RESEARCH FRONT

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PROSPECT OF DAIRY INDUSTRY IN KOLHAPUR DISTRICT

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ABSTRACT

In the present paper an attempt is made to assess the prospect of milk production in Kolhapur district. For present investigation secondary data is obtained from Department of agriculture Kolhapur district, Socio-economic review and district statistical abstract of the Kolhapur District. Kolhapur district is leading in milk production in Maharashtra state. There is a strong Dairy co-operative structure, with a well-built infrastructure in the form of more than 4446 Co-Operative Dairy Societies with 3.77 lakh Members of Co-operative dairy societies and 4 Dudh sangh spread throughout the district Besides the efforts made by innovative farmers in the region, favorable climatic condition, efficient and reliable marketing organizations are also some of the other contributing factors responsible for widespread and growth milk production of the region.

Key Words- Milk production, Doodah Sangh, Co-Operative Dairy Societies etc.

INTRODUCTION

Dairy farming is also very important subsidiary occupation in rural areas. It is the most effective economic activity for maintaining farmer's income and generating employment in rural areas of Indian subcontinent. It provides employment to millions of unemployed and under employed, and particularly to small farmers, and landless laborers in village (Misal, 2013). Most of the rural people especially women make their livelihood by rearing milk animals and by supplying milk to the co-operatives. Dairy industry and animal husbandry are very closely connected with agricultural in the country. India has vast live stock resources i.e. cattle and buffaloes, with more than 50 per cent of the worlds buffaloes and 20 per cent of cattle (Mane, 2015). Salunkhe (2013) noted that the dairy industry is important source of income and employment in rural areas. Dairy Industry is undertaken by farmers to augment their income and it has been the source of livelihood for the rural masses (Subramaniya, 2013).

India is a largest milk producer in the world's, accounting for more than 18.5 per cent of world production, achieving an annual output of 146.3 million tonnes in 2014-15. Also India is the world's largest consumer of dairy products, consuming almost 100 per cent of its own milk production (Salunkhe, 2013; Attar, 2013). Kolhapur district is the leading milk producer district not only Maharashtra but also India. Dairy is one of the important economic activities of the region. There is a strong dairy co-operative structure, with a well-built infrastructure in the form of more than 4446 Co-Operative dairy Societies with 3.77 lakh Members of Co-operative dairy societies and 4 Dudh sangh spread throughout the district. It is the second largest industry next to sugar industry in the district. Milk producer face few challenges like un-remunerative milk prices, high cost of inputs and animals disease. The distribution of dairy depend on the various natural as well as cultural factors like, physiographic conditions, climate, water availability, social and cultural factors (Kothawale, 2016). The present paper attempts to study the distribution and concentration of milk production, Co-operative dairy societies and animal health facilities in the Kolhapur district.

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OBJECTIVES OF THE STUDY:.

1. To study the prospect of milk production in Kolhapur district.
2. To study the spatial distribution of primary milk cooperative Societies.
3. To study the density of animal health facilities.

STUDY AREA

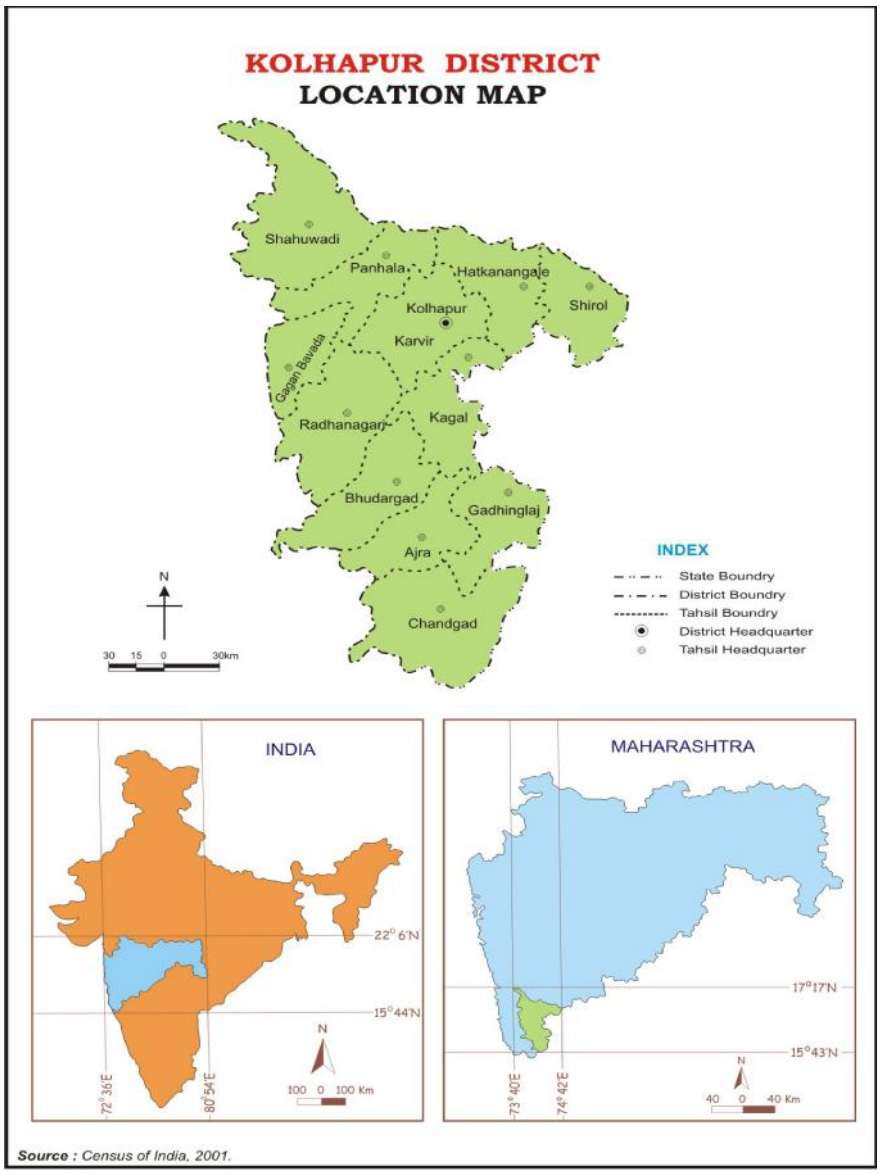

Fig. 1

The Kolhapur district is situated in South west part in Maharashtra State. The total area extend is of 7685 sq.km. which is about 2.50 per cent of the total area of the state. It lies between 15°43' and 17°17'North latitudes and 73°40' and 74°42'east longitudes. It is surrounded by Sangli district to the north, Belgum district of Karnataka state to the east and south and Ratanagiri and Sindhudurg district to the west. The main rivers of the district are Krishna, Warana, Panchaganaga, Doodhganga, Kumbhi-kasari, Hiranyakeshi. The climate ranges from the rainiest in the Gaganbawda region which has an average annual rainfall of over 4000 mm. This district consist 12 tahsils covering 1739 villages as per 2011census.The total population of the district is 38.74 lakh in 2011.

METHODOLOGY:

The present study was conducted in Kolhapur district of Maharashtra state. The criterion for the selection of the district was its progress in dairy performance. The present

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study is based on secondary data. Secondary data regarding milk production is obtained from District Milk development office Kolhapur and Socio-economic review of Kolhapur district, Kolhapur district census hand book etc. The period 2013-14 is considered for present investigation. The collected data processed and presented through tables and maps.

Health Facilities for Animals in Kolhapur

The Milk industry success depends on the good health of the livestock, Quality insemination, Food and feeder. In spite of advancement made in the animal husbandry practices, clinical Medicine and diagnostic techniques. Which are help in increasing the milk production and improve the economic status of livestock owners (Bandgar, et.al, 2013). Animal health plays an important role in harnessing the expected production potential of dairy animals. The health of cattle on a dairy is an essential part of good husbandry (NMPE, 2010).

Table 1: Health Facilities for live stock in Kolhapur District 2014

Sr. No	Tahsil	Veterinary Hospitals	Veterinary Dispensaries	Primary livestock health Centers	Artificial Insemination Centre's
1	Shahuwadi	1	6	6	13
2	Phhanala	1	4	8	13
3	Hatkanangle	1	9	12	22
4	Shirol	1	8	14	23
5	Karveer	1	11	7	19
6	Gaganbawada	0	3	2	
7	Radhanagri	0	8	6	14
8	Kagal	1	9	8	18
9	Bhudargad	0	7	3	10
10	Ajara	0	5	4	9
11	Ghadhinglaj	1	12	4	17
12	Chandgad	0	7	5	12
Total		07	89	79	175

Source: Socio-economic abstract Kolhapur district, 2013-4.

Table 1 shows the health facilities for live stock in Kolhapur district in 2013-14. It shows that there are 7 Veterinary Hospitals, 89 Veterinary Dispensaries, 79 Primary livestock health Centers, 175 Artificial Insemination Centre's are working. It shows a good health care of livestock in the district and the numbers of veterinaries are useful to the development of the animal husbandry business in the district.

Milk Production and Collection in Kolhapur District

Dairy activity is an important agriculture related activity in Kolhapur district. Milk production and productivity depends up on to climatic, social and economical factors. Kolhapur district was also having continually flowing rivers like Warna, Krishna, Kumbhi, Kasari, Dudhganga, Panchganga, Vedganga and basins of these rivers containing fertile soil. It is mainly raised in the areas of availability of perennial source of irrigation, suitable climatic condition and local spiritual leadership. Dairy activity practiced everywhere in Kolhapur district. Dairy animals comprising of cows and buffaloes, are the major livestock. Apart from their role in milk production, they contribute a huge quantity of organic manure, which is one of the major inputs in our agriculture.

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Table 2: Tahsilwise Milk Production in Kolhapur District (2013-14)

Sr. No	Taluka	Production (000 liters)	%	Milk Collection (000 liters)	%
1	Shahuwadi	18124	4.54	20511	6.55
2	Panhala	27720	6.94	37770	12.06
3	Hatkanangle	64455	16.15	32537	10.39
4	Shirol	29492	7.38	28066	8.96
5	Karveer	74128	18.57	50494	16.13
6	Gaganbawade	21249	5.32	3333	1.06
7	Radhanagri	35418	8.87	26052	8.32
8	Kagal	29452	7.37	35444	11.32
9	Bhudargad	19455	4.87	15358	4.90
10	Ajara	14588	3.65	11152	3.56
11	Ghadhinglaj	39452	9.88	30408	9.71
12	Chandgad	24538	6.14	21803	6.96
Total		399101		312927	

Source: Socio-economic Abstract, Kolhapur District, 2014.

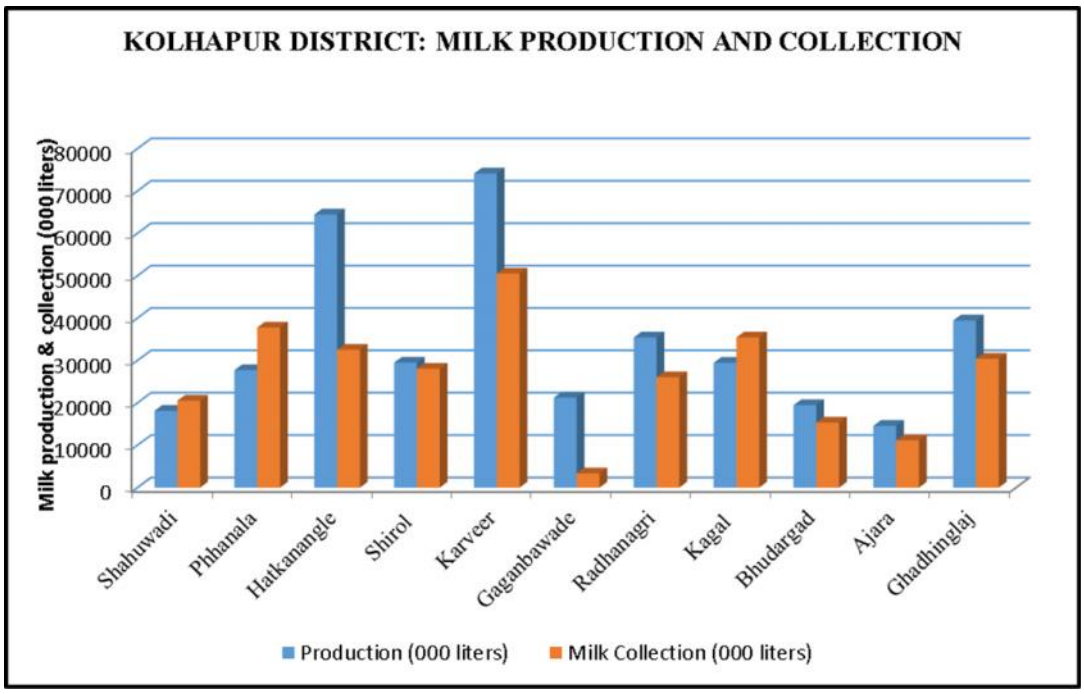

Fig.2

Table 1 depicts that the M ilk production and Milk collection of cooperative dairy units in Kolhapur District. In 2013-14 the total milk production and collection of Kolhapur district is 399101, 312927 thousand liters respectively. It has been found from the above table that the highest contribution to the milk production by Karveer (18.57 per cent), Hatkanangle (16.15 per cent), Ghadhinglaj (9.88 per cent) and less contribution of the Ajara (3.65 per cent), Shahuwadi (4.54 per cent) and Bhudargad (4.54 per cent) respectively. A higher percentage of in milk animal in milch herd positively influence the milk production. The factors which, affects milk production are in milk animals, in milk yield and the presence of fertile land, suitable climatic condition, abundant water availability for agriculture.

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Beside of that milk collection by Karveer tahsil have highest contribution(16.13 per cent), followed by Panhala (12.06 per cent), Kagal (11.32 per cent), Hatkanangle (9.88 per cent), Ghadhinglaj (9.71per cent), Shirol (8.96 per cent), Radhanagri (8.32 per cent), Shirol (8.86 per cent), Changad (6.96 per cent), Shahuwadi (6.55 per cent), Bhudargad (4.99per cent), Ajra (3.56per cent), and Gaganbawada (1.6 per cent) respectively. Majority of milk collected from the villages situated nearby the Kolhapur District. In the case of Kagal, Phanala and Shahuwadi tahsils milk collection is more than total milk production of tahsil because of some dudh sang collected milk from the villages located on the Maharashtra – Karnataka boundary.

Table 3: Tahsilwise Co-op Societies and Member of Societies in Kolhapur District (2014)

Sr. No	Tahsil	Co-op Societies	%	Member of Societies	%
1	Shahuwadi	306	6.88	26010	6.88
2	Panhala	469	10.54	39865	10.54
3	Hatkanangle	275	6.18	23375	6.18
4	Shirol	261	5.87	22185	5.87
5	Karveer	683	15.36	58055	15.36
6	Gaganbawada	98	2.20	8330	2.20
7	Radhanagri	516	11.60	43860	11.60
8	Kagal	445	10.00	37825	10.00
9	Bhudargad	444	9.98	37740	9.98
10	Ajara	253	5.69	21505	5.69
11	Ghadhinglaj	309	6.95	26265	6.95
12	Chandgad	387	8.70	32895	8.70
Total		4446		377910	

Source: Socio-economic Abstract Kolhapur District, 2014.

Tahsilwise Distribution of Co-op Societies and milk producers

Kolhapur district is well known for the Co-operative movement in Maharashtra. Co-operative movement made revolutionary developments in various fields of the district. Co-operative sector is playing a crucial role in dairy activity in Kolhapur district. Co-operative societies protect the farmers from the hands of the private money lenders and to improve their economic condition. Co-operative dairy's have large share in milk collection and milk processing at village level. There are about 4446 milk producers' co-operative societies and 3.77 lakhs member of these societies spread in Kolhapur district. The co-operative milk societies collect milk in village level and supply to the dudh sangh in the Kolhapur district. Also there are four co-operative Dudh Sanghas viz. Kolhapur Zilha Dudh Utpadak Sangh, Gokul Shirgaon, and Warana Sahakari Dudh Sangh, Warana nagar, Shahu Dudh Utpadak Sangh, Kagal and Hanuman Sahakari Dudh Sangh, Yalgud.

Table 2 shows that the tahsilwise distribution of co-operative societies in Kolhapur district. It is observed that there is 4446 number of co-operative milk societies with 377910 members in 12 tahsil of Kolhapur district.

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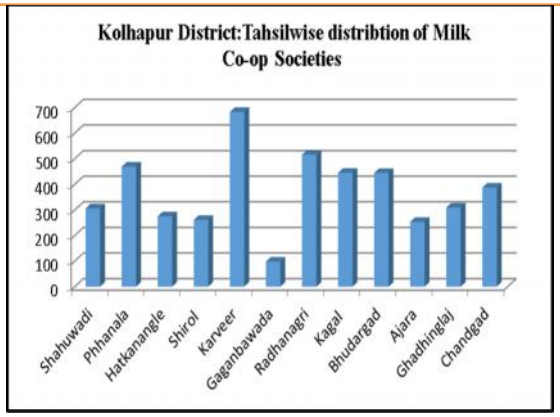

Fig.3

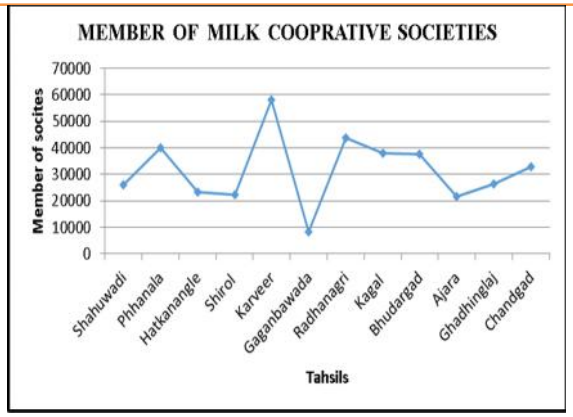

Fig. 4.

Out of the total co-op societies and member of Societies of the district the Karveer tahsil have highest (15.36 per cent) dairy societies, followed Radhanagri (11.60 per cent), Panhala (10.54 per cent), Kagal (10.00 per cent), Bhudargad (9.98 per cent), Chandgad (8.70 per cent), Ghadhinglaj (6.95 per cent), Shahuwadi (6,88 per cent), Hatkanangle (6.18 per cent), Shirol (5.87 per cent), Ajara (5.69 per cent), Gaganbawada (2.20 per cent) respectively.

There are positive relation between number of co-operative milk societies and number of Member. The number of co-operative milk societies increased, the number of Member of Societies also increased (Fig. 3 and 4). Thus, the dairy sector has to give more Member of Societies to the in the study region. It has been found from the above table that the highest concentration of co-operative milk societies and milk producers in Karveer, Radhanagri, Panhala and Kagal tahsils due to the presence of fertile land on the bank of river, suitable climatic condition, abundant water availability for agriculture and less concentration of co-operative milk societies and milk producers have Ajara (5.69 per cent), Gaganbawada tahsils , because of these areas are mostly hilly and have red soil. The majority area in the west is under thick forest coverage.

CONCLUSION

On the basis of study we can conclude that the growth of dairy activity an important agriculture related activity in Kolhapur district. It is largely controlled by the physio - economic conditions prevailing in the district. There is a strong dairy co-operative structure, with a well-built infrastructure in the form of more than 4446Co-Operative Dairy Societies with 3.77 lakhs and 4 Dudh Sangh spread throughout the district. In 2013-14, total milk production and Milk collection of the Kolhapur district is 399101and 312927 thousand liters respectively. Highest milk production is mainly concentrated in the central and eastern part of the district, the area of Karveer, Radhanagri, Panhala Bhudargad and Kagal tahsils where climatic condition is suitable and agricultural development is more than other tahsils of the district. Karveer (18.57 per cent), Hatkanangle (16.15 per cent), Ghadhinglaj (9.88 per cent) and less contribution of the Ajara (3.65 per cent), Shahuwadi (4.54 per cent) and Bhudargad (4.54 per cent) respectively. Besides the efforts made by innovative farmers in the region, favorable climatic condition, efficient and reliable marketing organizations are also some of the other contributing factors responsible for widespread and growth milk production of the region. Milk producer face few challenges like un-remunerative milk prices, lack of assured

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irrigation, labour problems, high cost of inputs, management and disease problems and lack of enough knowledge on dairy farming. There is considerable scope to raise the contribution of dairy activity in Kolhapur district.

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