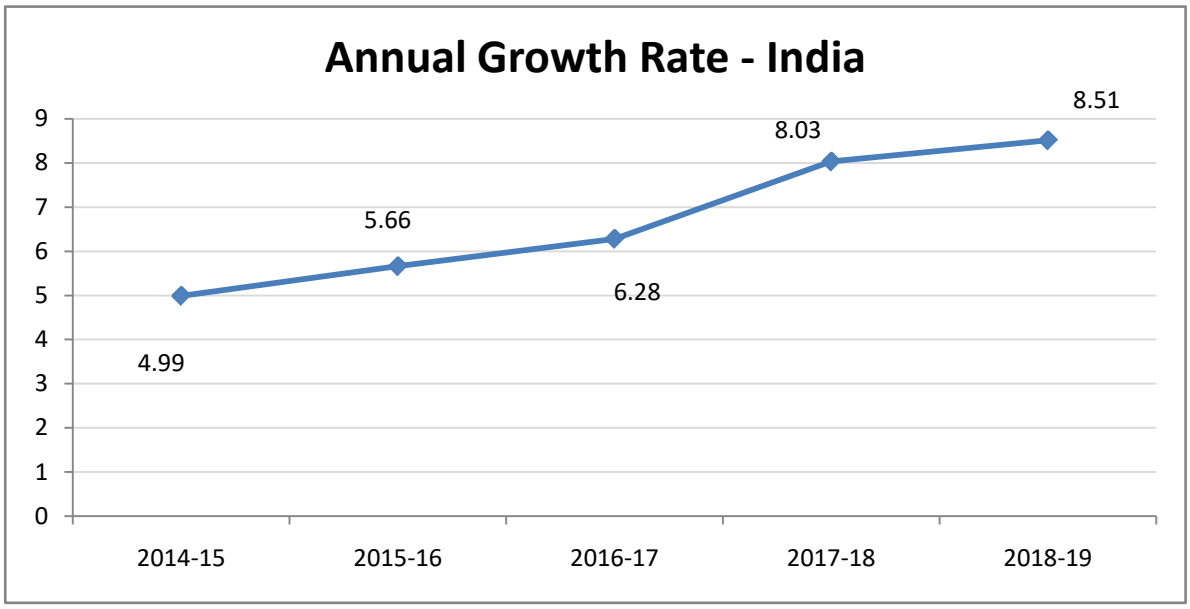
A trend showing the egg production over the past years is depicted in the Graph.



Annual Growth Rate of Kerala in egg production from 2014-15 to 2018-19 is depicted in the **Graph**



A steady increase in the Annual Growth Rate of India from 2014-15 to 2018-19, in egg production, is depicted in the following **Graph.**



Total Egg production in Kerala during the year 2018-19

Just like that of milk production estimates, the egg production estimates were also done seasonally and later seasonal estimates are pooled together to form the annual estimates. The three seasonal estimates were evolved at the end of the respective seasons and the annual estimates are done at the end of the reference year (March -February).

(In Lakh Nos.)

Category	**Summer**	**Rainy**	**Winter**	**Annual 2018-19**	**Annual 2017-18**	**%Variation**
Desi Fowl	1418.34066	1744.34463	1821.30441	4983.98970	5029.01915	-0.9
Improved Fowl	5561.26852	5340.47173	5842.6298	16744.37005	17285.81311	-3.13
Total	6979.60918	7084.81636	7663.93421	21728.35975	22314.83226	-2.63
Desi Duck	175.02362	204.2233	217.96909	597.21601	607.28032	-1.66
Improved Duck	208.35138	195.15873	176.89939	580.4095	558.55315	3.91
Total	383.375	399.38203	394.86848	1177.62551	1165.83347	1.01
Grand Total	**7362.98418**	**7484.19839**	**8058.80269**	**22905.98526**	**23480.66573**	**-2.45**

If we examine the seasonal estimates data, it is obvious that during winter season the egg production is in its highest, followed by rainy season and then by summer season. During summer season the egg production is estimated to be 7362.98418 lakhsand in rainy season it

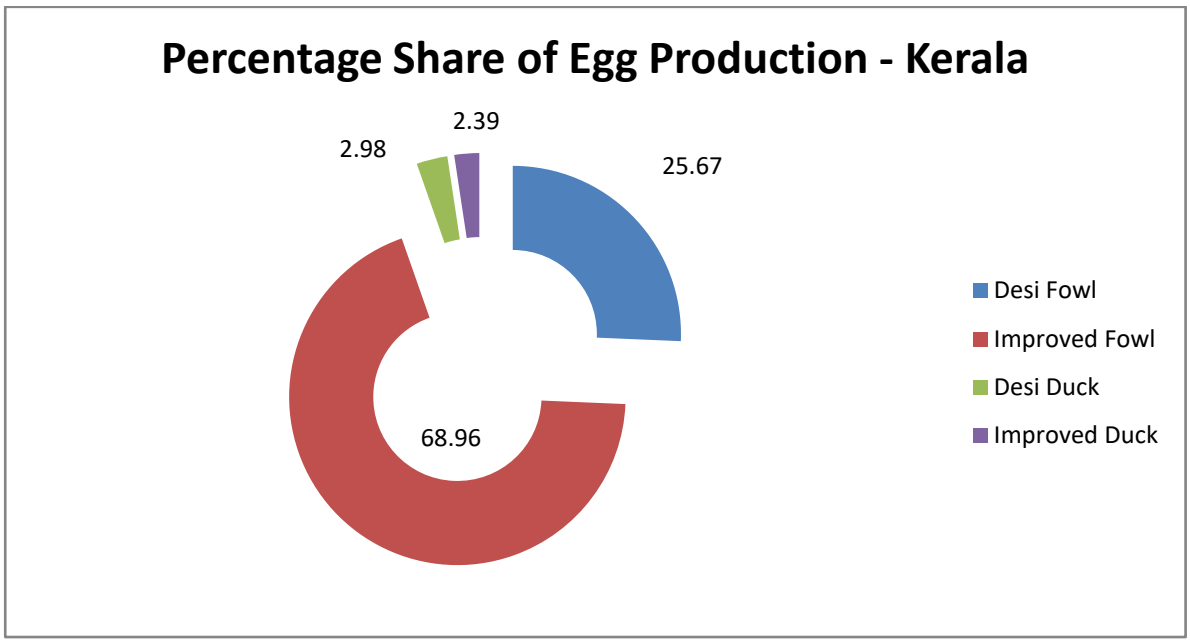
increases to 7484.19839lakhs and in winter season it again increases to 8058.80269 lakhs. All the seasonal estimates are pooled together to arrive at the annual production figures which is 22905.99lakh numbers and it is about 2.45 percent lower than the annual production figure of 23480.67 lakhnumbers estimatedin the previous year of 2017-2018. All category of layers except improved duckhave shown a declining trend in egg production,while the improved duck category has shown an increasing trend of 3.91percentage.

Percentage Share of Egg Production

Category	Egg Production (In lakh nos)	Percentage Share of Egg Production
Desi Fowl	4983.98970	21.76
Improved Fowl	16744.37005	73.10
Desi Duck	597.21601	2.61
Improved Duck	580.4095	2.53
Total Egg Production	22905.98526	100

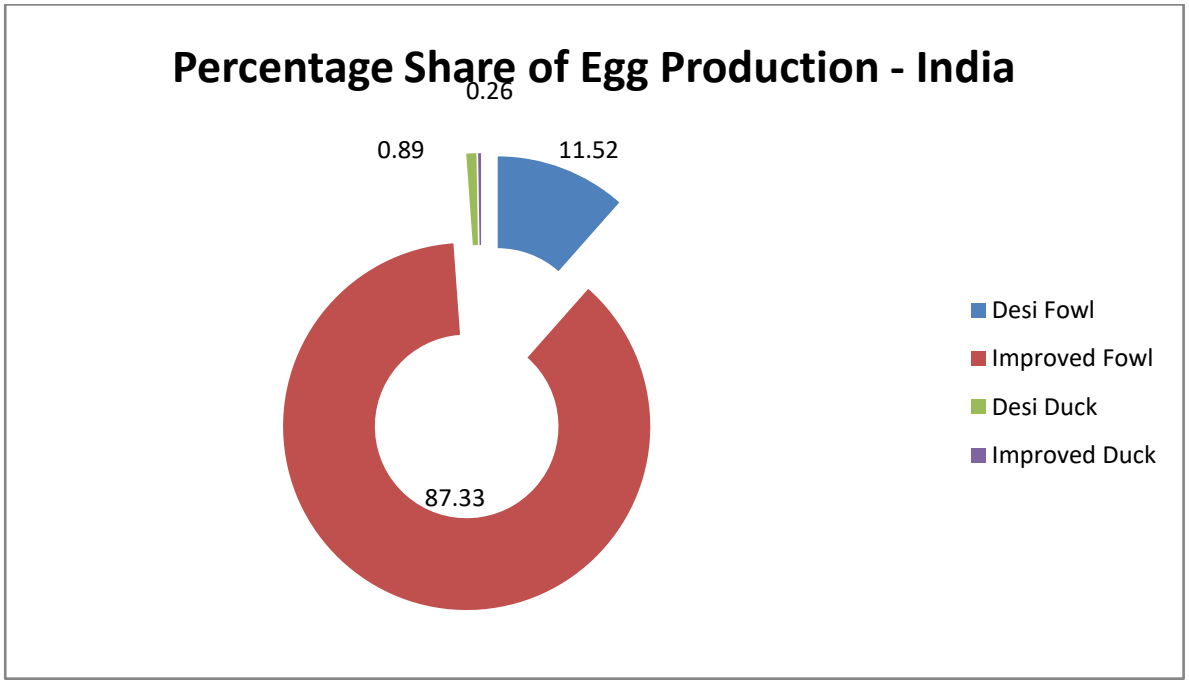
If we analyze the the percentage share of egg production, it is the egg from fowls which holds the highest share in the total egg production in the state. The egg from fowls constitute 94.86 percentage of total egg production, while egg from ducks constitute only 5.14 percentage. Further analysis reveals that among the fowls it is the Improved Fowl eggs contributes about 73.10 percentage of the total egg production.This is obvious as the state government has initiated many distinctive measures such as, supplying improved breeds of hen and duck which has high yield rates compared to the desi breeds, by initiating scientific management practices through the Kerala State Poultry Development Corporation, providing training and also technical as well as financial support to low, medium and large scale farmers engaged in poultry sector, and providing better veterinary services. Again it is noteworthy that 5.14 percentage of total egg production is contributed by ducks even though the duck population is significantly low in the state.

Species wise egg contribution in Kerala



The Graph above shows the species wise contribution of egg production by Fowl and Duck in Kerala. The graph reveals 68.96% of the production of egg is contributed by Improved Fowl and 25.67% is from Desi Fowls with respect to total production of egg. The Desi Duck and Improved Duck contribute 2.98% and 2.39% respectively with respect to total egg production.

Species wise egg contribution in India



The Graph above shows the species wise contribution of egg production by Fowl and Duck in India. The graph reveals 87.33% of the production of egg is contributed by Improved

Fowl and 11.52% is from Desi Fowls with respect to total production of egg. The Desi Duck and Improved Duck contribute 0.89% and 0.26% respectively with respect to total egg production.

Species wise Egg Production comparison from previous Year

Category	Egg Production 2018-19 (In lakh nos)	Egg Production 2017-18(In lakh nos)	Percentage Variation in Egg Production
Desi Fowl	4983.98970	5029.01915	-0.9
Improved Fowl	16744.37005	17285.81311	-3.13
Desi Duck	597.21601	607.28032	-1.66
Improved Duck	580.4095	558.55315	3.91
Total Egg Production	22905.98526	23480.66573	-2.45

If we examine Species wise production, in Desi Fowl category and Improved Fowl category the egg production has shown a decline of 0.9 and 3.31 percentage respectively from the previous year. In the case of ducks, the egg production of Desi Duck category has shown a decline of 1.66 percentage, while Improved Duck category has shown an increasing trend of 3.91percentage compared to 2017-18.

Season wise average egg yield rate per layer in Kerala during the year 2018-19

Category	Summer	Rainy	Winter	Annual Yield2018-19	Annual Yield2017-18	%Variation
Desi Fowl	45.32	45.94	45.79	137.05	137.06	-0.007
Improved Fowl	71.83	72.60	72.61	217.04	216.63	0.19
Desi Duck	54.49	53.29	53.48	161.26	159	1.42
Improved Duck	55.28	55.74	55.72	166.74	166.46	0.17

Estimated number of layers in Kerala during the year 2018-19(in Nos)

Category	Seasons			Estimated Number of Layers 2018-19 (In Nos.)	Estimated Number of Layers 2017-18 (In Nos.)	Percentage Variation in Estimated Number of Layers from previous year
	Summer	Rainy	Winter			
Desi Fowl	3129529	3797243	3977633	3633368	3666317	-0.9
Improved Fowl	7741815	7356316	8046457	7712063	7979145	-3.35
Total	10871344	11153559	12024090	11345431	11645462	-2.58
Desi Duck	321202	383253	407571	370507	381607	-2.91
Improved Duck	376936	350096	317453	348335	335788	3.74
Total	**698138**	**733349**	**725024**	**718842**	**717395**	**0.20**

The estimated number of layers in the current year is arrived at by identifying the ratio of increase/decrease of layers from the layer population identified during the quinquennial livestock census of 2012. The estimated fowl layer population has been worked out to be 113.45431 lakhs during 2018-2019 which is 2.58percentage lower than the estimated layers

of the previous year which is 116.45462lakhs.It is seen that while Improved Duck in the state has shown an increasing graph, Desi Fowl, Improved Fowl and Desi Duck population has shown a decreasing graph. The estimated Improved Duck population is seen as increasing at 3.74 percentage when compared to the previous year estimate. However the estimated Desi Fowl population, Improved Fowl population and Desi Duck population is decreasing at 0.9 percentage, 3.35 percentage and 2.91 percentagerespectively when compared to the previous year estimate.

The per capita availability of Egg -

The per capita availability of egg in Kerala during 2018-19 is 62 Nos. per annum and that of India is 79 Nos. per annum.The per capita availability of egg of Kerala from 2014-15 to 2018-19 is given in the table below.

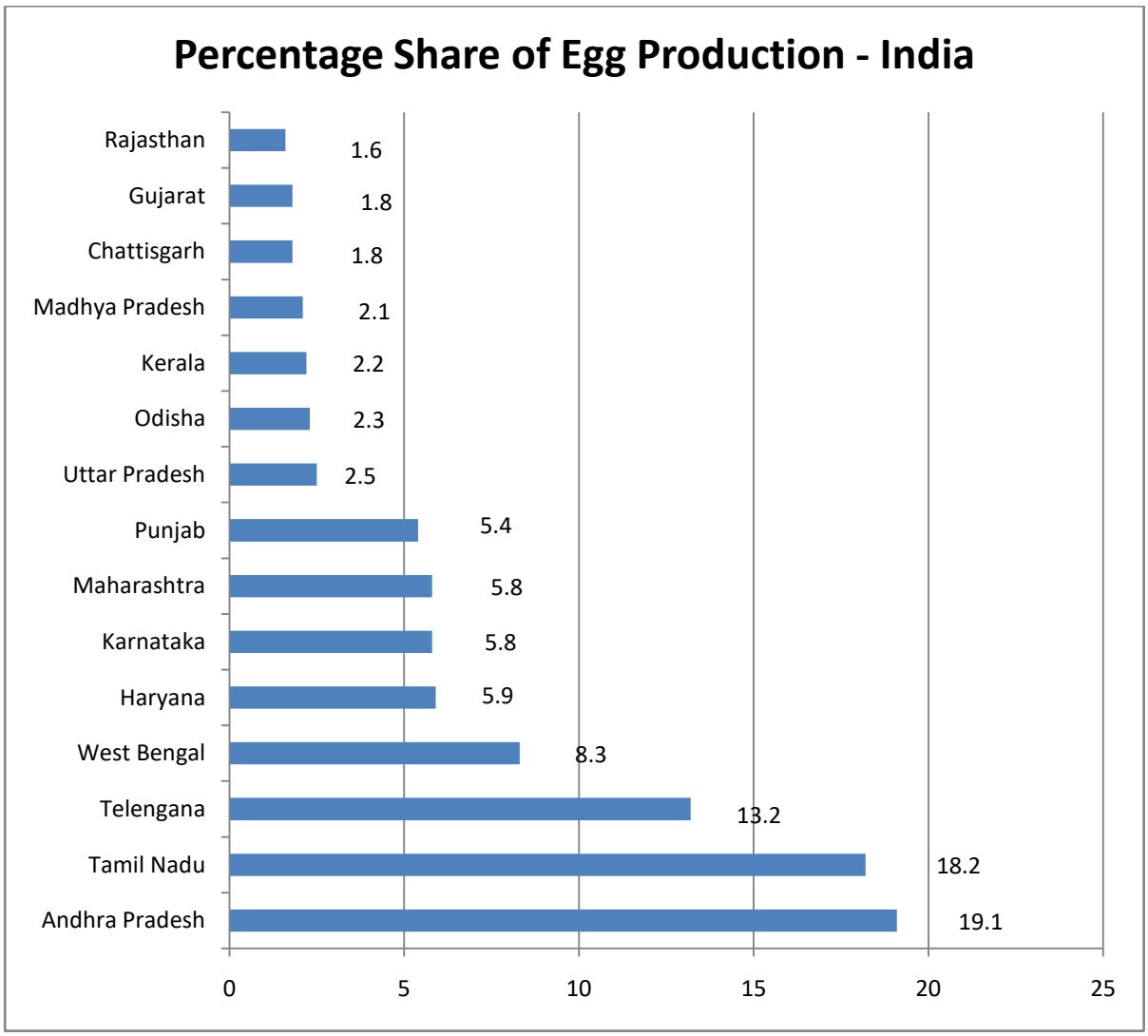
Per capita availability of Egg (Number/Annum)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Kerala	70	67	64	64	62
All India	63	66	69	74	79

Egg Production comparative analysis

Estimates of Egg production during 2014-15 to 2018-19(In Lakh Numbers)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Kerala	25036.11	24424.82	23443.83	23480.67	22905.99
India	784838.68	829284.36	881369.56	952169.98	1033176.31

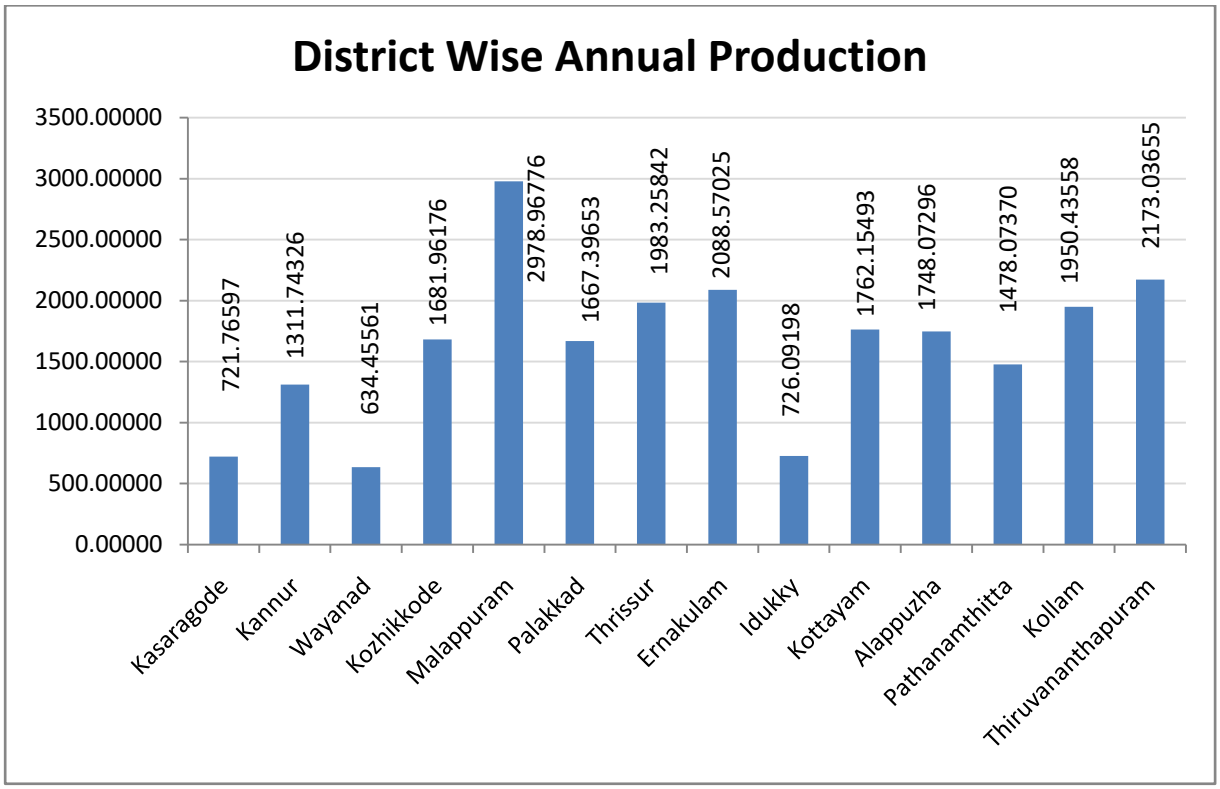


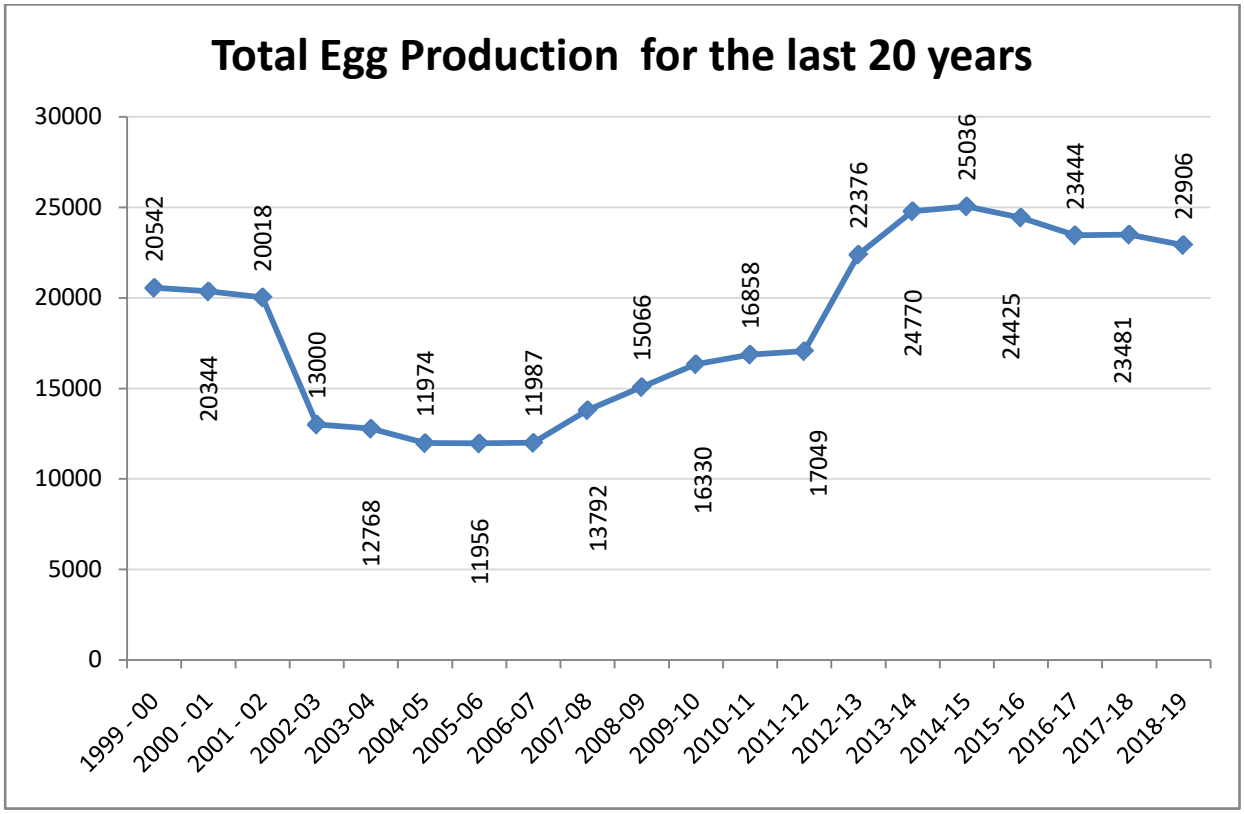
The state-wise share of egg production vis-a-vis total egg production in the country are given in the above Graph. The largest producer of egg is Andhra Pradesh which produces 19.1 % of the total egg production in the country followed by Tamil Nadu which produces 18.2% of the total egg production. Telangana and West Bengal stand as the third and fourth largest egg producer states which produce 13.2% and 8.3% of the total egg production respectively. Kerala stands eleventh with 2.2% of the total egg production of the country.

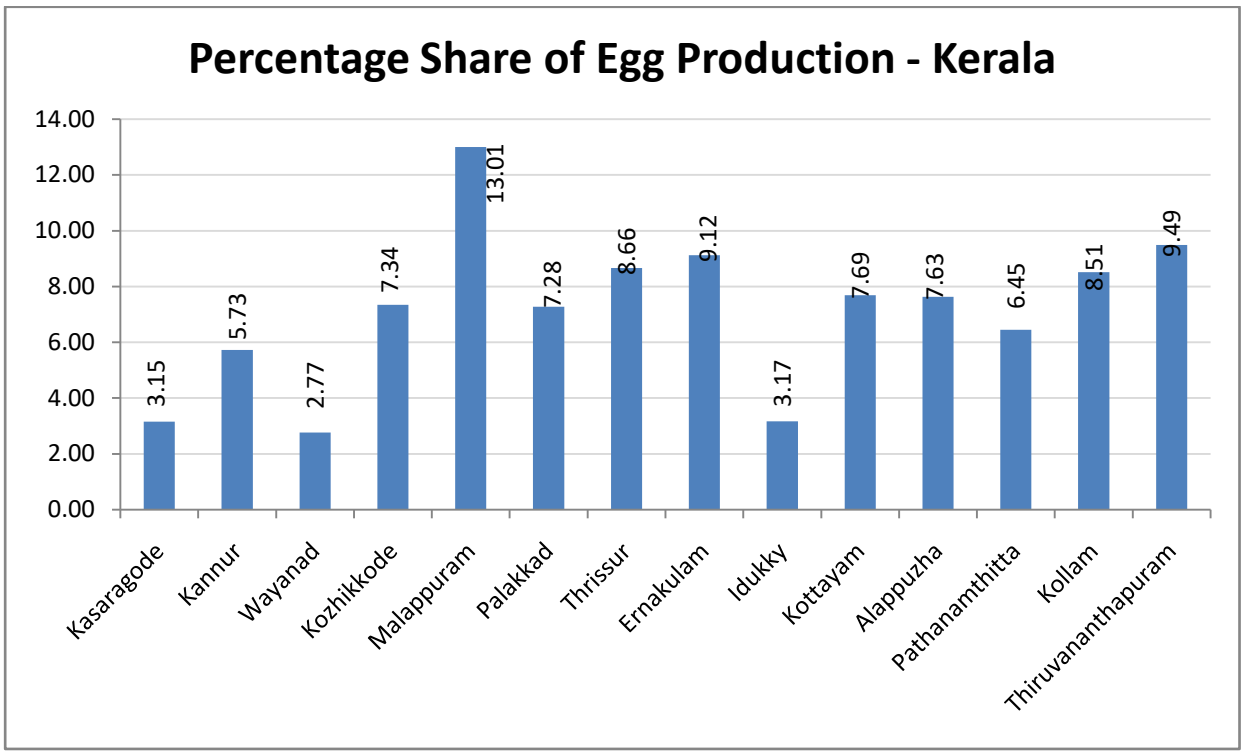
District Wise Egg Production in Kerala 2018-19

Sl No.	Name of District	Summer		Rainy		Winter		Overall		Annual Production - 2018-19
		Fowl	Duck	Fowl	Duck	Fowl	Duck	Fowl	Duck	
1	Kasaragode	200.65912	2.13512	256.86905	2.22987	258.61613	1.25668	238.65546	1.87825	**721.76597**
2	Kannur	382.56458	2.52551	396.32267	2.51293	522.3253	5.49227	433.14960	3.49664	**1311.74326**
3	Wayanad	196.39590	2.34178	220.4952	4.23218	208.7469	2.24365	208.57764	2.94656	**634.45561**
4	Kozhikkode	571.46852	4.79382	495.9722	10.48731	592.4839	6.75604	552.93645	7.35756	**1681.96176**
5	Malappuram	960.51936	32.31498	900.56271	31.09801	1025.3243	29.14841	961.62052	30.86381	**2978.96776**
6	Palakkad	506.96948	6.79244	554.5817	9.42515	583.8744	5.75334	548.29796	7.33801	**1667.39653**
7	Thrissur	561.52024	21.81614	689.6166	23.53257	663.7593	23.01358	638.29980	22.78823	**1983.25842**
8	Ernakulam	623.65362	46.46816	696.8521	44.12812	641.0265	36.44171	654.03215	42.38323	**2088.57025**
9	Idukky	229.04739	8.06198	209.6187	5.2564	269.5502	4.55727	235.81619	5.96430	**726.09198**
10	Kottayam	518.76466	33.94498	562.7826	34.97872	564.558	47.12592	548.65346	38.62680	**1762.15493**

11	Alappuzha	523.96861	130.9554	428.1082	105.8498	482.2688	76.92205	477.95545	104.73078	**1748.07296**
12	Pathanamthitta	382.11725	31.15762	493.0917	55.18208	421.6699	94.85513	432.51774	60.19518	**1478.07370**
13	Kollam	632.51215	41.49675	527.2047	47.8963	662.5966	38.72902	606.91578	42.74337	**1950.43558**
14	Thiruvananthapuram	689.44830	18.57028	652.7381	22.57258	767.1339	22.57341	702.61793	21.23510	**2173.03655**
State Total		**6979.60918**	**383.375**	**7084.8164**	**399.38203**	**7663.9342**	**394.86848**	**7240.04613**	**392.54783**	**22905.98526**




Total Egg Production for the last 20 years
30000
25000
20000
15000
10000
5000
0
20542
20344
20018
13000
12768
11974
11956
11987
13792
15066
16330
16858
17049
22376
24770
25036
24425
23444
23481
22906
1999 - 00
2000 - 01
2001 - 02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19


Percentage Share of Egg Production - Kerala
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
3.15
5.73
2.77
7.34
13.01
7.28
8.66
9.12
3.17
7.69
7.63
6.45
8.51
9.49
Kasaragode
Kannur
Wayanad
Kozhikkode
Malappuram
Palakkad
Thrissur
Ernakulam
Idukky
Kottayam
Alappuzha
Pathanamthitta
Kollam
Thiruvananthapuram

The table and its corresponding graph above signifies the district wise egg production. On analysis it is evident that Malappuram District is the highest egg producing district in the state. The district is contributing 13.01 percentage of the total egg produced in the stateduring 2018-19. The second largest egg producing district is Thiruvananthapuram district with 9.49 percentage, followed by Ernakulam district which contributes 9.12 percentage of the total egg produced in the state during 2018-19. If we consider the least contributors it is the Wayanad District which has only 2.77 percentage of the total egg production, followed by Kasargod with 3.15 percentage and then by Idukki with 3.17 percentage of the total egg produced in the state during 2018-19.

CHAPTER 6

MEAT PRODUCTION 2018-19

Meat production in the country shows a steady increase from 2007 onwards and the production witnessed a leap in the same year due to inclusion of more parameters like Commercial meat production. The total Meat production in the country is pegged at **8114.45** thousand metric tonnes in the year 2018-19, which marks a significant progress in the meat production. The annual growth rate of Meat production in the country is5.99percentage.

Meat production in the state also shows a steady increase down the years. The meat production in the state was **82.451** thousandmetric tonnes during 2000-01. During the year under reference the meat production has reached **457.41** thousand metric tonnes

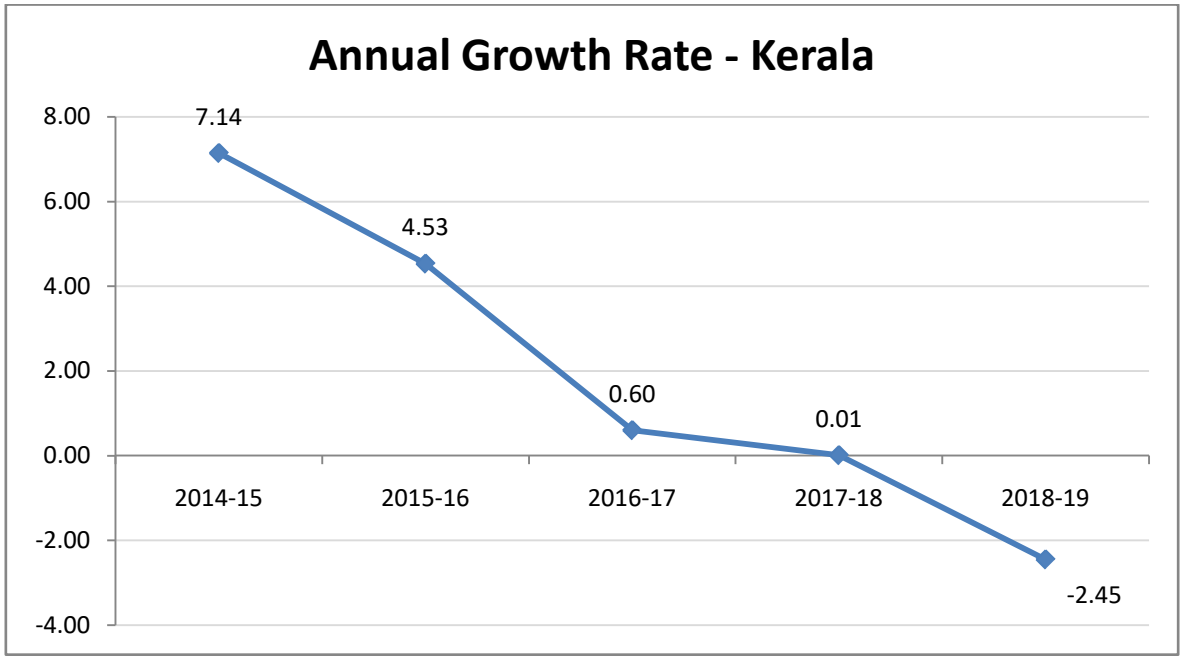
Meat Production 2018-19
457.413246 Thousand Metric tonnes

During the year under consideration (2018-2019), it is estimated that **457.41** thousandmetric tonnes of meat is produced in the state in place of **468.88** thousandmetric tonnes produced during 2017-18 showing a decline of 2.45 percentage.

Meat Production Of The State Over The Years

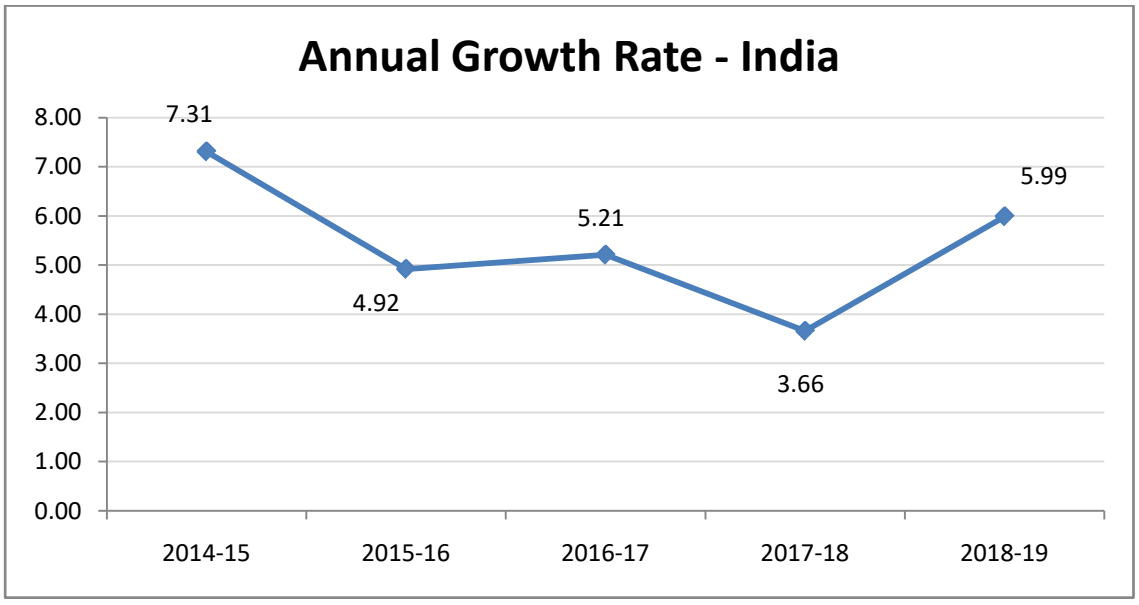
YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Meat Production (in Metric Tonnes)	117.51	124.55	425.57	400.99	416.12	445.83	466.04	468.84	468.88	457.41
% Change from previous year	-5.31	6.00	241.68	-5.77	3.77	7.14	4.53	0.60	0.01	-2.45

It is evident that the general trend in the meat production of the state is of an increasing nature over the years. But in the year under reference, 2018-19, meat production has shown a decline of 2.45 percentage compared to previous year.



Annual Growth Rate Of Meat Production in India

The trend in the annual growth rate of meat production is given in the Graph below. The annual growth rate for the year 2018-19 was 5.99% with highest annual growth rate of 13.25% reported in 2011-12 due to inclusion of production from commercial poultry by many States during that period.



Procedure

The number of animals/birds slaughtered during the four months prior to a season in the households is collected from all the sample wards. That is meat production data is collected from the fifteen percentage sample wards of the state anually. Similiarily number of animals/birds slaughtered during the four months prior to a season by the butchers and other agencies in the ward or within a radius of 2 kms was also collected from the fifteen percentage sample wards of the state. The meat production from the broiler farms is also being accounted for the estimates of annual meat production in the state. Both commercial meat production and meat production in the households are separately calculated. The sum of the above will give the total meat production.

Total meat production in Kerala during the year 2018-19

The estimates of Integrated Sample Survey were done seasonally and later seasonal estimates are pooled together to form the annual estimates. The three seasonal estimates were evolved at the end of the respective seasons and the annual estimates are done at the end of the reference year (March -February).

(In 000 Tonnes.)

Season	Cattle	Buffalo	Goat	Pig	Poultry	Total Meat production
Summer	38.60	51.58	7.38	1.43	53	151.99
Rainy	60.41	27.38	7.93	3.76	50.86	150.34
Winter	53.46	18.66	6.87	1.92	74.17	155.08
Annual 2018-19	**152.47**	**97.62**	**22.18**	**7.11**	**178.03**	**457.41**
2017-18	**159.17**	**98.44**	**22.42**	**6.88**	**181.97**	**468.88**
% Variation	-4.21	-0.83	-1.07	3.34	-2.17	-2.45

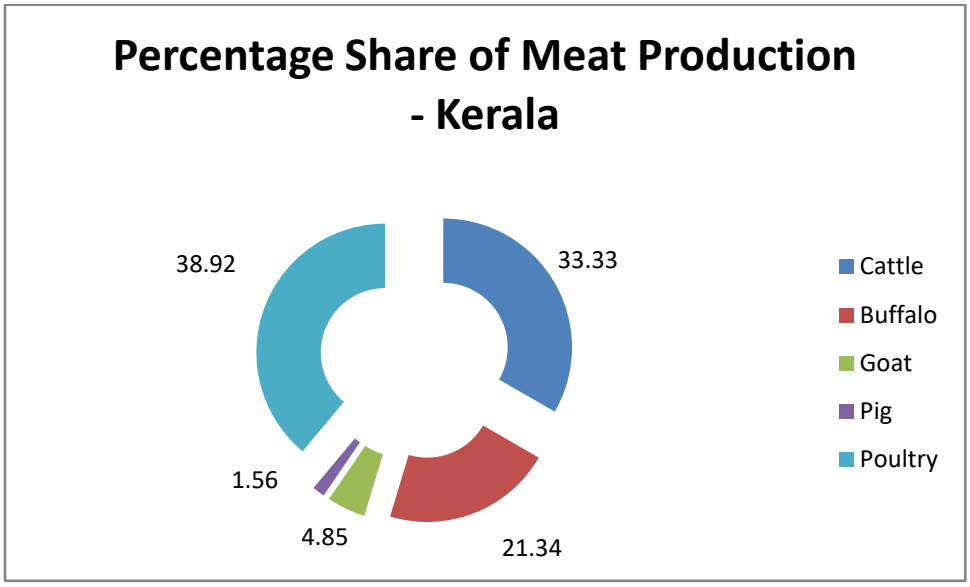
If we examine the seasonal estimates data it is obvious that during winter season the meat production is in its highest, followed by summer season and then by rainy season. During summer season the meat production is estimated to be **151.99 (000MT)** and in

winter season it increases to **155.08 (000MT)** and in rainy season it decreases to **150.34 (000MT)**. All the seasonal estimates are pooled together to arrive at the annual production which is **457.41(000MT)** and it is 2.45 percent lower than the annual production in the previous year.

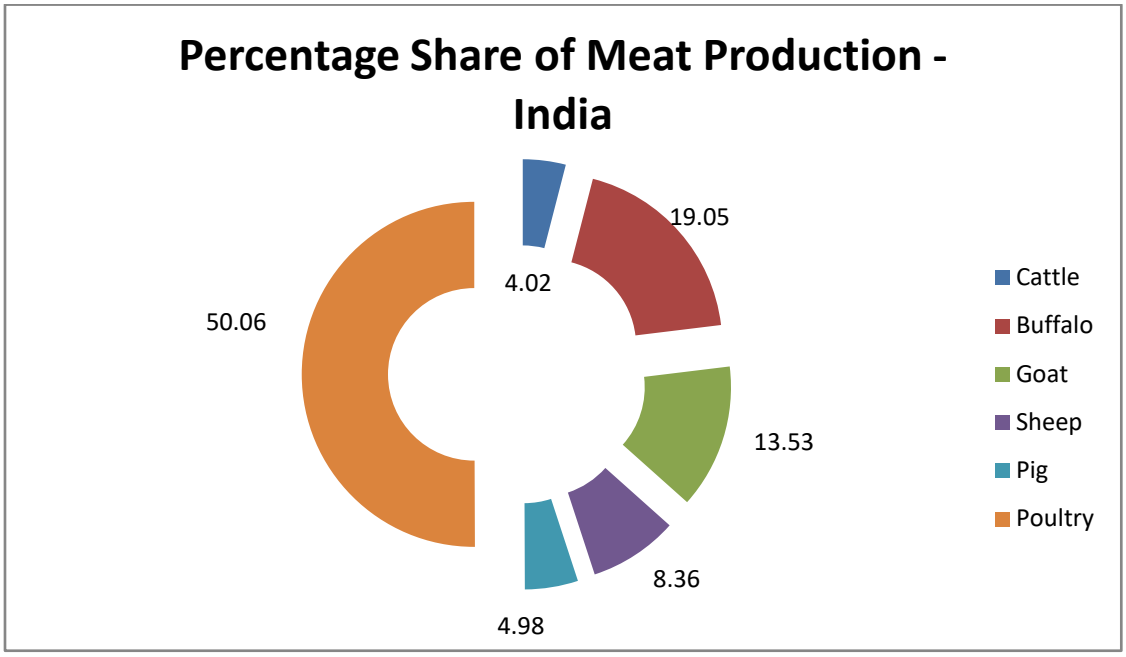
Species wise Percentage Share of Meat Production

Category	Meat Production (In 000 tonnes)	Percentage Shareof Meat Production
Cattle	152.472465	33.33
Buffalo	97.620931	21.34
Goat	22.183765	4.85
Pig	7.109367	1.56
Poultry	178.026718	38.92
Total Meat Production	**457.413246**	**100**

If we analyze the percentage share of meat production, it is the meat from poultry which holds the highest share in the total meat production in the state. The poultry meat constitute **38.92** percentage of total meat production, while cattle meat, goat meat, pig meat and buffalo meat constitute **33.33** percentage, **4.85** percentage, **1.56** percentage and **21.34** percentage respectively .



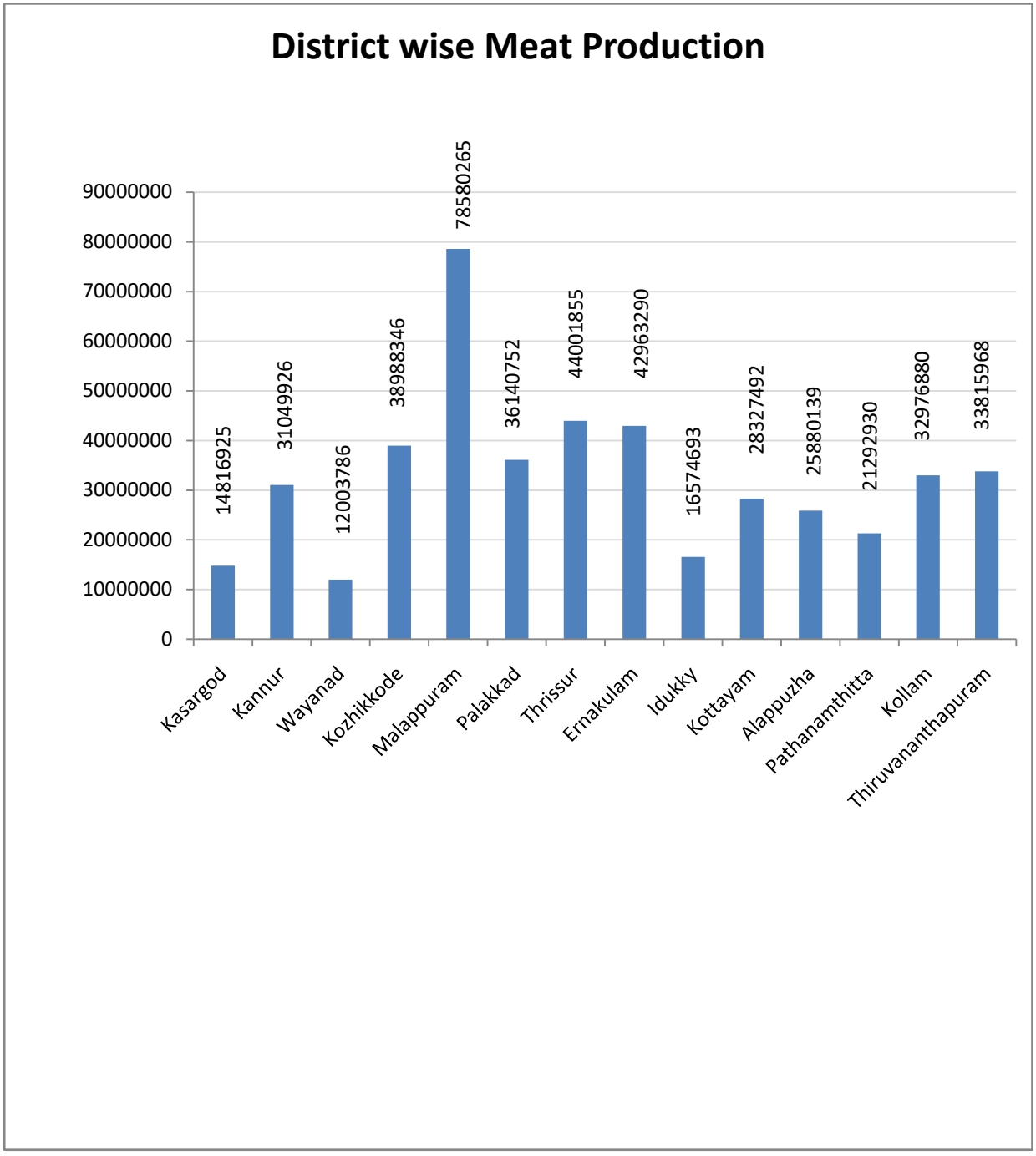
The Graph below shows the contribution of meat production from Cattle, Buffalo, Sheep, Goat, Pig and Poultry. The diagram shows that 50% of meat production is contributed by Poultry. Buffalo, Goat, Pig, Sheep and Cattle contribute 19%, 14%, 5%, 9% and 4% of meat production respectively.



Estimated Number of Animals slaughtered for meat production 2018-19(In Nos.)

Category	Estimated Number of animals slaughtered 2018-19 (In Nos.)	Estimated Number of animals slaughtered 2017-18(In Nos.)	Percentage Variation in Estimated Number of animals slaughtered from previous year
Cattle	1360511	1419458	-4.15
Buffalo	859136	867326	-0.94
Goat	1714574	1737592	-1.32
Pig	98331	94831	3.69
Poultry	118684464	121313383	-2.17
Total	**122717016**	**125432590**	**-2.16**

The estimated animals slaughtered is worked out to be **122717016** during 2018-2019 which is **2.16** percentage lower than the estimated animals slaughtered of the previous year.


District wise Meat Production
90000000
80000000
70000000
60000000
50000000
40000000
30000000
20000000
10000000
0
14816925
31049926
12003786
38988346
78580265
36140752
44001855
42963290
16574693
28327492
25880139
21292930
32976880
33815968
Kasargod
Kannur
Wayanad
Kozhikkode
Malappuram
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Thrissur
Ernakulam
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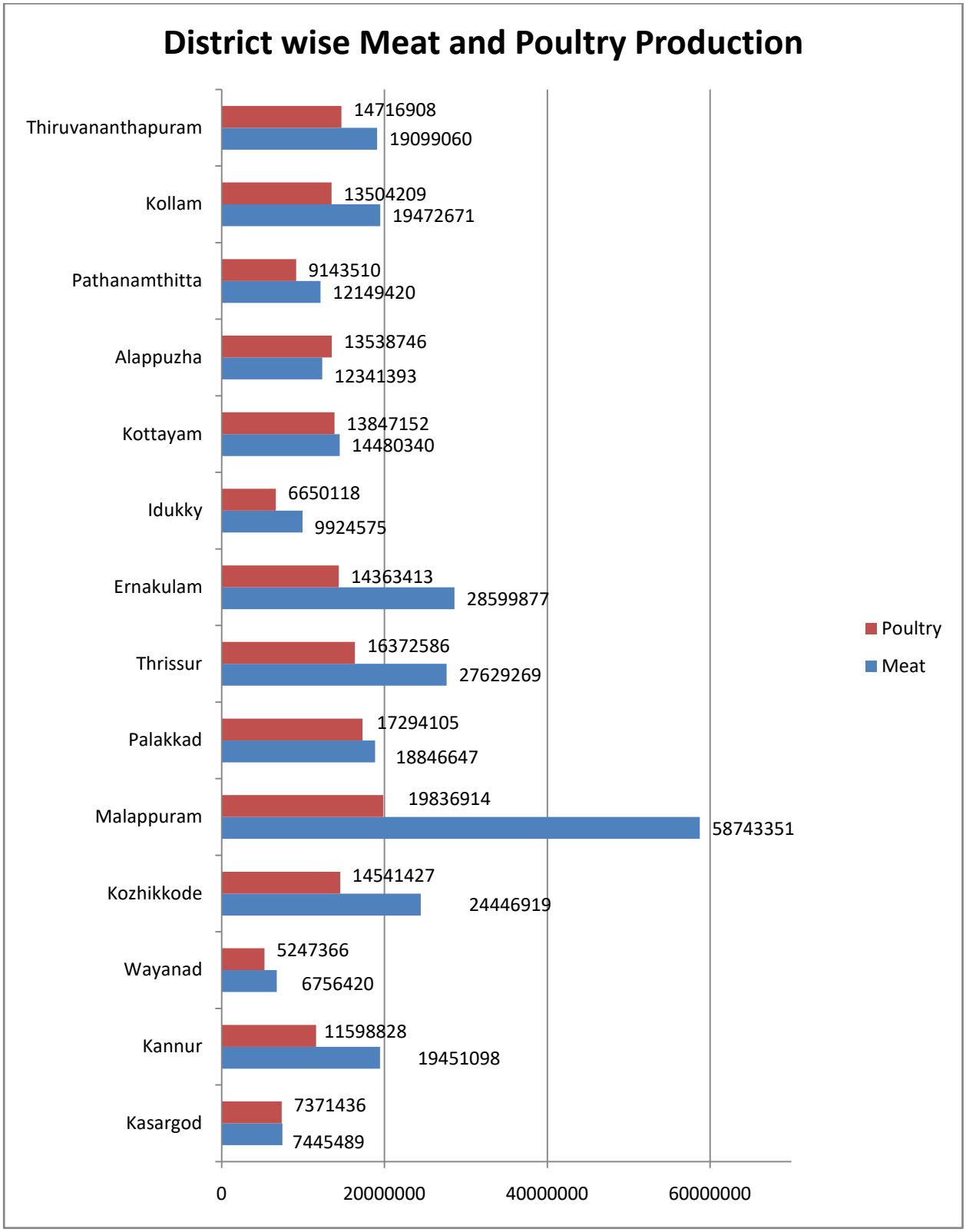
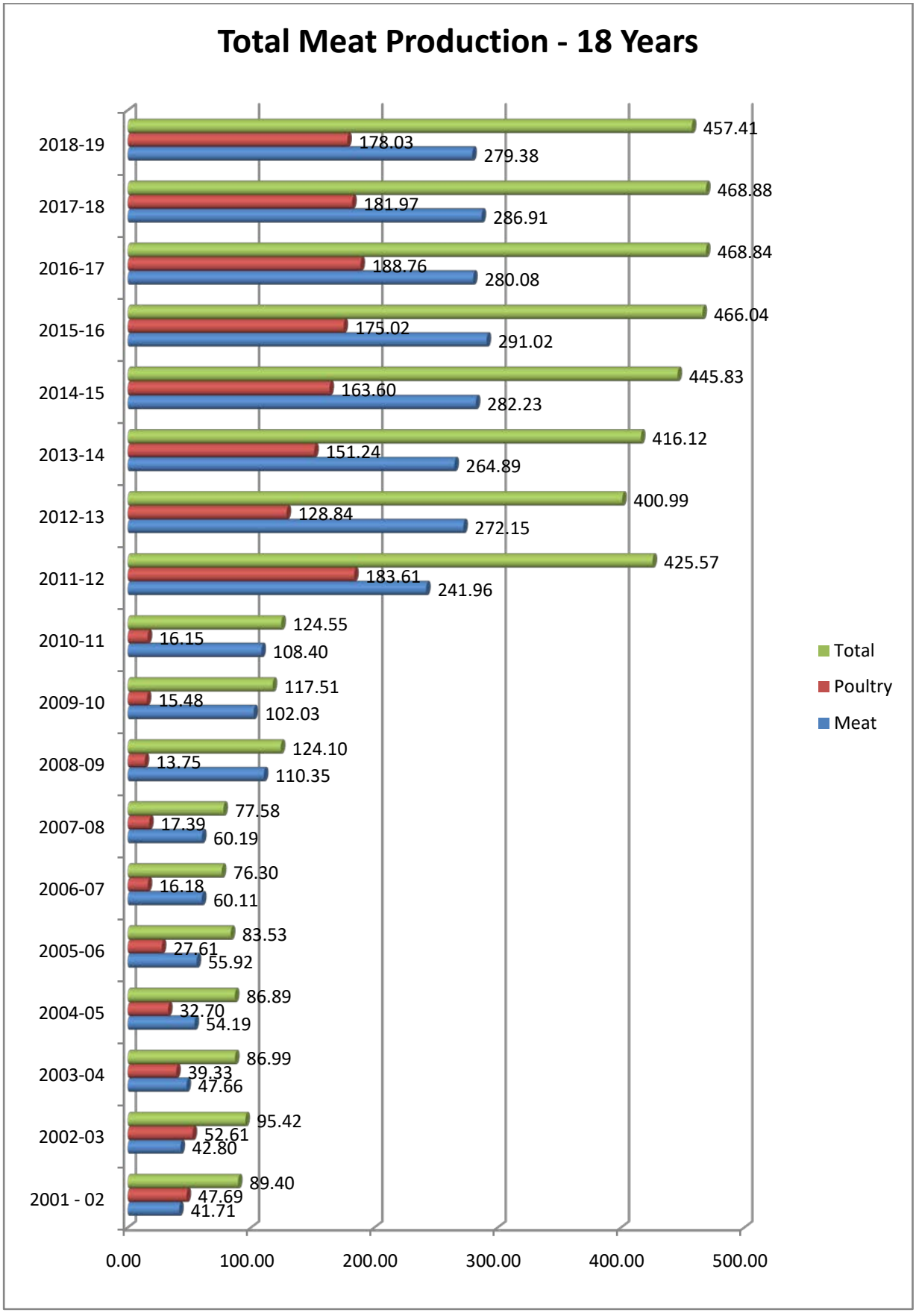
Kottayam
Alappuzha
Pathanamthitta
Kollam
Thiruvananthapuram


District wise Meat and Poultry Production
Thiruvananthapuram
14716908
19099060
Kollam
13504209
19472671
Pathanamthitta
9143510
12149420
Alappuzha
13538746
12341393
Kottayam
13847152
14480340
Idukky
6650118
9924575
Ernakulam
14363413
28599877
Thrissur
16372586
27629269
Palakkad
17294105
18846647
Malappuram
19836914
58743351
Kozhikkode
14541427
24446919
Wayanad
5247366
6756420
Kannur
11598828
19451098
Kasargod
7371436
7445489
0
20000000
40000000
60000000
Poultry
Meat


Total Meat Production - 18 Years
2018-19
457.41
178.03
279.38
2017-18
468.88
181.97
286.91
2016-17
468.84
188.76
280.08
2015-16
466.04
175.02
291.02
2014-15
445.83
163.60
282.23
2013-14
416.12
151.24
264.89
2012-13
400.99
128.84
272.15
2011-12
425.57
183.61
241.96
2010-11
124.55
16.15
108.40
2009-10
117.51
15.48
102.03
2008-09
124.10
13.75
110.35
2007-08
77.58
17.39
60.19
2006-07
76.30
16.18
60.11
2005-06
83.53
27.61
55.92
2004-05
86.89
32.70
54.19
2003-04
86.99
39.33
47.66
2002-03
95.42
52.61
42.80
2001 - 02
89.40
47.69
41.71
0.00
100.00
200.00
300.00
400.00
500.00
Total
Poultry
Meat

TABLES ISS REPORT 2018-19

Table 1 **LAND UTILIZATION STATISTICS (Area in Hectares.)**

Sl. No	District	Total Geographical area	Forest	Land put to non agricultural use	Barren & uncultivable land	Permanent pastures	Land under misc. tree crops	Cultivable waste	Fallow other than current fallow	Current fallow	Marshy Land	Still Water	Water Logged Area	Social Forestry	Net area sown	Area sown more than once	Total cropped Area
1	Trivandrum	218781	49861	32515.68	228	0	39.37	596.06	907.48	2759.65	1.00	2696.00	16.00	22.00	129139.09	30915.50	160054.59
2	Kollam	248788	81438	28895.76	83	0	50.77	3134.15	1533.07	2464.55	4.93	6938.66	939.00	94.97	123211.91	17049.05	140260.96
3	Pathanamthitta	265277	155214	18947.66	139	0	94.02	2445.91	2447.08	3076.18	0.00	2279.28	145.00	73.19	80415.92	24205.71	104621.63
4	Alappuzha	141011	0	25271.13	4	0	95.43	14457.50	2197.29	2550.11	0.00	12458.00	336.00	40.00	83601.70	28141.34	111743.04
5	Kottayam	220442	8141	30048.32	1017	0	123.65	5723.39	1801.87	4173.51	0.00	6360.00	159.00	112.00	162781.80	48131.80	210913.60
6	Idukki	436328	198413	14494.47	1364	0	154.72	1921.34	1150.99	1788.18	0.00	10560.00	0.00	1190.00	205291.27	60584.98	265876.25
7	Eranakulam	305826	70617	46530.62	295	0	118.74	15730.86	6827.92	7373.02	0.00	11171.00	290.00	106.00	146766.16	15327.26	162093.42
8	Thrissur	302919	103619	40471.68	50	0	192.45	9811.81	4869.01	7731.72	0.00	5035.00	318.00	147.00	130673.78	37346.47	168020.25
9	Palakkad	447584	136257	48460.39	1498	0	531.91	19199.89	10918.30	8838.38	0.00	15337.00	0.00	403.79	206139.42	66055.49	272194.91
10	Malappuram	355446	103417	53164.76	699	0	150.63	5412.84	4897.62	6289.95	0.00	6229.00	63.00	191.00	174931.21	61666.27	236597.48
11	Kozhikode	234641	41386	34915.46	552	0	123.86	2320.18	1627.03	2499.67	5.00	5405.85	551.00	37.00	145218.26	48676.41	193894.67
12	Wayanad	212966	78787	11948.13	41	0	43.60	904.52	1064.85	3066.56	0.00	4047.13	19.10	68.20	112975.92	54094.24	167070.16
13	Kannur	297112	48734	40722.81	1155	0	201.57	5977.48	3528.74	3107.25	2.00	6472.42	372.00	72.65	186766.20	33134.98	219901.18
14	Kasaragod	199166	5625	27660.18	3158	0	197.16	8860.80	1769.71	1744.86	0.00	4336.31	20.00	76.00	145718.03	12140.58	157858.61
STATE		**3886287**	**1081509**	**454047**	**10281**	**0**	**2117.88**	**96496.73**	**45540.96**	**57463.59**	**12.93**	**99325.65**	**3228.10**	**2633.80**	**2033630.67**	**537470.08**	**2571100.76**

Source: Directorate of Economics And Statistics

LIVESTOCK CENSUS DATA 2012

Table 2 **District wise Livestock Population (In Nos)**

Sl. No.	Name of District	Cattle			Buffaloes	Sheep	Goats	Pigs		
		Crossbred	Indigenous	Total				Crossbred	Indigenous	Total
1	Thiruvananthapuram	97679	793	98472	3752	31	163980	2350	262	2612
2	Kollam	100910	1369	102279	5792	9	111342	959	10	969
3	Pathanamthitta	63783	551	64334	2846	18	51066	623	133	756
4	Alappuzha	75301	620	75921	5973	0	55158	468	122	590
5	Kottayam	80786	894	81680	6141	9	94297	6383	1108	7491
6	Idukki	82933	7141	90074	5690	23	98503	10631	1065	11696
7	Ernakulam	102107	4675	106782	12777	50	123538	4655	740	5395
8	Thrissur	99882	2865	102747	18650	94	128130	7000	137	7137
9	Palakkad	153567	12337	165904	9191	1157	113031	3749	389	4138
10	Malappuram	77928	2619	80547	19855	9	137718	931	38	969
11	Kozhikode	96073	8658	104731	4343	12	43962	2672	176	2848
12	Kannur	98298	1483	99781	813	3	56445	4340	323	4663
13	Wayanad	70315	2362	72677	5166	21	35150	3441	136	3577
14	Kasaragod	52020	30678	82698	1280	10	33757	2615	326	2941
State Total		**1251582**	**77045**	**1328627**	**102269**	**1446**	**1246077**	**50817**	**4965**	**55782**

Table 3 **District wise Poultry Population**

Sl. No.	Name of District	Fowls					Ducks (including in farms)	Others (including in farms)	Total Poultry
		Desi	Improved	Layers (Farms)	Broilers (Farms)	Total			
1	Thiruvananthapuram	428558	583915	120679	477059	1610211	74070	58951	1743232
2	Kollam	54358	607428	100323	150487	912596	113546	44101	1070243
3	Pathanamthitta	105793	284531	13045	27832	431201	165825	46545	643571
4	Alappuzha	151006	325604	92206	277121	845937	658559	27689	1532185
5	Kottayam	132660	391809	42990	604167	1171626	299120	39059	1509805
6	Idukki	95736	200279	10481	183243	489739	26891	10385	527015
7	Ernakulam	313158	537347	126687	3083214	4060406	108986	101176	4270568
8	Thrissur	553169	321928	100240	1984843	2960180	78756	146897	3185833
9	Palakkad	518068	280845	103162	2477322	3379397	39609	93988	3512994
10	Malappuram	829380	507793	65128	1625139	3027440	87299	161500	3276239
11	Kozhikode	322558	381049	18987	283628	1006222	26853	89323	1122398
12	Kannur	75367	433859	22840	236501	768567	10629	19063	798259
13	Wayanad	58500	165724	18677	137346	380247	13734	10308	404289
14	Kasaragod	167597	192730	17330	289710	667367	5346	12584	685297
State Total		**3805908**	**5214841**	**852775**	**11837612**	**21711136**	**1709223**	**861569**	**24281928**

Table 4 **Districtwise number of Veterinary Institutions in Kerala during 2018-19**

Sl No.	Name of District	DVC	VH	VD	VPC	RAIC	MVD	MVH	Total
1	Thiruvananthapuram	1	23	72	2	5		1	104
2	Kollam	1	22	56	4	4		1	88
3	Pathanamthitta	1	14	43	3	3			64
4	Alappuzha	1	18	55	6	2		1	83
5	Kottayam	1	20	59	4	2		1	87
6	Idukki	1	9	49	2	4	1		66
7	Ernakulam	1	23	75	5	1		1	106
8	Thrissur	1	22	89	6	4			122
9	Palakkad	1	15	79	4	3	1		103
10	Malappuram	1	12	93	4	2			112
11	Kozhikkode	1	13	72	2	1	1		90
12	Wayanad	1	6	20	2	1			30
13	Kannur	1	11	72	6	4	1		95
14	Kasaragode	1	6	35	0	2			44
State Total		**14**	**214**	**869**	**50**	**38**	**4**	**5**	**1194**

DVC - District Veterinary Centre
VH - Veterinary Hospital
VD - Veterinary Dispensary
RAIC - Regional Artificial Insemenation Centre
MVD - Mobile Veterinary Dispensary
MVH - Mobile Veterinary Hospital
VPC - Veterinary Polyclinic

Table 5 **District wise Animals treated, Castrations, Operations, Artificial Inseminations and Calving recorded**

Sl. No.	Name of District	Number of cases treated	Castrations and Operations performed				Artificial Inseminations	Calvings recorded		
			Castrations	Obsterical cases	Other operations	Total		Male	Female	Total
1	Thiruvananthapuram	655838	336	25946	7780	34062	101928	10341	12389	22730
2	Kollam	576261	55	25892	8374	34321	117365	14622	15655	30277
3	Pathanamthitta	418178	11	14738	4710	19459	51910	8274	9198	17472
4	Alappuzha	429188	23	20280	4824	25127	87851	10197	11013	21210
5	Kottayam	412782	164	20567	5575	26306	58130	7707	10749	18456
6	Idukky	409616	7	40512	4312	44831	38180	5986	7228	13214
7	Eranakulam	524249	30	26631	19301	45962	67290	8077	8749	16826
8	Thrissur	749126	148	49405	10540	60093	122465	12779	16438	29217
9	Palakkad	478658	277	22998	6992	30267	114520	12734	13355	26089
10	Malappuram	52572	181	30163	1786	32130	73175	12734	13355	26089
11	Kozhikkode	468586	9	19650	15986	35645	59970	6830	8921	15751
12	Wayanad	441122	5	20377	1915	22297	107962	5608	6309	11917
13	Kannur	421537	13	21657	603	22273	77188	10318	12505	22823
14	Kasaragode	119903	9	8223	2168	10400	40874	6433	7215	22824
State Total		**6157616**	**1268**	**347039**	**94866**	**443173**	**1118808**	**132640**	**153079**	**294895**

Table 6 **District wise number of Outbreak, Attacks and Death**

Sl. No.	Name of District	Canaine Distember			Purvo Virus			Ranikhet			Fowl Pox		
		OB	AT	DT	OB	AT	DT	OB	AT	DT	OB	AT	DT
1	Thiruvananthapuram	0	110	8	0	373	39	0	1448	4	0	434	0
2	Kollam	0	0	0	0	0	3	0	0	0	0	0	0
3	Pathanamthitta	0	0	11	0	0	0	0	0	0	0	0	0
4	Alappuzha	0	0	0	0	0	1	0	0	0	0	0	0
5	Kottayam	0	0	0	0	0	0	0	0	0	0	0	0
6	Idukky	0	0	0	0	0	0	0	0	0	0	0	0
7	Ernakulam	0	0	0	0	0	0	0	0	0	0	0	0
8	Thrissur	0	19	0	0	42	0	0	38	8	0	0	0
9	Palakkad	0	0	0	0	0	0	0	0	0	0	0	0
10	Malappuram	0	0	0	0	0	0	48	0	0	20	0	92
11	Kozhikkod	0	0	0	0	0	0	0	0	0	0	0	0
12	Wayanad	0	0	0	0	0	0	0	0	655	0	0	2
13	Kannur	0	0	0	0	0	0	0	0	0	0	0	0
14	Kasaragode	0	0	0	0	0	0	0	0	0	0	0	0
State Total		**0**	**129**	**19**	**0**	**415**	**43**	**48**	**1486**	**667**	**20**	**434**	**94**

***OB: Out break AT: Attack DT: Death**

Table 7 **District wise - Estimated Number of In milk**

Season		Cow					Buffalo		Goat
		Exotic	Crossbred	Indigenous	Non Descript	Total	Indigenous	Non Descript	
Summer	Rural	0	595459	3344	24549	623352	5642	1226	394866
	Urban	0	34448	38	368	34854	0	127	47528
	Rural+Urban	0	629907	3382	24917	658206	5642	1353	442394
Rainy	Rural	0	620987	2885	17280	641152	4032	1526	475538
	Urban	0	38256	34	272	38562	125	910	26564
	Rural+Urban	0	659243	2919	17552	679714	4157	2436	502102
Winter	Rural	0	612844	1725	14593	629162	4535	1730	472446
	Urban	0	30810	2	994	31806	0	1	23184
	Rural+Urban	0	643654	1727	15587	660968	4535	1731	495630
Over all 2018-19	**Rural**	**0**	**609777**	**2657**	**18826**	**631260**	**4736**	**1493**	**447557**
	Urban	**0**	**34535**	**25**	**541**	**35101**	**125**	**349**	**32460**
	Rural+Urban	**0**	**644312**	**2682**	**19367**	**666361**	**4861**	**1842**	**480017**

Table 8 **Estimated Number of Productive Cow (Crossbred) in Nos.**

Sl No.	Name of District	Rural/Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	23987	31127	27156	27435
		Urban	1570	628	841	1013
		Rural+ Urban	25556.5	31755	27997	28448
2	Kannur	Rural	41585	43281	41015	41969
		Urban	2289	1379	3875	2504
		Rural+ Urban	43874	44660	44890	44473
3	Wayanad	Rural	31986	33455	34484	33302
		Urban	630	477	217	443
		Rural+ Urban	32615.5	33932	34701	33745
4	Kozhikode	Rural	39245	50163	41154	43552
		Urban	1726	1515	2019	1751
		Rural+ Urban	40970.5	51678	43173	45303
5	Malappuram	Rural	35261	31721	38087	34997
		Urban	2333	4722	1409	2834
		Rural+ Urban	37593.5	36443	39496	37831
6	Palakkad	Rural	71674	76130	67295	71736
		Urban	1890	2443	1656	1999
		Rural+ Urban	73563.5	78573	68951	73735
7	Thrissur	Rural	46186	45941	48312	46802
		Urban	3593	3518	3223	3446
		Rural+ Urban	49779	49459	51535	50248
8	Ernakulam	Rural	50464	46001	53306	49894
		Urban	4437	5361	3651	4490
		Rural+ Urban	54901	51362	56957	54384
9	Idukki	Rural	40579	49850	37991	42852
		Urban	579	413	495	495
		Rural+ Urban	41158	50263	38486	43348
10	Kottayam	Rural	38599	48161	43457	43418
		Urban	1904	1068	1560	1509
		Rural+ Urban	40503	49229	45017	44928
11	Alappuzha	Rural	41843	37713	38731	39428
		Urban	2229	3467	1903	2539
		Rural+ Urban	44072	41180	40634	41967
12	Pathanamthitta	Rural	34803	23519	32516	30248
		Urban	1107	1204	1275	1195
		Rural+ Urban	35909.5	24723	33791	31443
13	Kollam	Rural	48727	48728	52800	50066
		Urban	2862	3636	3481	3326
		Rural+ Urban	51589	52364	56281	53393
14	Thiruvananthapuram	Rural	50523	55197	56540	54076
		Urban	7299	8425	5205	6990
		Rural+ Urban	57822	63622	61745	61066
State Total		Rural	**595459**	**620987**	**612844**	**609777**
		Urban	**34448**	**38256**	**30810**	**34535**
		Rural+ Urban	**629907**	**659243**	**643654**	**644312**

Table 9 **Estimated Number of Productive Cow (Indigenous) in Nos.**

Sl No.	Name of District	Rural / Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	698	1013	244	655
		Urban	0	0	0	0
		Rural + Urban	698	1013	244	655
2	Kannur	Rural	201	57	290	182
		Urban	0	0	0	0
		Rural + Urban	201	57	290	182
3	Wayanad	Rural	3	16	19	13
		Urban	0	0	0	0
		Rural + Urban	3	16	19	13
4	Kozhikode	Rural	40	76	91	69
		Urban	1	0	0	1
		Rural + Urban	41	76	91	69
5	Malappuram	Rural	162.5	228	177	189
		Urban	5	0	0	5
		Rural + Urban	167.5	228	177	191
6	Palakkad	Rural	124.5	146	180	150
		Urban	11	22	0	17
		Rural + Urban	135.5	168	180	161
7	Thrissur	Rural	170	462	211	282
		Urban	4	8	0	6
		Rural + Urban	174	470	211	286
8	Ernakulam	Rural	676	629	300	537
		Urban	11	0	0	11
		Rural + Urban	687	629	300	540
9	Idukki	Rural	1.5	2	3	2
		Urban	0	0	0	0
		Rural + Urban	1.5	2	3	2
10	Kottayam	Rural	18	14	17	16
		Urban	3	0	0	3
		Rural + Urban	21	14	17	17
11	Alappuzha	Rural	1.5	2	3	2
		Urban	0	2	2	2
		Rural + Urban	1.5	4	5	3
12	Pathanamthi	Rural	20.5	26	31	26
		Urban	2	0	0	2
		Rural + Urban	22.5	26	31	26
13	Kollam	Rural	51.5	32	75	53
		Urban	1	0	0	1
		Rural + Urban	52.5	32	75	53
14	Thiruvananth	Rural	1176	182	84	482
		Urban	0	2	0	2
		Rural + Urban	1176	184	84	483
State Total		**Rural**	**3344**	**2885**	**1725**	**2657**
		Urban	**38**	**34**	**2**	**25**
		Rural + Urban	**3382**	**2919**	**1727**	**2682**

Table 10 **Estimated Number of Productive Cow (Non Descript) in Nos.**

Sl No.	Name of District	Rural/Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	7722	6283	3422	5823
		Urban	13	64	43	40
		Rural+Urban	7735	6347	3465	5863
2	Kannur	Rural	1549	271	808	875
		Urban	9	30	24	21
		Rural+Urban	1558	301	832	896
3	Wayanad	Rural	622	719	258	535
		Urban	16	54	44	38
		Rural+Urban	638	773	302	573
4	Kozhikode	Rural	1843	2101	1076	1678
		Urban	112	35	304	149
		Rural+Urban	1955	2136	1380	1827
5	Malappuram	Rural	611	242	252	3502
		Urban	32	13	85	43
		Rural+Urban	6609	3015	974	3545
6	Palakkad	Rural	6577	3002	889	3502
		Urban	59	24	158	80
		Rural+Urban	6636	3026	1047	3582
7	Thrissur	Rural	653	453	750	617
		Urban	24	10	63	32
		Rural+Urban	677	463	813	650
8	Ernakulam	Rural	1035	526	107	558
		Urban	30	12	80	40
		Rural+Urban	1065	538	187	599
9	Idukki	Rural	1543	1201	5255	2648
		Urban	4	2	11	6
		Rural+Urban	1547	1203	5266	2654
10	Kottayam	Rural	361	634	359	452
		Urban	16	6	41	21
		Rural+Urban	377	640	400	473
11	Alappuzha	Rural	910	546	136	533
		Urban	38	16	102	52
		Rural+Urban	948	562	238	584
12	Pathanamthitta	Rural	201	151	503	283
		Urban	0	0	0	0
		Rural+Urban	201	151	503	283
13	Kollam	Rural	800	1072	731	869
		Urban	0	0	0	0
		Rural+Urban	800	1072	731	869
14	Thiruvananthapu	Rural	122	79	47	83
		Urban	15	6	39	20
		Rural+Urban	137	85	86	103
State Total		Rural	**24549**	**17280**	**14593**	**18826**
		Urban	**368**	**272**	**994**	**541**
		Rural+Urban	**24917**	**17552**	**15587**	**19367**

Table 11 **Estimated Number of Productive Buffalo (Indigenous) in Nos.**

Sl No.	Name of District	Rural / Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	5	5	5	5
		Urban	0	0	0	0
		Rural+Urban	5	5	5	5
2	Kannur	Rural	85	83	83	84
		Urban	0	6	0	6
		Rural+Urban	85	89	83	86
3	Wayanad	Rural	68	61	36	55
		Urban	0	0	0	0
		Rural+Urban	68	61	36	55
4	Kozhikode	Rural	38	35	63	45
		Urban	0	1	0	1
		Rural+Urban	38	36	63	46
5	Malappuram	Rural	490	809	601	634
		Urban	0	1	0	1
		Rural+Urban	490	810	601	634
6	Palakkad	Rural	36	312	509	285
		Urban	0	5	0	5
		Rural+Urban	36	317	509	286
7	Thrissur	Rural	759	679	359	601
		Urban	0	25	0	25
		Rural+Urban	759	704	359	609
8	Ernakulam	Rural	589	242	332	388
		Urban	0	21	0	21
		Rural+Urban	589	263	332	395
9	Idukki	Rural	689	277	521	495
		Urban	0	2	0	2
		Rural+Urban	689	279	521	496
10	Kottayam	Rural	503	231	173	303
		Urban	0	3	0	3
		Rural+Urban	503	234	173	304
11	Alappuzha	Rural	1170	330	374	625
		Urban	0	8	0	8
		Rural+Urban	1170	338	374	628
12	Pathanamthitta	Rural	129	92	126	116
		Urban	0	2	0	2
		Rural+Urban	129	94	126	116
13	Kollam	Rural	675	616	663	651
		Urban	0	7	0	7
		Rural+Urban	675	623	663	654
14	Thiruvananthapuram	Rural	406	260	690	450
		Urban	0	44	0	44
		Rural+Urban	406	304	690	465
State Total		Rural	**5642**	**4032**	**4535**	**4736**
		Urban	**0**	**125**	**0**	**125**
		Rural+Urban	**5642**	**4157**	**4535**	**4861**

Table 12 **Estimated Number of Productive Buffalo (Non Descript) in Nos.**

Sl No.	Name of District	Rural/Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	35	139	104	93
		Urban	0	21	0	21
		Rural+Urban	35	160	104	100
2	Kannur	Rural	7	6	13	9
		Urban	0	0	0	0
		Rural+Urban	7	6	13	9
3	Wayanad	Rural	72	65	143	93
		Urban	1	7	0	4
		Rural+Urban	73	72	143	96
4	Kozhikode	Rural	104	94	48	82
		Urban	2	14	0	8
		Rural+Urban	106	108	48	88
5	Malappuram	Rural	13	12	26	17
		Urban	2	14	0	8
		Rural+Urban	15	26	26	22
6	Palakkad	Rural	126	210	63	134
		Urban	6	42	0	24
		Rural+Urban	132	252	63	150
7	Thrissur	Rural	44	110	110	88
		Urban	4	28	0	16
		Rural+Urban	48	138	110	99
8	Ernakulam	Rural	91	103	182	125
		Urban	86	602	0	345
		Rural+Urban	177	705	182	357
9	Idukki	Rural	111	120	51	94
		Urban	0	0	0	0
		Rural+Urban	111	120	51	94
10	Kottayam	Rural	422	348	345	372
		Urban	7	49	1	19
		Rural+Urban	429	397	346	391
11	Alappuzha	Rural	29	171	378	192
		Urban	9	63	0	36
		Rural+Urban	38	234	378	216
12	Pathanamthitt	Rural	46	42	32	40
		Urban	8	56	0	32
		Rural+Urban	54	98	32	62
13	Kollam	Rural	7	6	13	9
		Urban	0	0	0	0
		Rural+Urban	7	6	13	9
14	Thiruvanantha	Rural	119	100	222	146
		Urban	2	14	0	8
		Rural+Urban	121	114	222	152
State Total		Rural	**1226**	**1526**	**1730**	**1493**
		Urban	**127**	**910**	**1**	**349**
		Rural+Urban	**1353**	**2436**	**1731**	**1842**

Table 13 **Estimated Number of Productive Goat in Nos.**

Sl No.	Name of District	Rural / Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	12623	13676	19589	15268
		Urban	1041	69	274	461
		Rural+Urban	13664	13745	19863	15729
2	Kannur	Rural	18364	23336	26488	22710
		Urban	842	795	337	660
		Rural+Urban	19206	24131	26825	23371
3	Wayanad	Rural	8079	10689	11378	10043
		Urban	162	121	127	137
		Rural+Urban	8241	10810	11505	10180
4	Kozhikode	Rural	19923	19997	20643	20185
		Urban	893	1888	708	1167
		Rural+Urban	20816	21885	21351	21352
5	Malappuram	Rural	50314	51541	52466	51435
		Urban	8039	3408	2658	4709
		Rural+Urban	58353	54949	55124	56144
6	Palakkad	Rural	41133	37499	51096	43184
		Urban	4965	1891	586	2489
		Rural+Urban	46098	39390	51682	45673
7	Thrissur	Rural	36683	42873	39911	39830
		Urban	4047	6481	5546	5360
		Rural+Urban	40730	49354	45457	45190
8	Ernakulam	Rural	38406	37955	36684	37688
		Urban	20534	1933	1546	8023
		Rural+Urban	58940	39888	38230	45711
9	Idukki	Rural	33438	32990	34623	33677
		Urban	599	262	164	342
		Rural+Urban	34037	33252	34787	34019
10	Kottayam	Rural	36436	32324	39945	36204
		Urban	655	1416	421	835
		Rural+Urban	37091	33740	40366	37038
11	Alappuzha	Rural	18468	25391	23549	22471
		Urban	1112	1060	1779	1314
		Rural+Urban	19580	26451	25328	23785
12	Pathanamthitta	Rural	14175	18440	22392	18314
		Urban	63	408	724	397
		Rural+Urban	14238	18848	23116	18710
13	Kollam	Rural	30191	41839	39536	37189
		Urban	960	1068	407	815
		Rural+Urban	31151	42907	39943	38003
14	Thiruvananthapu	Rural	36633	86988	54146	59360
		Urban	3616	5764	7907	5751
		Rural+Urban	40249	92752	62053	65110
State Total		Rural	**394866**	**475538**	**472446**	**447557**
		Urban	**47528**	**26564**	**23184**	**32460**
		Rural+Urban	**442394**	**502102**	**495630**	**480017**

Table 14 **Estimated Milk Yield per day per Animal - Crossbred Cow in Kgs.**

Sl No.	Name of District	Rural / Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	9.79	10.24	10.07	10.03
		Urban	8.23	5.76	9.86	7.93
		Rural+Urban	9.54	10.15	10.07	9.92
2	Kannur	Rural	10.24	9.96	9.90	10.03
		Urban	9.00	6.37	10.02	8.45
		Rural+Urban	10.01	9.85	9.91	9.92
3	Wayanad	Rural	10.54	10.53	11.58	10.88
		Urban	10.69	10.50	10.22	10.47
		Rural+Urban	10.37	10.53	11.57	10.82
4	Kozhikode	Rural	10.81	10.88	10.21	10.64
		Urban	12.40	10.77	9.92	11.04
		Rural+Urban	10.69	10.87	10.20	10.59
5	Malappuram	Rural	11.31	10.15	10.02	10.49
		Urban	8.46	9.63	9.86	9.31
		Rural+Urban	10.95	10.08	10.02	10.35
6	Palakkad	Rural	10.36	9.93	10.03	10.11
		Urban	9.74	10.50	9.77	10.01
		Rural+Urban	10.18	9.94	10.02	10.05
7	Thrissur	Rural	9.78	9.80	10.04	9.87
		Urban	9.50	10.62	10.01	10.05
		Rural+Urban	9.60	9.86	10.04	9.83
8	Ernakulam	Rural	11.20	9.77	10.10	10.36
		Urban	9.54	11.55	9.83	10.31
		Rural+Urban	10.88	9.96	9.90	10.25
9	Idukki	Rural	9.87	9.93	10.02	9.94
		Urban	9.75	7.13	10.01	8.95
		Rural+Urban	9.71	9.90	10.02	9.88
10	Kottayam	Rural	9.96	10.85	10.27	10.36
		Urban	9.05	12.37	10.22	10.55
		Rural+Urban	9.76	10.88	10.27	10.31
11	Alappuzha	Rural	10.54	10.88	10.05	10.49
		Urban	10.91	7.38	10.01	9.42
		Rural+Urban	10.38	10.59	10.05	10.34
12	Pathanamth	Rural	8.91	10.06	10.06	9.68
		Urban	9.85	8.84	10.32	9.66
		Rural+Urban	8.79	10.00	10.07	9.62
13	Kollam	Rural	9.23	9.85	10.13	9.73
		Urban	9.82	7.45	9.97	9.07
		Rural+Urban	9.12	9.68	10.12	9.64
14	Thiruvanant	Rural	11.71	10.44	10.17	10.78
		Urban	11.26	11.50	10.00	10.93
		Rural+Urban	11.46	10.58	10.16	10.74
State Average		**Rural**	**10.17**	**10.22**	**10.15**	**10.18**
		Urban	**9.84**	**9.95**	**9.98**	**9.92**
		Rural+Urban	**10.15**	**10.20**	**10.14**	**10.16**

Table 15 **Estimated Milk Yield per day per Animal - Indigenous Cow in Kgs.**

Sl No.	Name of District	Rural / Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	1.98	2.17	2.14	2.10
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	1.95	2.17	2.14	2.09
2	Kannur	Rural	1.98	2.15	2.11	2.08
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	1.95	2.15	2.11	2.07
3	Wayanad	Rural	2.03	2.15	2.10	2.09
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	2.00	2.15	2.10	2.08
4	Kozhikode	Rural	1.83	2.24	2.04	2.04
		Urban	3.00	0.00	0.00	3.00
		Rural+Urban	1.83	2.24	2.04	2.04
5	Malappuram	Rural	1.85	2.17	2.10	2.04
		Urban	2.03	0.00	0.00	2.03
		Rural+Urban	1.82	2.17	2.10	2.03
6	Palakkad	Rural	1.76	2.17	2.10	2.01
		Urban	2.03	2.00	0.00	2.01
		Rural+Urban	1.76	2.17	2.10	2.01
7	Thrissur	Rural	2.16	2.30	2.06	2.17
		Urban	2.03	2.00	0.00	2.01
		Rural+Urban	2.12	2.30	2.06	2.16
8	Ernakulam	Rural	1.81	1.95	2.20	1.99
		Urban	2.03	0.00	0.00	2.03
		Rural+Urban	1.79	1.95	2.20	1.98
9	Idukki	Rural	2.10	2.17	1.76	2.01
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	2.07	2.17	1.76	2.00
10	Kottayam	Rural	1.70	2.27	2.09	2.02
		Urban	2.03	0.00	0.00	2.03
		Rural+Urban	1.72	2.27	2.09	2.03
11	Alappuzha	Rural	1.95	2.30	1.79	2.02
		Urban	0.00	2.00	1.88	1.94
		Rural+Urban	1.92	2.15	1.82	1.96
12	Pathanamthitta	Rural	1.93	1.91	2.10	1.98
		Urban	2.03	0.00	0.00	2.03
		Rural+Urban	1.91	1.91	2.10	1.97
13	Kollam	Rural	1.78	2.20	2.10	2.03
		Urban	1.00	0.00	0.00	1.00
		Rural+Urban	1.74	2.20	2.10	2.01
14	Thiruvananthapuram	Rural	1.85	2.17	2.20	2.07
		Urban	0.00	2.00	0.00	2.00
		Rural+Urban	1.82	2.16	2.20	2.06
State Average		Rural	**1.86**	**2.14**	**2.12**	**2.04**
		Urban	**2.00**	**2.15**	**1.88**	**2.01**
		Rural+Urban	**2.19**	**2.44**	**2.14**	**2.26**

Table 16 **Estimated Milk Yield per day per Animal - Non Descript Cow in Kgs.**

Sl No.	Name of District	Rural/Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	2.89	2.63	3.30	2.94
		Urban	2.29	2.70	3.38	2.79
		Rural+Urban	2.84	2.63	3.30	2.92
2	Kannur	Rural	3.27	2.75	3.18	3.07
		Urban	2.42	2.85	3.25	2.84
		Rural+Urban	3.21	2.76	3.18	3.05
3	Wayanad	Rural	2.78	2.50	3.31	2.86
		Urban	2.76	2.87	3.21	2.95
		Rural+Urban	2.73	2.53	3.30	2.85
4	Kozhikode	Rural	3.01	3.11	3.29	3.14
		Urban	3.51	2.50	3.24	3.08
		Rural+Urban	2.99	3.10	3.28	3.12
5	Malappuram	Rural	3.14	3.04	3.18	3.12
		Urban	2.72	2.90	3.23	2.95
		Rural+Urban	3.07	3.03	3.20	3.10
6	Palakkad	Rural	3.01	4.49	3.39	3.63
		Urban	3.81	4.00	3.00	3.61
		Rural+Urban	2.97	4.48	3.33	3.60
7	Thrissur	Rural	2.92	2.18	3.00	2.70
		Urban	2.71	2.70	3.25	2.88
		Rural+Urban	2.87	2.19	3.02	2.69
8	Ernakulam	Rural	3.20	3.50	3.00	3.24
		Urban	1.97	2.90	3.25	2.70
		Rural+Urban	3.12	3.49	3.11	3.24
9	Idukki	Rural	3.44	4.50	3.07	3.68
		Urban	2.76	3.00	3.36	3.04
		Rural+Urban	3.39	4.50	3.07	3.66
10	Kottayam	Rural	3.60	2.20	3.20	3.00
		Urban	2.68	2.75	3.12	2.85
		Rural+Urban	3.50	2.21	3.19	2.96
11	Alappuzha	Rural	3.27	2.75	3.38	3.13
		Urban	2.73	2.90	3.25	2.96
		Rural+Urban	3.20	2.75	3.32	3.09
12	Pathanamthitta	Rural	3.16	2.75	3.15	3.02
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	3.11	2.75	3.15	3.00
13	Kollam	Rural	3.18	3.06	3.14	3.13
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	3.13	3.06	3.14	3.11
14	Thiruvananthapuram	Rural	3.14	3.04	3.18	3.12
		Urban	2.68	2.90	3.25	2.94
		Rural+Urban	3.04	3.03	3.21	3.09
State Average		Rural	**3.00**	**3.18**	**3.18**	**3.12**
		Urban	**3.00**	**2.88**	**3.21**	**3.03**
		Rural+Urban	**3.00**	**3.17**	**3.18**	**3.12**

Table 17 **Estimated Milk Yield per day per Animal - Buffalo (Indigeneous) in Kgs.**

Sl No.	Name of District	Rural / Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	5.46	4.88	5.35	5.23
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	5.37	4.88	5.35	5.20
2	Kannur	Rural	5.45	5.42	5.30	5.39
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.36	5.42	5.30	5.36
3	Wayanad	Rural	5.45	5.42	5.24	5.37
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.36	5.42	5.24	5.34
4	Kozhikode	Rural	5.45	5.34	5.33	5.37
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.36	5.35	5.33	5.35
5	Malappuram	Rural	5.45	5.40	5.33	5.39
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.37	5.40	5.33	5.37
6	Palakkad	Rural	5.45	5.41	5.39	5.42
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.36	5.42	5.39	5.39
7	Thrissur	Rural	5.38	5.72	5.11	5.41
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.29	4.75	5.11	5.05
8	Ernakulam	Rural	5.45	6.50	5.30	5.75
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.36	6.42	5.30	5.70
9	Idukki	Rural	5.99	5.41	5.44	5.61
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.90	5.41	5.44	5.58
10	Kottayam	Rural	5.45	5.42	5.32	5.40
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.37	5.42	5.32	5.37
11	Alappuzha	Rural	5.20	4.99	5.36	5.18
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.12	5.00	5.36	5.16
12	Pathanamthitt	Rural	5.45	5.40	5.33	5.39
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.36	5.41	5.33	5.37
13	Kollam	Rural	5.59	5.44	5.36	5.46
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.50	5.44	5.36	5.43
14	Thiruvanantha	Rural	5.44	5.41	5.36	5.40
		Urban	0.00	5.50	0.00	5.50
		Rural+Urban	5.35	5.42	5.36	5.38
State Average		**Rural**	**5.38**	**5.33**	**5.34**	**5.35**
		Urban	**0.00**	**5.50**	**0.00**	**5.50**
		Rural+Urban	**5.38**	**5.33**	**5.34**	**5.35**

Table 18 **Estimated Milk Yield per day per Animal - Buffalo (Non Descript) in Kgs.**

Sl No.	Name of Dis	Rural/Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	4.07	4.25	4.24	4.19
		Urban	0.00	4.00	0.00	4.00
		Rural+Urban	4.00	4.22	4.24	4.15
2	Kannur	Rural	3.75	4.25	4.23	4.08
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	3.69	4.25	4.23	4.06
3	Wayanad	Rural	4.01	4.25	4.23	4.16
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	3.97	4.23	4.23	4.14
4	Kozhikode	Rural	4.04	4.25	4.24	4.18
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	4.01	4.22	4.24	4.16
5	Malappuram	Rural	4.00	4.07	4.23	4.10
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	4.24	4.03	4.23	4.17
6	Palakkad	Rural	4.54	4.25	4.23	4.34
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	4.54	4.21	4.23	4.33
7	Thrissur	Rural	3.81	4.25	4.24	4.10
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	3.95	4.20	4.24	4.13
8	Ernakulam	Rural	3.71	4.25	4.23	4.06
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	4.92	4.04	4.23	4.40
9	Idukki	Rural	3.70	4.25	4.24	4.06
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	3.64	4.25	4.24	4.04
10	Kottayam	Rural	3.73	5.00	4.24	4.33
		Urban	6.25	5.25	1.00	4.19
		Rural+Urban	3.71	5.03	4.24	4.33
11	Alappuzha	Rural	4.28	4.25	4.23	4.25
		Urban	6.25	4.00	0.00	5.12
		Rural+Urban	4.70	4.18	4.23	4.37
12	Pathanamthit	Rural	3.95	4.20	4.17	4.11
		Urban	6.25	3.50	0.00	4.87
		Rural+Urban	4.24	3.80	4.17	4.07
13	Kollam	Rural	3.80	4.25	4.23	4.09
		Urban	0.00	0.00	0.00	0.00
		Rural+Urban	3.74	4.25	4.23	4.07
14	Thiruvananth	Rural	4.36	4.25	4.23	4.28
		Urban	6.25	3.25	0.00	4.74
		Rural+Urban	4.32	4.13	4.23	4.23
State Average		Rural	**3.88**	**4.42**	**4.23**	**4.18**
		Urban	**6.25**	**4.03**	**4.00**	**4.76**
		Rural+Urban	**4.11**	**4.27**	**4.23**	**4.20**

Table 19 **Estimated Milk Yield per day per Animal - Goat in Kgs.**

Sl No.	Name of District	Rural/ Urban	Inmilk			
			Summer	Rainy	Winter	Overall
1	Kasargod	Rural	0.59	0.49	0.65	0.58
		Urban	0.74	0.50	0.63	0.62
		Rural+Urban	0.59	0.49	0.65	0.58
2	Kannur	Rural	0.49	0.44	0.62	0.52
		Urban	0.65	0.64	0.63	0.64
		Rural+Urban	0.49	0.45	0.62	0.52
3	Wayanad	Rural	1.11	1.19	0.75	0.62
		Urban	0.70	0.90	0.70	0.77
		Rural+Urban	1.08	1.18	0.75	1.01
4	Kozhikode	Rural	1.25	0.99	0.74	0.99
		Urban	0.69	0.81	0.56	0.69
		Rural+Urban	1.20	0.97	0.73	0.97
5	Malappuram	Rural	0.70	0.59	0.68	0.66
		Urban	0.66	0.61	0.68	0.65
		Rural+Urban	0.68	0.59	0.68	0.65
6	Palakkad	Rural	0.43	0.47	0.66	0.52
		Urban	0.64	0.45	0.73	0.61
		Rural+Urban	0.45	0.47	0.66	0.53
7	Thrissur	Rural	1.16	0.72	0.75	0.88
		Urban	0.91	0.63	0.68	0.74
		Rural+Urban	1.12	0.71	0.74	0.86
8	Ernakulam	Rural	0.92	0.49	0.52	0.64
		Urban	0.65	0.77	0.64	0.69
		Rural+Urban	0.81	0.50	0.52	0.61
9	Idukki	Rural	0.82	1.07	0.70	0.86
		Urban	0.73	0.89	0.57	0.73
		Rural+Urban	0.80	1.07	0.70	0.86
10	Kottayam	Rural	0.79	1.23	0.72	0.92
		Urban	0.61	1.25	0.70	0.86
		Rural+Urban	0.77	1.23	0.72	0.91
11	Alappuzha	Rural	0.91	1.10	0.70	0.90
		Urban	0.60	0.78	0.63	0.67
		Rural+Urban	0.88	1.09	0.70	0.89
12	Pathanamthit	Rural	0.35	0.46	0.71	0.51
		Urban	0.94	0.50	0.63	0.69
		Rural+Urban	0.35	0.46	0.70	0.50
13	Kollam	Rural	0.51	0.50	0.68	0.56
		Urban	0.61	0.63	0.61	0.62
		Rural+Urban	0.50	0.50	0.67	0.56
14	Thiruvananth	Rural	0.51	0.52	0.69	0.57
		Urban	0.61	0.57	0.70	0.63
		Rural+Urban	0.51	0.53	0.69	0.58
State Average		Rural	**0.73**	**0.68**	**0.68**	**0.70**
		Urban	**0.66**	**0.67**	**0.67**	**0.67**
		Rural+Urban	**0.72**	**0.68**	**0.68**	**0.69**

Table 20 **Milk Production -Crossbred Cow in Tonnes**

Sl No.	Name of District	Rural / Urban	Summer	Rainy	Winter	Annual
1	Kasargod	Rural	28178.889	39189.052	32830.305	100198.246
		Urban	1550.678	444.768	995.082	2990.528
		Rural+Urban	29729.567	39633.820	33825.387	103188.774
2	Kannur	Rural	51106.794	53049.205	48701.211	152857.210
		Urban	2471.979	1079.925	4657.662	8209.566
		Rural+Urban	53578.773	54129.130	53358.873	161066.776
3	Wayanad	Rural	40469.666	43330.191	47918.967	131718.824
		Urban	808.183	616.046	266.238	1690.467
		Rural+Urban	41277.849	43946.237	48185.205	133409.291
4	Kozhikode	Rural	50885.596	67101.869	50443.281	168430.746
		Urban	2568.192	2006.576	2402.505	6977.273
		Rural+Urban	53453.788	69108.445	52845.786	175408.019
5	Malappuram	Rural	47863.763	39602.083	45814.059	133279.905
		Urban	2369.516	5595.209	1666.753	9631.478
		Rural+Urban	50233.279	45197.292	47480.812	142911.383
6	Palakkad	Rural	89134.856	92938.001	80957.160	263030.017
		Urban	2208.645	3154.412	1941.795	7304.852
		Rural+Urban	91343.501	96092.413	82898.955	270334.869
7	Thrissur	Rural	54179.807	55380.901	58234.221	167794.929
		Urban	4094.466	4595.296	3869.534	12559.296
		Rural+Urban	58274.273	59976.197	62103.755	180354.225
8	Ernakulam	Rural	67824.945	55306.040	63326.934	186457.919
		Urban	5078.781	7615.398	4306.446	17000.625
		Rural+Urban	72903.726	62921.438	67633.380	203458.544
9	Idukki	Rural	48081.384	60869.173	45702.306	154652.863
		Urban	677.585	361.943	594.831	1634.359
		Rural+Urban	48758.969	61231.116	46297.137	156287.222
10	Kottayam	Rural	46148.965	64266.734	53581.818	163997.517
		Urban	2068.236	1625.519	1913.058	5606.813
		Rural+Urban	48217.201	65892.253	55494.876	169604.330
11	Alappuzha	Rural	52902.756	50471.668	46708.983	150083.407
		Urban	2918.369	3146.479	2285.010	8349.858
		Rural+Urban	55821.125	53618.147	48993.993	158433.265
12	Pathanamthitta	Rural	37194.150	29115.192	39252.321	105561.663
		Urban	1307.981	1309.070	1578.930	4195.981
		Rural+Urban	38502.131	30424.262	40831.251	109757.644
13	Kollam	Rural	53999.189	59028.522	64155.198	177182.909
		Urban	3371.574	3331.861	4164.669	10868.104
		Rural+Urban	57370.763	62360.383	68319.867	188051.013
14	Thiruvananthapuram	Rural	70998.712	70852.944	69033.183	210884.839
		Urban	9859.141	11916.456	6245.400	28020.997
		Rural+Urban	80857.853	82769.400	75278.583	238905.836
State Total		**Rural**	**738969.472**	**780501.575**	**746659.947**	**2266130.994**
		Urban	**41353.326**	**46798.958**	**36887.913**	**125040.197**
		Rural+Urban	**780322.798**	**827300.533**	**783547.860**	**2391171.191**

Table 21 **Milk Production - Indigenous Cow in Tonnes**

Sl No.	Name of District	Rural/ Urban	Summer	Rainy	Winter	Annual
1	Kasargod	Rural	165.629	270.195	62.712	498.536
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	165.629	270.195	62.712	498.536
2	Kannur	Rural	47.663	15.050	73.502	136.215
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	47.663	15.050	73.502	136.215
3	Wayanad	Rural	0.732	4.241	4.798	9.771
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	0.732	4.241	4.798	9.771
4	Kozhikode	Rural	8.784	20.895	22.302	51.981
		Urban	0.366	0.000	0.000	0.366
		Rural+Urban	9.150	20.895	22.302	52.347
5	Malappuram	Rural	36.051	60.813	44.604	141.468
		Urban	1.220	0.000	0.000	1.220
		Rural+Urban	37.271	60.813	44.604	142.688
6	Palakkad	Rural	26.364	38.931	45.326	110.621
		Urban	2.684	5.872	0.000	8.556
		Rural+Urban	29.048	44.803	45.326	119.177
7	Thrissur	Rural	44.042	130.602	52.159	226.803
		Urban	0.976	2.214	0.000	3.190
		Rural+Urban	45.018	132.816	52.159	229.993
8	Ernakulam	Rural	146.961	150.866	79.200	377.027
		Urban	2.684	0.000	0.000	2.684
		Rural+Urban	149.645	150.866	79.200	379.711
9	Idukki	Rural	0.378	0.535	0.633	1.546
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	0.378	0.535	0.633	1.546
10	Kottayam	Rural	3.679	3.903	4.257	11.839
		Urban	0.732	0.000	0.000	0.732
		Rural+Urban	4.411	3.903	4.257	12.571
11	Alappuzha	Rural	0.351	0.566	0.643	1.560
		Urban	0.000	0.492	0.450	0.942
		Rural+Urban	0.351	1.058	1.093	2.502
12	Pathanamthitta	Rural	4.758	6.095	7.796	18.649
		Urban	0.488	0.000	0.000	0.488
		Rural+Urban	5.246	6.095	7.796	19.137
13	Kollam	Rural	10.996	8.660	18.915	38.571
		Urban	0.122	0.000	0.000	0.122
		Rural+Urban	11.118	8.660	18.915	38.693
14	Thiruvananthapuram	Rural	261.119	48.518	22.176	331.813
		Urban	0.000	0.431	0.000	0.431
		Rural+Urban	261.119	48.949	22.176	332.244
State Total		**Rural**	**757.507**	**759.870**	**439.023**	**1956.400**
		Urban	**9.272**	**9.009**	**0.450**	**18.731**
		Rural+Urban	**766.779**	**768.879**	**439.473**	**1975.131**

Table 22 **Milk Production -Non Descript Cow in Tonnes**

Sl No.	Name of District	Rural / Urban	Summer	Rainy	Winter	Annual
1	Kasargod	Rural	2677.312	2031.299	1354.938	6063.549
		Urban	3.569	21.255	17.415	42.239
		Rural+Urban	2680.881	2052.554	1372.353	6105.788
2	Kannur	Rural	608.395	91.666	307.848	1007.909
		Urban	2.611	10.523	9.360	22.494
		Rural+Urban	611.006	102.189	317.208	1030.403
3	Wayanad	Rural	207.163	221.093	102.462	530.718
		Urban	5.307	19.084	16.965	41.356
		Rural+Urban	212.470	240.177	119.427	572.074
4	Kozhikode	Rural	665.211	804.974	424.260	1894.445
		Urban	47.192	10.763	118.365	176.320
		Rural+Urban	712.403	815.737	542.625	2070.765
5	Malappuram	Rural	230.360	90.489	96.306	417.155
		Urban	10.452	4.637	32.955	48.044
		Rural+Urban	240.812	95.126	129.261	465.199
6	Palakkad	Rural	2378.390	1657.266	361.131	4396.787
		Urban	27.006	11.808	56.880	95.694
		Rural+Urban	2405.396	1669.074	418.011	4492.481
7	Thrissur	Rural	228.958	121.432	270.000	620.390
		Urban	7.798	3.321	24.570	35.689
		Rural+Urban	236.756	124.753	294.570	656.079
8	Ernakulam	Rural	397.751	226.444	38.520	662.715
		Urban	7.078	4.280	31.200	42.558
		Rural+Urban	404.829	230.724	69.720	705.273
9	Idukki	Rural	637.633	664.477	1935.288	3237.398
		Urban	1.327	0.738	4.440	6.505
		Rural+Urban	638.960	665.215	1939.728	3243.903
10	Kottayam	Rural	156.057	171.561	137.856	465.474
		Urban	5.145	2.030	15.330	22.505
		Rural+Urban	161.202	173.591	153.186	487.979
11	Alappuzha	Rural	357.484	184.685	55.161	597.330
		Urban	12.428	5.707	39.780	57.915
		Rural+Urban	369.912	190.392	94.941	655.245
12	Pathanamthitta	Rural	76.263	51.076	190.134	317.473
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	76.263	51.076	190.134	317.473
13	Kollam	Rural	305.488	403.057	275.556	984.101
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	305.488	403.057	275.556	984.101
14	Thiruvananthapuram	Rural	45.955	29.584	17.962	93.501
		Urban	4.820	2.140	15.210	22.170
		Rural+Urban	50.775	31.724	33.172	115.671
State Total		**Rural**	**8972.420**	**6749.103**	**5567.422**	**21288.945**
		Urban	**134.733**	**96.286**	**382.470**	**613.489**
		Rural+Urban	**9107.153**	**6845.389**	**5949.892**	**21902.434**

Table 23 **Milk Production – Buffalo -Indigeneous in Tonnes**

Sl No.	Name of District	Rural / Urban	Summer	Rainy	Winter	Annual
1	Kasargod	Rural	3.273	3.003	3.210	9.486
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	3.273	3.003	3.210	9.486
2	Kannur	Rural	55.617	55.282	52.788	163.687
		Urban	0.000	4.059	0.000	4.059
		Rural+Urban	55.617	59.341	52.788	167.746
3	Wayanad	Rural	44.490	40.671	22.617	107.778
		Urban	0.000	0.000	0.000	0.000
		Rural+Urban	44.490	40.671	22.617	107.778
4	Kozhikode	Rural	24.863	23.005	40.257	88.125
		Urban	0.000	0.677	0.000	0.677
		Rural+Urban	24.863	23.682	40.257	88.802
5	Malappuram	Rural	320.720	537.175	384.741	1242.636
		Urban	0.000	0.677	0.000	0.677
		Rural+Urban	320.720	537.852	384.741	1243.313
6	Palakkad	Rural	23.563	207.806	329.508	560.877
		Urban	0.000	3.383	0.000	3.383
		Rural+Urban	23.563	211.189	329.508	564.260
7	Thrissur	Rural	490.129	394.523	220.242	1104.894
		Urban	0.000	16.913	0.000	16.913
		Rural+Urban	490.129	411.436	220.242	1121.807
8	Ernakulam	Rural	385.335	193.479	211.152	789.966
		Urban	0.000	14.207	0.000	14.207
		Rural+Urban	385.335	207.686	211.152	804.173
9	Idukki	Rural	495.522	184.296	340.200	1020.018
		Urban	0.000	1.353	0.000	1.353
		Rural+Urban	495.522	185.649	340.200	1021.371
10	Kottayam	Rural	329.229	153.909	110.406	593.544
		Urban	0.000	2.030	0.000	2.030
		Rural+Urban	329.229	155.939	110.406	595.574
11	Alappuzha	Rural	730.181	202.643	240.351	1173.175
		Urban	0.000	5.412	0.000	5.412
		Rural+Urban	730.181	208.055	240.351	1178.587
12	Pathanamthitta	Rural	84.407	61.141	80.559	226.107
		Urban	0.000	1.353	0.000	1.353
		Rural+Urban	84.407	62.494	80.559	227.460
13	Kollam	Rural	452.762	411.863	426.792	1291.417
		Urban	0.000	4.736	0.000	4.736
		Rural+Urban	452.762	416.599	426.792	1296.153
14	Thiruvananthapuram	Rural	265.163	173.046	443.526	881.735
		Urban	0.000	29.766	0.000	29.766
		Rural+Urban	265.163	202.812	443.526	911.501
State Total		**Rural**	**3705.254**	**2641.842**	**2906.349**	**9253.445**
		Urban	**0.000**	**84.566**	**0.000**	**84.566**
		Rural+Urban	**3705.254**	**2726.408**	**2906.349**	**9338.011**

Table 24 **Milk Production – Buffalo -Non Descript in Tonnes**

Sl No.	Name of District	Rural / Urban	Summer	Rainy	Winter	Annual
1	Kasargod	Rural	17.08	72.662	52.853	142.595
		Urban	0	10.332	0	10.332
		Rural+Urban	17.08	82.994	52.853	152.927
2	Kannur	Rural	3.148	3.137	6.606	12.891
		Urban	0	0	0	0.000
		Rural+Urban	3.148	3.137	6.606	12.891
3	Wayanad	Rural	34.626	33.979	72.665	141.270
		Urban	0.763	3.444	0	4.207
		Rural+Urban	35.389	37.423	72.665	145.477
4	Kozhikode	Rural	50.365	49.139	24.394	123.898
		Urban	1.525	6.888	0	8.413
		Rural+Urban	51.89	56.027	24.394	132.311
5	Malappuram	Rural	6.237	6.012	13.212	25.461
		Urban	1.525	6.888	0	8.413
		Rural+Urban	7.762	12.9	13.212	33.874
6	Palakkad	Rural	68.607	109.778	31.992	210.377
		Urban	4.575	20.664	0	25.239
		Rural+Urban	73.182	130.442	31.992	235.616
7	Thrissur	Rural	20.097	57.503	55.942	133.542
		Urban	3.05	13.776	0	16.826
		Rural+Urban	23.147	71.279	55.942	150.368
8	Ernakulam	Rural	40.564	53.844	92.483	186.891
		Urban	65.575	296.184	0	361.759
		Rural+Urban	106.139	350.028	92.483	548.650
9	Idukki	Rural	49.266	62.73	25.919	137.915
		Urban	0	0	0	0.000
		Rural+Urban	49.266	62.73	25.919	137.915
10	Kottayam	Rural	188.865	214.02	175.398	578.283
		Urban	5.338	31.642	0.48	37.460
		Rural+Urban	194.203	245.662	175.878	615.743
11	Alappuzha	Rural	14.906	89.391	191.826	296.123
		Urban	6.863	30.996	0	37.859
		Rural+Urban	21.769	120.387	191.826	333.982
12	Pathanamthitta	Rural	21.829	21.695	15.994	59.518
		Urban	6.1	24.108	0	30.208
		Rural+Urban	27.929	45.803	15.994	89.726
13	Kollam	Rural	3.194	3.137	6.606	12.937
		Urban	0	0	0	0.000
		Rural+Urban	3.194	3.137	6.606	12.937
14	Thiruvananthapuram	Rural	62.255	52.275	112.555	227.085
		Urban	1.525	5.597	0	7.122
		Rural+Urban	63.78	57.872	112.555	234.207
State Total		**Rural**	**581.039**	**829.302**	**878.445**	**2288.786**
		Urban	**96.839**	**450.519**	**0.480**	**547.838**
		Rural+Urban	**677.878**	**1279.821**	**878.925**	**2836.624**

Table 25 **Milk Production - Goat in Tonnes**

Sl No.	Name of District	Rural/ Urban	Summer	Rainy	Winter	Annual
1	Kasargod	Rural	886.889	819.354	1527.903	3234.146
		Urban	92.846	4.244	20.55	117.640
		Rural+Urban	979.735	823.598	1548.453	3351.786
2	Kannur	Rural	1089.376	1262.388	1983.816	4335.580
		Urban	65.744	62.697	25.275	153.716
		Rural+Urban	1155.12	1325.085	2009.091	4489.296
3	Wayanad	Rural	1073.737	1561.394	1024.02	3659.151
		Urban	13.595	13.395	10.668	37.658
		Rural+Urban	1087.332	1574.789	1034.688	3696.809
4	Kozhikode	Rural	2981.238	2426.777	1820.734	7228.749
		Urban	74.021	188.682	47.196	309.899
		Rural+Urban	3055.259	2615.459	1867.93	7538.648
5	Malappuram	Rural	4223.023	3738.141	4285.409	12246.573
		Urban	634.578	255.472	215.655	1105.705
		Rural+Urban	4857.601	3993.613	4501.064	13352.278
6	Palakkad	Rural	2127.745	2149.181	4045.648	8322.574
		Urban	381.61	104.64	51.168	537.418
		Rural+Urban	2509.355	2253.821	4096.816	8859.992
7	Thrissur	Rural	5124.848	3790.698	3570.691	12486.237
		Urban	441.724	502.376	449.226	1393.326
		Rural+Urban	5566.572	4293.074	4019.917	13879.563
8	Ernakulam	Rural	4228.139	2290.571	2289.082	8807.792
		Urban	1603.295	184.263	118.527	1906.085
		Rural+Urban	5831.434	2474.834	2407.609	10713.877
9	Idukki	Rural	3276.864	4329.793	2908.29	10514.947
		Urban	52.653	28.585	11.217	92.455
		Rural+Urban	3329.517	4358.378	2919.507	10607.402
10	Kottayam	Rural	3440.709	4902.929	3473.277	11816.915
		Urban	48.232	217.711	35.364	301.307
		Rural+Urban	3488.941	5120.64	3508.641	12118.222
11	Alappuzha	Rural	2025.031	3430.31	1978.074	7433.415
		Urban	79.589	101.543	135.204	316.336
		Rural+Urban	2104.62	3531.853	2113.278	7749.751
12	Pathanamthitta	Rural	602.225	1052.285	1894.961	3549.471
		Urban	7.072	25.092	54.552	86.716
		Rural+Urban	609.297	1077.377	1949.513	3636.187
13	Kollam	Rural	1841.621	2573.099	3205.236	7619.956
		Urban	70.272	82.103	29.67	182.045
		Rural+Urban	1911.893	2655.202	3234.906	7802.001
14	Thiruvananthapuram	Rural	2234.613	5613.382	4480.627	12328.622
		Urban	263.623	402.878	664.188	1330.689
		Rural+Urban	2498.236	6016.26	5144.815	13659.311
State Total		**Rural**	**35156.058**	**39940.302**	**38487.768**	**113584.128**
		Urban	**3828.854**	**2173.681**	**1868.460**	**7870.995**
		Rural+Urban	**38984.912**	**42113.983**	**40356.228**	**121455.123**

Table 26 **District wise Milk production**

Sl No.	Name of District	Cow					Buffalo		Goat	Annual production (2018-19)	Annual production (2017-18)	% variation
		Exotic	Crossbred	Indigenous	Non Descript	Total	Indigenous	Non Descript				
1	Kasaragode	0	103188.774	498.536	6105.788	109793.098	9.486	152.927	3351.786	113307.297	109739.340	3.25
2	Kannur	0	161066.776	136.215	1030.403	162233.394	167.746	12.891	4489.296	166903.327	167373.982	-0.28
3	Wayanad	0	133409.291	9.771	572.074	133991.136	107.778	145.477	3696.809	137941.200	146938.936	-6.12
4	Kozhikkode	0	175408.019	52.347	2070.765	177531.131	88.802	132.311	7538.648	185290.892	184994.185	0.16
5	Malappuram	0	142911.383	142.688	465.199	143519.270	1243.313	33.874	13352.278	158148.735	156322.738	1.17
6	Palakkad	0	270334.869	119.177	4492.481	274946.527	564.260	235.616	8859.992	284606.395	279425.679	1.85
7	Thrissur	0	180354.225	229.993	656.079	181240.297	1121.807	150.368	13879.563	196392.035	206964.827	-5.11
8	Ernakulam	0	203458.544	379.711	705.273	204543.528	804.173	548.650	10713.877	216610.228	220178.414	-1.62
9	Idukky	0	156287.222	1.546	3243.903	159532.671	1021.371	137.915	10607.402	171299.359	164559.858	4.10
10	Kottayam	0	169604.33	12.571	487.979	170104.880	595.574	615.743	12118.222	183434.419	191242.091	-4.08
11	Alappuzha	0	158433.265	2.502	655.245	159091.012	1178.587	333.982	7749.751	168353.332	159980.254	5.23
12	Pathanamthitta	0	109757.644	19.137	317.473	110094.254	227.460	89.726	3636.187	114047.627	142597.413	-20.02
13	Kollam	0	188051.013	38.693	984.101	189073.807	1296.153	12.937	7802.001	198184.898	209442.634	-5.38
14	Thiruvananthapuram	0	238905.836	332.244	115.671	239353.751	911.501	234.207	13659.311	254158.770	236221.976	7.59
State Total		**0**	**2391171.191**	**1975.131**	**21902.434**	**2415048.756**	**9338.011**	**2836.624**	**121455.12**	**2548678.514**	**2575982.327**	**-1.06**

Table 27 **Estimated Number of animals Inmilk for the last 20 years**

Sl No.	Year	Inmilk						
		Cows			Buffalo		Goat	Total
		Exotic / Crossbred	Indigenous	Non Descript	Indigenous	Non Descript		
1	1999 - 00	8942	250		336		5563	15091
2	2000 - 01	9297	213		300		5604	15414
3	2001 - 02	9688	170		287		5735	15880
4	2002-03	8293	189		214		5072	13768
5	2003-04	7236	143		175		3780	11334
6	2004-05	7052	116		167		3549	10884
7	2005-06	7034	112		157		3642	10945
8	2006-07	6950	102		131		3903	11086
9	2007-08	7069	101		123		4624	11917
10	2008-09	6999	144		170		4640	11953
11	2009-10	7140	135		210		4470	11955
12	2010-11	7624	302		155		4728	12809
13	2011-12	7760	260		133		4660	12813
14	2012-13	7936	115		406		4560	13017
15	2013-14	7959	97		485		4569	13110
16	2014-15	8050	73		505		4628	13256
17	2015-16	6686	26	213	47	23	5084	12079
18	2016-17	6304	20	192	50	15	5037	11618
19	2017-18	6494	27	216	52	19	4898	11706
20	2018-19	6443	27	194	49	18	4800	11531

Table 28 **Estimated Milk Production for the last 20 years**

Sl No.	Year	Cows		Buffalo Indigenous/ Non Discript	Goat	Total
		Indigenous/Non Discript	Crossbred / Exotic			
1	1999 - 00	227.970	2099.554	70.027	127.719	2525.270
2	2000 - 01	195.043	2224.791	63.447	122.117	2605.398
3	2001 - 02	156.592	2381.015	62.994	117.284	2717.885
4	2002-03	175.930	2088.775	48.031	106.240	2418.976
5	2003-04	136.319	1855.677	39.790	78.768	2110.553
6	2004-05	108.854	1803.574	37.927	74.857	2025.212
7	2005-06	108.176	1839.340	36.474	79.210	2063.200
8	2006-07	98.268	1904.675	29.846	86.086	2118.875
9	2007-08	98.049	2025.343	27.346	96.897	2247.634
10	2008-09	143.049	2168.078	36.312	103.089	2450.528
11	2009-10	132	2234.357	44.45	126.3	2537.107
12	2010-11	104.423	2407.88	20.996	110.046	2643.345
13	2011-12	17.595	2564.38	27.015	107.219	2716.845
14	2012-13	8.521	2640.012	37.606	105.474	2791.613
15	2013-14	2.081	2481.48	58.05	112.07	2653.68
16	2014-15	2.52	2531.44	62.41	114.77	2711.13
17	2015-16	24.09	2483.8	12.95	128.88	2649.72
18	2016-17	23.46	2357.93	12.21	126.69	2520.29
19	2017-18	26.5	2416.04	12.67	120.77	2575.98
20	2018-19	23.88	2391.17	12.17	121.46	2548.68

Table 29 **Estimated Number of Fowls**

Sl No.	Name of District	Rural / Urban	Desi Fowls				Improved Fowls				Total Fowls			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
1	Kasargod	Rural	83465	122350.9	143839	116418	221640	266472.4	258660	248919	305105	388823	402499	365337
		Urban	2214	3332	4102	3211	6045	3847	2640	4185	8259	7179	6742	7396
		Rural + Urban	85679	125682.9	147941	119629	227685	270319.4	261300	253104	313364	396002	409241	372733
2	Kannur	Rural	37663	88137.62	92973	72856	501174	461220.2	638394	532824	538837	549358	731367	605680
		Urban	3098	2185	3059	2778	9859	16301	18271	14795	12957	18486	21330	17573
		Rural + Urban	40761	90322.62	96032	75634	511033	477521.2	656665	547619	551794	567844	752697	623253
3	Wayanad	Rural	68973	70179.29	71757	70295	235072	256347.1	236886	242838	304045	326526	308643	313133
		Urban	1545	901	0	1222	3342	677	2052	2020	4887	1578	2052	2840
		Rural + Urban	70518	71080.29	71757	71115	238414	257024.1	238938	244858	308932	328104	310695	315972
4	Kozhikode	Rural	263025	288444.1	333655	294812	633352	464892.7	570628	555962	896377	753337	904283	850774
		Urban	10881	47947	21116	26737	28400	20978	11890	20471	39281	68925	33006	47208
		Rural + Urban	273906	336391.1	354771	321548	661752	485870.7	582518	576433	935658	822262	937289	897981
5	Malappuram	Rural	752483	834357.3	832269	806305	801135	650789.8	780017	743528	1553618	1485147	1612286	1549832
		Urban	40087	74654	79230	64605	47937	15107	26937	29970	88024	89761	106167	94574
		Rural + Urban	792570	909011.3	911499	870909	849072	665896.8	806954	773497	1641642	1574908	1718453	1644407
6	Palakkad	Rural	484634	449410.7	512113	481798	377406	470068.3	445656	431070	862040	919479	957769	912869
		Urban	24083	9863	43285	25604	10514	7141	20926	12800	34597	17004	64211	38405
		Rural + Urban	508717	459273.7	555398	507402	387920	477209.3	466582	443871	896637	936483	1021980	951273
7	Thrissur	Rural	432867	520056.9	537145	496532	455096	450405.2	436194	447301	887963	970462	973339	943833
		Urban	58853	69888	45338	58128	34395	115966	114054	88073	93248	185854	159392	146201
		Rural + Urban	491720	589944.9	582483	554660	489491	566371.2	550248	535373	981211	1156316	1132731	1090034

Table 29 Contd. **Estimated Number of Fowls**

Sl No.	Name of District	Rural / Urban	Desi Fowls				Improved Fowls				Total Fowls			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
8	Ernakulam	Rural	228722	269996.6	307010	268369	618151	731705.8	654354	668320	846873	1001702	961364	936689
		Urban	27795	9252	0	18486	69706	24965	27674	40810	97501	34217	27674	53218
		Rural + Urban	237974	279248.6	307010	274580	687857	756670.8	682028	709130	925831	1035919	989038	983710
9	Idukki	Rural	45079	95270.53	89256	76517	275831	219933.1	301933	265576	320910	315204	391189	342092
		Urban	615	459	414	496	19503	5528	11919	12300	20118	5987	12333	12797
		Rural + Urban	45694	95729.53	89670	77013	295334	225461.1	313852	277876	341028	321191	403522	354889
10	Kottayam	Rural	53014	154496.6	156661	121288	673576	685326.7	683253	680717	726590	839823	839914	802005
		Urban	5664	4177	0	4917	10761	10389	10248	10467	16425	14566	10248	13768
		Rural + Urban	58678	158673.6	156661	124589	684337	695715.7	693501	691184	743015	854389	850162	815773
11	Alappuzha	Rural	99883	118954.4	122835	113856	609218	482765.4	554952	548764	709101	601720	677787	662620
		Urban	5849	6019	10387	7398	31859	30089	19217	27106	37708	36108	29604	34504
		Rural + Urban	105732	124973.4	133222	121254	641077	512854.4	574169	575871	746809	637828	707391	697124
12	Pathanamthi	Rural	60600	120203.1	120558	100398	461939	592467.9	490728	515390	522539	712671	611286	615788
		Urban	1498	1094	0	1295	12652	16657	20059	16437	14150	17751	20059	17306
		Rural + Urban	62098	121297.1	120558	101267	474591	609124.9	510787	531827	536689	730422	631345	633094
13	Kollam	Rural	39656	52108.14	61969	51188	771656	655682.5	849597	758199	811312	707791	911566	809387
		Urban	1554	1146	1978	1556	40538	39293	28596	36192	42092	40439	30574	37748
		Rural + Urban	41210	53254.14	63947	52744	812194	694975.5	878193	794391	853404	748230	942140	847135
14	Thiruvanant	Rural	288889	366706.6	334748	330189	775546	566147	735067	691673	1064435	932854	1069815	1021863
		Urban	6840	15653	51936	24636	5512	95154	95655	65356	12352	110807	147591	89992
		Rural + Urban	295729	382359.6	386684	354825	781058	661301	830722	757029	1076787	1043661	1217406	1111855
State Total		Rural	**2938953**	**3550673**	**3716788**	**3400821**	**7410792**	**6954224**	**7636319**	**7331081**	**10349745**	**10504897**	**11353107**	**10731901**
		Urban	**190576**	**246570**	**260845**	**232547**	**331023**	**402092**	**410138**	**380983**	**521599**	**648662**	**670983**	**613530**
		Rural + Urban	**3129529**	**3797243**	**3977633**	**3633368**	**7741815**	**7356316**	**8046457**	**7712063**	**10871344**	**11153559**	**12024090**	**11345432**

Table 30 **Estimated Egg yield per Fowl per year (in Nos)**

Sl No.	Name of District	Rural/ Urban	Desi Fowls				Improved Fowls			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
1	Kasargod	Rural	47.34	44.14	45.38	45.62	70.58	74.59	73.33	72.84
		Urban	40.49	44.55	44	43.01	63	67.99	70.99	67.31
		Rural + Urban	47.16	44.15	45.34	45.55	70.38	74.5	73.3	72.73
2	Kannur	Rural	48.27	45.05	45.48	46.27	71.41	74.71	72.96	73.03
		Urban	39	44.5	43.42	42.31	53.41	67.8	70.96	64.03
		Rural + Urban	47.56	45.04	45.41	46	71.07	74.48	72.9	72.82
3	Wayanad	Rural	48.12	46.37	45.72	46.74	67.89	72.98	73.65	71.5
		Urban	39	43.95	0	41.49	90	69.28	71.98	77.09
		Rural + Urban	47.92	46.34	45.72	46.66	68.2	72.97	73.63	71.59
4	Kozhikode	Rural	47.46	46.13	46.1	46.56	67.05	70.22	73.77	70.33
		Urban	34.5	45.82	44	41.44	64.22	68.96	71	68.05
		Rural + Urban	46.95	46.09	45.98	46.34	66.92	70.17	73.71	70.25
5	Malappuram	Rural	43.36	44.97	46.51	44.94	73.52	74.11	74.9	74.17
		Urban	31.45	43.75	44.35	39.84	68.06	69	70	69.01
		Rural + Urban	42.76	44.87	46.32	44.64	73.22	73.99	74.74	73.98
6	Palakkad	Rural	45.66	47.03	44.7	45.81	71.31	71.04	72.07	71.47
		Urban	39.7	43.5	44	42.39	66.51	69.93	70.5	68.97
		Rural + Urban	45.38	46.95	44.64	45.67	71.18	71.03	72	71.4
7	Thrissur	Rural	45.08	47	46.9	46.33	70.13	74.2	71.53	71.96
		Urban	42.07	43.27	44.09	43.14	65.19	69.63	70	68.27
		Rural + Urban	44.72	46.56	46.69	45.99	69.79	73.26	71.21	71.43
8	Ernakulam	Rural	48.37	46.94	46.33	47.22	75.02	75.04	73.18	74.42
		Urban	39	44.2	0	41.61	55.15	67.99	72	65.02
		Rural + Urban	47.36	46.85	46.33	46.85	73.01	74.8	73.13	73.65
9	Idukki	Rural	47.25	47.95	45.24	46.83	69.44	72.68	73.07	71.73
		Urban	39	43.98	43.45	42.14	81.87	70.49	70.24	74.21
		Rural + Urban	47.14	47.93	45.23	46.78	70.26	72.62	72.96	71.94

Table 30 Contd. **Estimated Egg yield per Fowl per year (in Nos)**

Sl No.	Name of District	Rural/ Urban	Desi Fowls				Improved Fowls			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
10	Kottayam	Rural	48.07	45.55	45.75	46.46	71.85	70.53	71.09	71.16
		Urban	39	43.97	0	41.5	65.84	69.25	70	68.36
		Rural + Urban	47.19	45.51	45.75	46.15	71.76	70.51	71.07	71.11
11	Alappuzha	Rural	46.55	45.74	45.53	45.94	74.17	72.53	73.57	73.42
		Urban	39	43.6	43.69	42.09	73.21	69.61	70.51	71.11
		Rural + Urban	46.13	45.63	45.39	45.72	74.12	72.36	73.46	73.31
12	Pathanamthitta	Rural	45.29	44.12	45	44.8	74.94	72.25	71.99	73.06
		Urban	35.42	43.98	0	39.72	63	69.19	70.5	67.55
		Rural + Urban	45.06	44.12	45	44.72	74.62	72.16	71.93	72.91
13	Kollam	Rural	47.02	45.92	45.86	46.27	75.71	72.51	72.14	73.46
		Urban	38.99	43.98	43.3	42.09	71.56	69.5	71.39	70.81
		Rural + Urban	46.72	45.98	45.78	46.16	75.51	72.34	72.12	73.33
14	Thiruvananthapuram	Rural	47.26	46.74	45.31	46.44	70.42	71.86	71.45	71.24
		Urban	48	42.96	43.22	44.73	63.5	71.24	70.85	68.52
		Rural + Urban	47.28	46.58	45.03	46.3	70.37	71.77	71.38	71.17
State Average		**Rural**	**45.76**	**46.07**	**45.92**	**45.92**	**72.11**	**72.76**	**72.72**	**72.53**
		Urban	**38.5**	**43.99**	**43.94**	**42.14**	**65.75**	**69.73**	**70.60**	**68.69**
		Rural + Urban	**45.32**	**45.94**	**45.79**	**45.68**	**71.83**	**72.60**	**72.61**	**72.35**

Table 31 **Estimated Egg Production - Fowls (in Lakh Numbers)**

Sl No.	Name of District	Rural/ Urban	Desi Fowls				Improved Fowls				Total			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
1	Kasargod	Rural	39.51098	54.00937	65.27392	52.86675	156.44336	198.75963	189.66328	181.62498	195.95434	252.76900	254.93720	234.49173
		Urban	0.89643	1.48443	1.80488	1.39325	3.80835	2.61562	1.87405	2.77048	4.70478	4.10005	3.67893	4.16373
		Rural + Urban	40.40741	55.4938	67.0788	54.25999	160.25171	201.37525	191.53733	184.39546	200.65912	256.86905	258.61613	238.65546
2	Kannur	Rural	18.17912	39.70715	42.27982	33.35729	357.9113	344.59097	465.75274	388.87724	376.09039	384.29812	508.03256	422.23453
		Urban	1.20822	0.97233	1.32837	1.16823	5.26597	11.05222	12.96437	9.74684	6.47419	12.02455	14.29274	10.91507
		Rural + Urban	19.38734	40.67948	43.60819	34.52552	363.17724	355.64319	478.71711	398.62408	382.56458	396.32267	522.32530	433.1496
3	Wayanad	Rural	33.18929	32.54501	32.80687	32.84645	159.59626	187.08517	174.46292	173.74732	192.78555	219.63018	207.26979	206.59376
		Urban	0.60255	0.39601	0	0.49886	3.0078	0.46904	1.47708	1.64902	3.61035	0.86505	1.47708	1.98387
		Rural + Urban	33.79184	32.94102	32.80687	33.1813	162.60406	187.55421	175.94	175.39634	196.39590	220.49523	208.74687	208.57764
4	Kozhikode	Rural	124.84348	133.07247	153.82131	137.14349	424.6323	326.46527	420.92963	390.33404	549.47578	459.53774	574.75094	527.47753
		Urban	3.75395	21.96733	9.29104	11.71202	18.23879	14.46712	8.4419	13.74689	21.99274	36.43445	17.73294	25.45892
		Rural + Urban	128.59743	155.0398	163.11235	148.85552	442.87109	340.93239	429.37153	404.08093	571.46852	495.97219	592.48388	552.93645
5	Malappura	Rural	326.25848	375.2037	387.09625	362.75381	589.02778	482.27241	584.23202	551.47599	915.28626	857.47611	971.32827	914.2298
		Urban	12.60723	32.66277	35.14012	26.77375	32.62587	10.42383	18.8559	20.61697	45.23310	43.08660	53.99602	47.39072
		Rural + Urban	338.86571	407.86647	422.23637	389.52755	621.65365	492.69624	603.08792	572.09297	960.51936	900.56271	1025.32429	961.62052
6	Palakkad	Rural	221.28256	211.34682	228.90049	220.43888	269.13273	333.95065	321.17572	308.08551	490.41529	545.29747	550.07621	528.52438
		Urban	9.56141	4.29041	19.0454	10.90318	6.99278	4.9938	14.75283	8.8704	16.55419	9.28421	33.79823	19.77358
		Rural + Urban	230.84397	215.63723	247.94589	231.34206	276.12551	338.94445	335.92855	316.95591	506.96948	554.58168	583.87444	548.29796
7	Thrissur	Rural	195.15684	244.42676	251.94226	230.42931	319.17933	334.20001	311.98776	321.87674	514.33617	578.62677	563.93002	552.30605
		Urban	24.7603	30.24017	19.99145	25.0391	22.42377	80.74968	79.8378	60.95465	47.18407	110.98985	99.82925	85.99375
		Rural + Urban	219.91714	274.66693	271.93371	255.46841	341.6031	414.94969	391.82556	382.83139	561.52024	689.61662	663.75927	638.2998
8	Ernakulam	Rural	110.634	126.74711	142.2357	126.4535	463.73929	549.04278	478.86556	497.45842	574.37329	675.78989	621.10126	623.91192
		Urban	10.84005	4.08938	0	7.45094	38.44028	16.97283	19.92528	25.11892	49.28033	21.06221	19.92528	30.12023
		Rural + Urban	121.47405	130.83649	142.2357	131.45481	502.17957	566.01561	498.79084	522.57734	623.65362	696.85210	641.02654	654.03215

Table 31 Contd. **Estimated Egg Production - Fowls (in Lakh Numbers)**

Sl No.	Name of District	Rural/ Urban	Desi Fowls				Improved Fowls				Total			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
9	Idukki	Rural	21.29983	45.67872	40.37858	35.78765	191.54112	159.84122	220.61975	190.41879	212.84095	205.51994	260.99833	226.20643
		Urban	0.23985	0.20187	0.17988	0.20734	15.96659	3.89689	8.37203	9.40242	16.20644	4.09876	8.55191	9.60976
		Rural + Urban	21.53968	45.88059	40.55846	35.99498	207.50771	163.73811	228.99178	199.82121	229.04739	209.61870	269.55024	235.81619
10	Kottayam	Rural	25.48154	70.37169	71.67002	55.79416	483.98936	483.38033	485.71442	484.35127	509.47090	553.75202	557.38444	540.14543
		Urban	2.20877	1.83669	0	2.02197	7.08499	7.1939	7.1736	7.15082	9.29376	9.03059	7.17360	8.50804
		Rural + Urban	27.69031	72.20838	71.67002	57.15137	491.07435	490.57423	492.88802	491.50209	518.76466	562.78261	564.55804	548.65346
11	Alappuzha	Rural	46.49591	54.4058	55.9264	52.26187	451.86831	350.13413	408.25522	403.24673	498.36422	404.53993	464.18162	455.5086
		Urban	2.28092	2.62416	4.53827	3.13873	23.32347	20.94412	13.54895	19.30812	25.60439	23.56828	18.08722	22.44685
		Rural + Urban	48.77683	57.02996	60.46467	55.4006	475.19178	371.07825	421.80417	422.55486	523.96861	428.10821	482.26884	477.95545
12	Pathanamt	Rural	27.4483	53.03649	54.25088	44.88298	346.16767	428.04905	353.27742	376.09803	373.61597	481.08554	407.52830	420.981
		Urban	0.53052	0.48115	0	0.50573	7.97076	11.52503	14.1416	11.19727	8.50128	12.00618	14.14160	11.53674
		Rural + Urban	27.97882	53.51764	54.25088	45.22244	354.13843	439.57408	367.41902	387.2953	382.11725	493.09172	421.66990	432.51774
13	Kollam	Rural	18.64632	23.92698	28.4162	23.63785	584.25293	475.46687	612.91036	557.01514	602.89925	499.39385	641.32656	580.65298
		Urban	0.60587	0.50398	0.85638	0.65389	29.00703	27.30691	20.41368	25.6089	29.61290	27.81089	21.27006	26.2628
		Rural + Urban	19.25219	24.43096	29.27258	24.29174	613.25996	502.77378	633.32404	582.62404	632.51215	527.20474	662.59662	606.91578
14	Thiruvanar	Rural	136.53474	171.39179	151.68112	153.26072	546.13024	406.8349	525.23364	492.3195	682.66498	578.22669	676.91476	645.58022
		Urban	3.2832	6.72409	22.4488	10.74375	3.50012	67.78735	67.77029	46.29395	6.78332	74.51144	90.21909	57.03771
		Rural + Urban	139.81794	178.11588	174.12992	164.00447	549.63036	474.62225	593.00393	538.61346	689.44830	652.73813	767.13385	702.61793
State Total		Rural	**1344.96139**	**1635.86986**	**1706.67982**	**1561.91469**	**5343.61195**	**5060.07339**	**5553.08044**	**5316.92969**	**6688.57334**	**6695.94325**	**7259.76026**	**6878.84438**
		Urban	**73.37927**	**108.47477**	**114.62459**	**98.76608**	**217.65657**	**280.39834**	**289.54936**	**262.43567**	**291.03584**	**388.87311**	**404.17395**	**361.20175**
		Rural + Urban	**1418.34066**	**1744.34463**	**1821.30441**	**1660.68076**	**5561.26852**	**5340.47173**	**5842.6298**	**5579.36537**	**6979.60918**	**7084.81636**	**7663.93421**	**7240.04613**

Table 32 **Estimated Number of Ducks (In Numbers)**

Sl No.	Name of District	Rural/ Urban	Desi				Improved				Total			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
1	Kasargod	Rural	917	2104	1001	1345	2045	1181.46	1295	1507	2962	3285	2296	2852
		Urban	992	679	0	835	40	63	0	52	1032	742	0	886
		Rural + Urban	1909	2782.971	1001	1905	2085	1244.46	1295	1542	3994	4027	2296	3447
2	Kannur	Rural	1021	1074	4444	2164	2917	3087.959	5622	3864	3938	4162	10066	6028
		Urban	340	233	0	286	311	167	0	239	651	400	0	525
		Rural + Urban	1361	1307	4444	2356	3228	3254.959	5622	4024	4589	4562	10066	6381
3	Wayanad	Rural	1211	2524.531	1585	1777	2611	4296.429	2527	3151	3822	6821	4112	4928
		Urban	275	188	0	231	23	36	0	30	298	224	0	261
		Rural + Urban	1486	2712.531	1585	1932	2634	4332.429	2527	3171	4120	7045	4112	5103
4	Kozhikode	Rural	3961	8324.897	6522	6274	2601	8514.354	5431	5524	6562	16839	11953	11798
		Urban	1972	1392	0	1681	220	751	451	475	2192	2143	451	1603
		Rural + Urban	5933	9716.897	6522	7402	2821	9265.354	5882	5999	8754	18982	12404	13401
5	Malappuram	Rural	44319	39829.24	30447	38245	16403	18141.69	13059	15890	60722	57971	43506	54135
		Urban	1479	5572	10914	5960	458	358	79	300	1937	5930	10993	6260
		Rural + Urban	45798	45401.24	41361	44206	16861	18499.69	13138	16189	62659	63901	54499	60395
6	Palakkad	Rural	5083	5705.714	5347	5380	5678	8993.986	4800	6507	10761	14700	10147	11886
		Urban	1091	747	511	784	193	129	0	161	1284	876	511	892
		Rural + Urban	6174	6452.714	5858	6164	5871	9122.986	4800	6615	12045	15576	10658	12779
7	Thrissur	Rural	21616	23357.79	19380	21468	11747	13817.8	16645	14055	33363	37176	36025	35523
		Urban	5170	7056	6235	6156	337	407	633	458	5507	7463	6868	6614
		Rural + Urban	26786	30413.79	25615	27624	12084	14224.8	17278	14513	38870	44639	42893	42137
8	Ernakulam	Rural	25191	25452.01	25125	25257	46435	44305.18	36350	42402	71626	69757	61475	67659
		Urban	12159	8327	5745	8759	771	1195	0	984	12930	9522	5745	9419
		Rural + Urban	37350	33779.01	30870	34016	47206	45500.18	36350	43062	84556	79279	67220	77078

Table 32 Contd. **Estimated Number of Ducks (In Numbers)**

Sl No.	Name of District	Rural/ Urban	Desi				Improved				Total			
			Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall	Summer	Rainy	Winter	Overall
9	Idukki	Rural	902	3868.451	3604	2790	13624	4773.418	4783	7735	14526	8642	8387	10525
		Urban	184	92	0	138	57	89	17	55	241	181	17	147
		Rural + Urban	1086	3960.451	3604	2882	13681	4862.418	4800	7789	14767	8823	8404	10672
10	Kottayam	Rural	12821	32461.16	19156	21522	43367	34214.81	65802	47659	56188	66676	84958	69181
		Urban	4560	1639	1403	2538	279	433	84	267	4839	2072	1487	2805
		Rural + Urban	17381	34100.16	20559	24060	43646	34647.81	65886	47926	61027	68748	86445	71985
11	Alappuzha	Rural	78703	89265.26	76825	81645	134608	97369.25	63471	98672	213311	186635	140296	180316
		Urban	20290	4108	0	12166	909	1409	272	868	21199	5517	272	9034
		Rural + Urban	98993	93373.26	76825	89811	135517	98778.25	63743	99540	234510	192152	140568	189351
12	Pathanamth	Rural	40772	73919	149555	87706	16444	19828.07	22444	19557	57216	93747	171999	107263
		Urban	1383	694	0	1037	903	4331	1696	2319	2286	5025	1696	3015
		Rural + Urban	42155	74613.15	149555	88403	17347	24159.07	24140	21876	59502	98772	173695	110278
13	Kollam	Rural	14846	20502	12950	16129	51179	60540.36	52741	54847	66025	81042	65691	70976
		Urban	3239	1625	1546	2139	5387	2194	2505	3363	8626	3819	4051	5502
		Rural + Urban	18085	22127.05	14496	18267	56566	62734.36	55246	58211	74651	84861	69742	76478
14	Thiruvanant	Rural	8911	14743.35	11521	11735	16558	17788.32	16746	17034	25469	32532	28267	28769
		Urban	7794	7769	13755	9745	831	1681	0	1258	8625	9450	13755	10590
		Rural + Urban	16705	22512.35	25276	21480	17389	19469.32	16746	17879	34094	41982	42022	39359
State Total		**Rural**	**260274**	**343132**	**367462**	**323436**	**366217**	**336853**	**311716**	**338404**	**626491**	**679985**	**679178**	**661839**
		Urban	**60928**	**40121**	**40109**	**47072**	**10719**	**13243**	**5737**	**9932**	**71647**	**53364**	**45846**	**57003**
		Rural + Urban	**321202**	**383253**	**407571**	**370507**	**376936**	**350096**	**317453**	**348335**	**698138**	**733349**	**725024**	**718843**

Table 33 **Estimated EggYield per Duck per Year (in Numbers)**

Sl No.	Name of District	Rural/ Urban	Summer		Rainy		Winter		Overall	
			Desi	Improved	Desi	Improved	Desi	Improved	Desi	Improved
1	Kasargod	Rural	53.65	53.51	56.23	55.64	53.74	55.5	54.55	54.88
		Urban	53.08	55.58	52.49	52.52	0	0	52.78	54.04
		Rural + Urban	53.36	53.55	55.32	55.48	53.74	55.5	54.15	54.84
2	Kannur	Rural	54.24	55.44	56.23	55	53.37	55.5	54.62	55.31
		Urban	53.11	55.91	52.49	52.94	0	0	52.8	54.42
		Rural + Urban	53.96	55.49	55.56	54.89	53.37	55.5	54.31	55.29
3	Wayanad	Rural	64.26	53.84	68.3	55.64	53.12	55.47	61.96	54.98
		Urban	53.01	52	52.49	52.19	0	0	52.75	52.1
		Rural + Urban	62.18	53.83	67.2	55.61	53.12	55.47	60.89	54.97
4	Kozhikode	Rural	54.56	54.71	56.21	55	53.26	55.99	54.69	55.23
		Urban	53.11	73.83	52.5	52.5	0	53.5	52.8	59.96
		Rural + Urban	54.08	56.2	55.68	54.8	53.26	55.8	54.35	55.6
5	Malappuram	Rural	51.78	53.39	45.15	55.11	53	55.64	49.95	54.71
		Urban	25	52	52.49	53.94	52.25	54	43.22	53.31
		Rural + Urban	50.92	53.35	46.05	55.09	52.8	55.63	49.9	54.69
6	Palakkad	Rural	56.92	55.95	69.21	55.78	53.25	54.96	59.85	55.57
		Urban	53.11	74	52.46	52.19	52.45	0	52.67	63.05
		Rural + Urban	56.24	56.55	67.27	55.73	53.18	54.96	58.95	55.75
7	Thrissur	Rural	56.75	54.72	51.04	55.64	52.51	55.5	53.43	55.29
		Urban	56.99	52	52.5	53.5	52.25	53.96	53.92	53.15
		Rural + Urban	56.8	54.64	51.38	55.58	52.45	55.44	53.54	55.22
8	Ernakulam	Rural	54	56.01	56.24	56	52.78	55.55	54.35	55.86
		Urban	53.11	51.97	52.49	52.91	52	0	52.54	52.44
		Rural + Urban	53.71	55.94	55.32	55.92	52.64	55.55	53.9	55.81

Table 33 Contd. **Estimated EggYield per Duck per Year (in Numbers)**

Sl No.	Name of District	Rural/ Urban	Summer		Rainy		Winter		Overall	
			Desi	Improved	Desi	Improved	Desi	Improved	Desi	Improved
9	Idukki	Rural	51.54	54.83	64.76	55.64	52.51	55.53	56.31	55.33
		Urban	53.11	52	52.54	52.64	0	54	52.82	52.87
		Rural + Urban	51.8	54.82	64.48	55.58	52.51	55.52	56.31	55.31
10	Kottayam	Rural	50.45	58.03	45.74	55.64	52.51	55.16	49.54	56.28
		Urban	47.5	52	52.68	52.94	52	53.19	50.73	52.71
		Rural + Urban	49.68	57.99	46.08	55.61	52.47	55.15	49.38	56.25
11	Alappuzha	Rural	51.71	54.04	54.65	55.64	53.73	55.93	53.36	55.2
		Urban	84	51.97	52.13	52.94	0	53.4	68	52.77
		Rural + Urban	58.33	54.03	54.54	55.6	53.73	55.92	55.54	55.18
12	Pathanamthitta	Rural	51.89	53.53	56.27	54.98	54.38	56.25	54.18	54.91
		Urban	52.76	51.97	52.55	53.52	0	53.48	52.65	52.99
		Rural + Urban	51.92	53.45	56.24	54.72	54.38	56.06	54.18	54.74
13	Kollam	Rural	53.04	54.55	56.2	56.75	52.41	56.5	53.9	55.93
		Urban	53.1	73.99	52.55	52.94	52	53.5	52.55	60.16
		Rural + Urban	53.05	56.4	55.93	56.62	52.36	56.36	53.79	56.46
14	Thiruvananthapu	Rural	50.68	57.27	50.98	56.49	52.52	55.75	51.39	56.51
		Urban	53.11	51.97	53	52.94	52.25	0	52.79	52.46
		Rural + Urban	51.81	57.02	51.68	56.18	52.37	55.75	51.95	56.32
State Average		**Rural**	**52.59**	**55.02**	**53.37**	**55.85**	**53.62**	**55.76**	**53.19**	**55.54**
		Urban	**62.61**	**64.01**	**52.56**	**53.13**	**52.20**	**53.55**	**55.80**	**56.9**
		Rural + Urban	**54.49**	**55.28**	**53.29**	**55.74**	**53.48**	**55.72**	**53.75**	**55.58**

Table 34 **Estimated Egg Production - Ducks (in Lakh Numbers)**

Sl No.	Name of District	Rural/ Urban	Summer			Rainy			Winter			Overall		
			Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total
1	Kasargod	Rural	0.49199	1.09432	1.58631	1.18301	0.65736	1.84037	0.53793	0.71875	1.25668	0.73996	0.82360	1.56356
		Urban	0.52658	0.02223	0.54881	0.35641	0.03309	0.3895	0	0	0	0.44115	0.02768	0.46883
		Rural + Urban	1.01857	1.11655	2.13512	1.53942	0.69045	2.22987	0.53793	0.71875	1.25668	1.03607	0.84218	1.87825
2	Kannur	Rural	0.55383	1.61723	2.17106	0.60386	1.69836	2.30222	2.37191	3.12036	5.49227	1.16841	2.13875	3.30716
		Urban	0.18057	0.17388	0.35445	0.1223	0.08841	0.21071	0	0	0	0.15132	0.13097	0.28229
		Rural + Urban	0.7344	1.79111	2.52551	0.72616	1.78677	2.51293	2.37191	3.12036	5.49227	1.26998	2.22666	3.49664
3	Wayanad	Rural	0.77815	1.40588	2.18403	1.72414	2.39056	4.1147	0.84201	1.40164	2.24365	1.11793	1.73631	2.85424
		Urban	0.14579	0.01196	0.15775	0.09869	0.01879	0.11748	0	0	0	0.12214	0.01539	0.13753
		Rural + Urban	0.92394	1.41784	2.34178	1.82283	2.40935	4.23218	0.84201	1.40164	2.24365	1.19992	1.74664	2.94656
4	Kozhikode	Rural	2.16105	1.42302	3.58407	4.67934	4.68289	9.36223	3.47367	3.04108	6.51475	3.44123	3.05352	6.49475
		Urban	1.04732	0.16243	1.20975	0.7308	0.39428	1.12508	0	0.24129	0.24129	0.88841	0.26649	1.15490
		Rural + Urban	3.20837	1.58545	4.79382	5.41014	5.07717	10.48731	3.47367	3.28237	6.75604	4.03756	3.32000	7.35756
5	Malappuram	Rural	22.94937	8.7577	31.70707	17.98201	9.9984	27.98041	16.13691	7.26627	23.40318	19.03572	8.68547	27.72119
		Urban	0.36975	0.23816	0.60791	2.9245	0.1931	3.1176	5.70257	0.04266	5.74523	2.98392	0.15870	3.14262
		Rural + Urban	23.31912	8.99586	32.31498	20.90651	10.1915	31.09801	21.83948	7.30893	29.14841	22.01965	8.84417	30.86382
6	Palakkad	Rural	2.89311	3.17708	6.07019	3.94907	5.01691	8.96598	2.84734	2.63798	5.48532	3.23391	3.61984	6.85375
		Urban	0.57943	0.14282	0.72225	0.39184	0.06733	0.45917	0.26802	0	0.26802	0.41383	0.10492	0.51875
		Rural + Urban	3.47254	3.3199	6.79244	4.34091	5.08424	9.42515	3.11536	2.63798	5.75334	3.64774	3.69027	7.33801
7	Thrissur	Rural	12.26653	6.42775	18.69428	11.92244	7.68824	19.61068	10.17626	9.23798	19.41424	11.46336	7.77643	19.23979
		Urban	2.94662	0.17524	3.12186	3.70414	0.21775	3.92189	3.25779	0.34155	3.59934	3.30420	0.24424	3.54844
		Rural + Urban	15.21315	6.60299	21.81614	15.62658	7.90599	23.53257	13.43405	9.57953	23.01358	14.76756	8.02067	22.78823
8	Ernakulam	Rural	13.60287	26.00705	39.60992	14.31429	24.8109	39.12519	13.26219	20.19212	33.45431	13.73060	23.69221	37.42281
		Urban	6.45758	0.40066	6.85824	4.3706	0.63233	5.00293	2.9874	0	2.9874	4.61342	0.51697	5.13039
		Rural + Urban	20.06045	26.40771	46.46816	18.68489	25.44323	44.12812	16.24959	20.19212	36.44171	18.34402	24.03921	42.38323

Table 34 Contd. **Estimated Egg Production - Ducks (in Lakh Numbers)**

Sl No.	Name of District	Rural/ Urban	Summer			Rainy			Winter			Overall		
			Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total
9	Idukki	Rural	0.46485	7.46977	7.93462	2.5053	2.65591	5.16121	1.89229	2.6558	4.54809	1.62175	4.26489	5.88664
		Urban	0.09772	0.02964	0.12736	0.04834	0.04685	0.09519	0	0.00918	0.00918	0.07293	0.02871	0.10164
		Rural + Urban	0.56257	7.49941	8.06198	2.55364	2.70276	5.2564	1.89229	2.66498	4.55727	1.67070	4.29360	5.96430
10	Kottayam	Rural	6.46837	25.16537	31.63374	14.84911	19.03695	33.88606	10.05786	36.29382	46.35168	10.47267	26.75884	37.23151
		Urban	2.16616	0.14508	2.31124	0.86344	0.22922	1.09266	0.72956	0.04468	0.77424	1.25485	0.14043	1.39528
		Rural + Urban	8.63453	25.31045	33.94498	15.71255	19.26617	34.97872	10.78742	36.3385	47.12592	11.72753	26.89927	38.62680
11	Alappuzha	Rural	40.69768	72.74216	113.4398	48.78654	54.17609	102.9626	41.27435	35.50244	76.77679	43.61311	54.24245	97.85556
		Urban	17.04318	0.47242	17.5156	2.1413	0.74588	2.88718	0	0.14526	0.14526	9.56183	0.45701	10.01884
		Rural + Urban	57.74086	73.21458	130.9554	50.92784	54.92197	105.8498	41.27435	35.6477	76.92205	50.03132	54.69947	104.73079
12	Pathanamth	Rural	21.15615	8.80247	29.95862	41.59739	10.90218	52.49957	81.32279	12.62524	93.94803	47.82538	10.76684	58.59222
		Urban	0.7297	0.4693	1.199	0.36467	2.31784	2.68251	0	0.9071	0.9071	0.54644	1.23617	1.78261
		Rural + Urban	21.88585	9.27177	31.15762	41.96206	13.22002	55.18208	81.32279	13.53234	94.85513	48.19217	12.00301	60.19518
13	Kollam	Rural	7.87412	27.91667	35.79079	11.52197	34.35904	45.88101	6.78653	29.79839	36.58492	8.74583	30.70631	39.45214
		Urban	1.71995	3.98601	5.70596	0.85386	1.16143	2.01529	0.80392	1.34018	2.1441	1.12693	2.16430	3.29123
		Rural + Urban	9.59407	31.90268	41.49675	12.37583	35.52047	47.8963	7.59045	31.13857	38.72902	9.87276	32.87061	42.74337
14	Thiruvanant	Rural	4.51585	9.48322	13.99907	7.51637	10.04878	17.56515	6.0508	9.33562	15.38642	6.03163	9.62528	15.65691
		Urban	4.13935	0.43186	4.57121	4.11757	0.88986	5.00743	7.18699	0	7.18699	5.13397	0.66179	5.79576
		Rural + Urban	8.6552	9.91508	18.57028	11.63394	10.93864	22.57258	13.23779	9.33562	22.57341	11.16560	10.06950	21.23510
State Total		Rural	**136.87392**	**201.48969**	**338.36361**	**183.13484**	**188.12257**	**371.25741**	**197.03284**	**173.82749**	**370.86033**	**172.24149**	**187.89073**	**360.13222**
		Urban	**38.14970**	**6.86169**	**45.01139**	**21.08846**	**7.03616**	**28.12462**	**20.93625**	**3.07190**	**24.00815**	**26.74108**	**5.67453**	**32.41561**
		Rural + Urban	**175.02362**	**208.35138**	**383.375**	**204.2233**	**195.15873**	**399.38203**	**217.96909**	**176.89939**	**394.86848**	**198.98257**	**193.56526**	**392.54783**

Table 35 **Districtwise - Estimated Egg Production(in Lakh Numbers)**

Sl No.	Name of District	Summer		Rainy		Winter		Overall		Annual Production - 2018-19	Annual Production - 2017-18	% Variation
		Fowl	Duck	Fowl	Duck	Fowl	Duck	Fowl	Duck			
1	Kasaragode	200.65912	2.13512	256.86905	2.22987	258.61613	1.25668	238.65546	1.87825	721.76597	737.87151	-2.18
2	Kannur	382.56458	2.52551	396.32267	2.51293	522.3253	5.49227	433.14960	3.49664	1311.74326	1432.60103	-8.44
3	Wayanad	196.39590	2.34178	220.49523	4.23218	208.74687	2.24365	208.57764	2.94656	634.45561	614.96962	3.17
4	Kozhikkode	571.46852	4.79382	495.97219	10.48731	592.48388	6.75604	552.93645	7.35756	1681.96176	1802.43951	-6.68
5	Malappuram	960.51936	32.31498	900.56271	31.09801	1025.3243	29.14841	961.62052	30.86381	2978.96776	3277.92215	-9.12
6	Palakkad	506.96948	6.79244	554.58168	9.42515	583.87444	5.75334	548.29796	7.33801	1667.39653	1592.08370	4.73
7	Thrissur	561.52024	21.81614	689.61662	23.53257	663.75927	23.01358	638.29980	22.78823	1983.25842	2007.78920	-1.22
8	Ernakulam	623.65362	46.46816	696.8521	44.12812	641.02654	36.44171	654.03215	42.38323	2088.57025	2078.34445	0.49
9	Idukky	229.04739	8.06198	209.6187	5.2564	269.55024	4.55727	235.81619	5.96430	726.09198	758.82198	-4.31
10	Kottayam	518.76466	33.94498	562.78261	34.97872	564.55804	47.12592	548.65346	38.62680	1762.15493	1783.63022	-1.2
11	Alappuzha	523.96861	130.95544	428.10821	105.84981	482.26884	76.92205	477.95545	104.73078	1748.07296	1724.52006	1.37
12	Pathanamthi	382.11725	31.15762	493.09172	55.18208	421.6699	94.85513	432.51774	60.19518	1478.07370	1535.48849	-3.74
13	Kollam	632.51215	41.49675	527.20474	47.8963	662.59662	38.72902	606.91578	42.74337	1950.43558	1899.93541	2.66
14	Thiruvanant	689.44830	18.57028	652.73813	22.57258	767.13385	22.57341	702.61793	21.23510	2173.03655	2234.24840	-2.74
State Total		**6979.60918**	**383.375**	**7084.81636**	**399.38203**	**7663.93421**	**394.86848**	**7240.04613**	**392.54783**	**22905.98526**	**23480.66573**	**-2.45**

Table 36 **Estimated Egg Production for the last 20 Years (in Lakh Numbers)**

Sl No.	Year	Fowl Eggs		Duck Eggs		Total Egg Production
		Desi	Improved	Desi	Improved	
1	1999 - 00	10064	9634	724	120	20542
2	2000 - 01	9386	10145	687	126	20344
3	2001 - 02	9801	9443	661	113	20018
4	2002-03	8274	4201	853	140	13000
5	2003-04	7174	4531	824	239	12768
6	2004-05	6771	4178	793	233	11974
7	2005-06	6749	4173	802	232	11956
8	2006-07	6596	4434	700	257	11987
9	2007-08	7527	5324	622	319	13792
10	2008-09	8711	5422	613	320	15066
11	2009-10	8875	6787	559	109	16330
12	2010-11	7976	8196	617	69	16858
13	2011-12	7170	8844	1010	26	17049
14	2012-13	7970	12614	1696	96	22376
15	2013-14	8391	14335	1921	122	24770
16	2014-15	8720	14517	1460	339	25036
17	2015-16	8077	15075	700	573	24425
18	2016-17	6017	16167	698	562	23444
19	2017-18	5029	17286	607	559	23481
20	2018-19	4984	16744	597	581	22906

Table 37 **Number of Slaughter Houses/Butcher shops**

Sl No.	Name of District	Authorised	Unauthorised	Mechanised	Temporary	Total
1	Thiruvananthapuram	8	36	0	851	895
2	Kollam	6	84	0	128	218
3	Pathanamthitta	2	59	0	193	254
4	Alappuzha	4	47	0	48	99
5	Kottayam	3	116	0	89	208
6	Idukki	7	126	0	51	184
7	Eranakulam	3	156	1	163	323
8	Thrissur	4	197	1	93	295
9	Palakkad	1	76	0	42	119
10	Malappuram	2	112	0	310	424
11	Kozhikkodu	1	106	0	42	149
12	Wayanadu	2	47	1	38	88
13	Kannur	1	142	0	74	217
14	Kasargod	4	21	0	29	54
		48	**1325**	**3**	**2151**	**3527**

Table 38 **Estimated Number of Poultry culled for chicken**

Sl. No	District	Number of birds culled
1	Kasargod	4914290
2	Kannur	7732552
3	Wayanad	3498243
4	Kozhikkode	9694284
5	Malappuram	13224607
6	Palakkad	11529402
7	Thrissur	10915056
8	Ernakulam	9575609
9	Idukky	4433411
10	Kottayam	9231434
11	Alappuzha	9025829
12	Pathanamthitta	6095672
13	Kollam	9002806
14	Thiruvananthapuram	9811270
State Total		**118684464**

Table 39 **Estimated Number of animals slaughtered Category-wise (Authorised Sector)**

Sl. No	District	Cattle	Buffalo	Goat	Pig
1	Kasargod	349	1181	3235	40
2	Kannur	102	352	0	0
3	Wayanad	0	951	27	119
4	Kozhikkode	1368	399	576	0
5	Malappuram	3507	3873	3655	0
6	Palakkad	3759	2726	11724	0
7	Thrissur	5753	3245	5010	1230
8	Ernakulam	17094	8236	13573	1255
9	Idukky	3717	3872	6441	6548
10	Kottayam	2060	1009	6492	342
11	Alappuzha	5857	3987	4197	0
12	Pathanamthitta	4064	895	2663	0
13	Kollam	23206	9724	16834	0
14	Thiruvananthapuram	4713	5429	5438	131
State Total		**75549**	**45879**	**79865**	**9665**

Table 40 **Estimated Number of animals slaughtered category-wise (Unauthorised Sector)**

Sl. No	District	Cattle	Buffalo	Goat	Pig
1	Kasargod	32820	25732	45880	566
2	Kannur	98584	55744	127444	3864
3	Wayanad	32988	18415	34270	4169
4	Kozhikkode	121337	73551	192048	121
5	Malappuram	256900	205586	429336	0
6	Palakkad	81914	63933	123444	1080
7	Thrissur	120169	74424	148984	41171
8	Ernakulam	133590	67107	121702	15785
9	Idukky	43043	23864	42175.5	4438
10	Kottayam	66978	39541	69613.5	15444
11	Alappuzha	59923	31432	65699	0
12	Pathanamthitta	53842	43509	52945	487
13	Kollam	87424	39306	81278.5	0
14	Thiruvananthapur	95450	51113	99889	1541
State Total		**1284962**	**813257**	**1634708.5**	**88666**

Table 41 **Estimated category-wise Meat Production (in Kg)**

Sl.No	District	Cattle	Buffalo	Goat	Pig	Total	Poultry	Grand Total
1	Kasargod	3658335	3090348	651603	45203	7445489	7371436	14816925
2	Kannur	11079090	6364534	1717711	289763	19451098	11598828	31049926
3	Wayanad	3759390	2223634	452606	320790	6756420	5247366	12003786
4	Kozhikkode	13707915	8272750	2458994	7260	24446919	14541427	38988346
5	Malappuram	29292930	23953452	5496969	0	58743351	19836914	78580265
6	Palakkad	9468195	7637542	1659910	81000	18846647	17294105	36140752
7	Thrissur	13960605	8629641	1993992	3045031	27629269	16372586	44001855
8	Ernakulam	17036490	8541258	1798383	1223746	28599877	14363413	42963290
9	Idukky	5285565	3168250	670322	800438	9924575	6650118	16574693
10	Kottayam	7660785	4658880	987937	1172738	14480340	13847152	28327492
11	Alappuzha	7375515	4032780	933098		12341393	13538746	25880139
12	Pathanamthitta	6508695	4902906	719556	18263	12149420	9143510	21292930
13	Kollam	12500235	5674742	1297694		19472671	13504209	32976880
14	Thiruvananthapuram	11178720	6473924	1341281	105135	19099060	14716908	33815968
State Total		**15,24,72,465**	**9,76,24,641**	**2,21,80,055**	**71,09,367**	**27,93,86,528**	**17,80,26,718**	**45,74,13,246**

Table 42 **Meat Production for the last 18 Years**

Sl No.	Year	Meat Production (000 MT)	Poultry Meat Production (000 MT)	Total (000 MT)
1	2001 - 02	41.71	47.69	**89.40**
2	2002-03	42.80	52.61	**95.42**
3	2003-04	47.66	39.33	**86.99**
4	2004-05	54.19	32.70	**86.89**
5	2005-06	55.92	27.61	**83.53**
6	2006-07	60.11	16.18	**76.30**
7	2007-08	60.19	17.39	**77.58**
8	2008-09	110.35	13.75	**124.10**
9	2009-10	102.03	15.48	**117.51**
10	2010-11	108.40	16.15	**124.55**
11	2011-12	241.96	183.61	**425.57**
12	2012-13	272.15	128.84	**400.99**
13	2013-14	264.89	151.24	**416.12**
14	2014-15	282.23	163.60	**445.83**
15	2015-16	291.02	175.02	**466.04**
16	2016-17	280.08	188.76	**468.84**
17	2017-18	286.91	181.97	**468.88**
18	2018-19	279.38	178.03	**457.41**

Table 43 **Average Utilisation of Milk per Household per Day (in Kg.)**

Season	Category	Milk Purchased		Milk Sold		Consumed as fluid milk	milk converted into milk product	Total milk production per house hold producing milk
		Quantity	Rate / Kg	Quantity	Rate/Kg			
Summer	Cow Milk (in Kg)			12.2	44	1.3	0.2	13.7
Rainy				12.38	44	1.05	0.28	13.8
winter				12.6	44	1	0.3	13.9
Overall				**12.39**	**44**	**1.12**	**0.26**	**13.8**
Summer	Buffalo Milk (in Kg)			5.9	61	0.6	0	6.5
Rainy				6.05	61	0.5	0	6.7
winter				*6*	*65*	0.5	0	6.5
Overall				**5.98**	**62**	**0.53**	**0**	**6.57**
Summer	Goat Milk (in Kg)			0.065	66	0.5	0	0.565
Rainy				0.06	70	0.6	0	0.65
winter				0.05	80	0.65	0	0.7
Overall				**0.06**	**72**	**0.58**	**0**	**0.64**

Not only the data on production of milk and egg in the selected households but the particulars of the utilization also were collected during the survey. A brief abstract of the utilisation practice is given above.

Table 44 **Average Utilisation of Egg per House Hold (in Numbers per week)**

Season	Category	Total egg production per house hold producing egg	Egg Purchased		Egg Sold		% Average utilisation- Egg Sold	Egg consumed	% Average utilisation Egg consumed	Eggs kept for hatching	% Average utilisation- Eggs kept for hatching	Eggs damaged	% Average utilisation Eggs damaged
			No.	Rate / dozen	No.	Rate / dozen							
Summer	Fowl Egg (In Nos.)	20	3	72	6	72	30	14	70	0	0	0	0
Rainy		21	4	90	7	84	33	16	76	0	0	0	0
Winter		22	2	84	8	84	36	14	64	0	0	0	0
Over all		21	3	82	7	80	33	15	70	0	0	0	0
Summer	Duck Egg (In Nos.)	11	0	84	8	84	73	3	27	0	0	0	0
Rainy		12	0	108	8	108	67	3	25	0	0	0	0
Winter		12	0	108	9	108	75	3	25	0	0	0	0
Over all		12	0	100	8	100	71	3	26	0	0	0	0

Table 45 **Average Feed Consumption per Animal per day in Kg – Breed Wise**

Season	Category	Green Fodder			Dry Fodder			Feed-Commerical			Concentrate Fodder			Total Consumption Per		
		Adult Female	Adult Male	Young Stock	Adult Female	Adult Male	Young Stock	Adult Female	Adult Male	Young Stock	Adult Female	Adult Male	Young Stock	Adult Female	Adult Male	Young Stock
Summer	**Crossbred Cow**	12.60	10.10	2.10	3.60	3.30	1.20	3.80	1.40	0.60	3.5	2.8	1.4	23.50	17.60	5.30
Rainy		14.70	11.60	3.40	3.20	3.50	1.30	3.50	1.60	0.60	3.5	3	1.7	24.90	19.70	7.00
Winter		13.60	11.25	3.10	3.40	3.40	1.30	3.50	1.70	0.50	3.6	3.2	1.7	24.10	19.55	6.60
Over all		13.64	10.98	2.87	3.40	3.40	1.27	3.60	1.57	0.57	3.53	3.00	1.60	24.17	18.95	6.31
Summer	**Indigenous Cow**	9.30	9.20	2.00	2.70	2.40	1.00	2.40	1.20	0.60	3.1	2.5	1.4	17.50	15.30	5.00
Rainy		11.40	10.20	3.10	2.80	2.60	1.20	2.30	1.20	0.50	3	2.8	1.4	19.50	16.80	6.20
Winter		10.60	10.20	2.80	2.60	2.60	1.10	2.40	1.50	0.50	3.4	3	1.5	19.00	17.30	5.90
Over all		10.44	9.87	2.63	2.70	2.53	1.10	2.37	1.30	0.53	3.16	2.77	1.43	18.67	16.47	5.69
Summer	**Non-Descript Cows**	10.00	9.30	2.20	2.90	2.70	1.00	2.40	1.00	0.50	3.1	2.5	1.4	18.40	15.50	5.10
Rainy		11.40	10.40	2.80	3.00	2.90	1.20	2.40	1.10	0.50	3	2.8	1.4	19.80	17.20	5.90
Winter		11.00	10.00	2.50	3.00	1.90	1.20	2.30	1.30	0.50	3.5	3	1.5	19.80	16.20	5.70
Over all		10.80	9.90	2.50	2.97	2.50	1.13	2.37	1.13	0.50	3.20	2.77	1.43	19.34	16.30	5.56
Summer	**Indigenous Buffalo**	10.10	9.30	2.50	3.00	2.20	1.00	1.80	1.20	0.50	3.5	3	1.4	18.40	15.70	5.40
Rainy		12.20	11.10	2.30	3.10	2.50	1.20	1.70	1.50	0.50	3.5	3.1	1.4	20.50	18.20	5.40
Winter		11.20	10.60	3.00	3.00	1.50	1.10	1.70	1.40	0.50	3.5	3.2	1.4	19.40	16.70	6.00
Over all		11.17	10.33	2.60	3.03	2.07	1.10	1.73	1.37	0.50	3.50	3.10	1.40	19.43	16.87	5.60
Summer	**Non-Descript Buffalo**	9.80	9.60	2.50	3.00	2.20	1.00	1.80	1.00	0.50	3.5	3	1.4	18.10	15.80	5.40
Rainy		12.20	11.60	3.40	3.40	2.70	1.20	1.60	1.00	0.50	3.5	3.2	1.4	20.70	18.50	6.50
Winter		11.50	10.80	3.00	3.10	2.70	1.20	1.70	1.00	0.50	3.5	3.5	1.6	19.80	18.00	6.30
Over all		11.17	10.67	2.97	3.17	2.53	1.13	1.70	1.00	0.50	3.50	3.23	1.47	19.54	17.43	6.07

Note :- Consumption of green fodder include both natural grown grass and fodder grass.

Table 46 **Average Utilisation of Dung per Household (in Kg. per Day)**

Season	Category	Total dung production per household engaged in Dairy activity	Used as Dung cake	% Average utilisation Used as Dung cake	Used as Manure	% Average utilisation Used as Manure	Other Use such as biogas	% Average utilisation Other Use
Summer	**Cattle/Buffalo Dung (In Kgs)**	27	0	0	26.5	98.15	0.5	1.87
Rainy		28	0	0.00	27.5	98.21	0.5	0.02
Winter		29	0	0	28.5	98.28	0.5	1.72
Over all		27.99	0.00	0.00	27.49	98.21	0.50	1.20
Summer	**Goat Dung (In Kgs)**	1.4	0	0	1.4	100	0	0
Rainy		2.2	0	0	2.2	100	0	0
Winter		2.25	0	0	2.25	100	0	0
Over all		1.95	0.00	0.00	1.95	100.27	0.00	0.00

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