

**RESEARCH ARTICLE :**

# Prospects for doubling of milk production in Kolhapur district

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**SUMMARY :** In the present paper an attempt is made to assess the prospect and doubling 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 total milk production and Milk collection of the Kolhapur district is 399101 and 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 %), (Hatkanangle (16.15 %), (Ghadhinglaj (9.88 %) and (less contribution of the Ajara (3.65 %), (Shahuwadi (4.54 %) and (Bhudargad (4.54 %), (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 like Proper management and maintains, Supply of input in chip rate because of high cost of feed (85-90%), Availability of veterinary doctor in each village, Supply of artificial insemination daily in each village for wider pread and growth milk production of the region. For increasing the milk per cow with the help of proper management and proper feed to the animal in the Kolhapur district.

**KEY WORDS :**

Doubling, Milk, Production

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## **BACKGROUND AND OBJECTIVES**

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. 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 agriculture in the country. India has vast live stock resources *i.e.* cattle and buffaloes, with

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more than 50 per cent of the world's buffaloes and 20 per cent of cattle 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.

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.; (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 and highest employment in the dairy unit.. 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 doubling milk production, distribution and concentration, Co-operative dairy societies and animal health facilities in the Kolhapur district.

#### **Objectives of the study :**

- To study the prospect and doubling of milk production in Kolhapur district.
- To study the spatial distribution of primary milk cooperative Societies.
- To study the density of animal health facilities.

## **RESOURCES AND METHODS**

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 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 2014-15 is considered for present

investigation. The collected data processed and presented through tables.

## **OBSERVATIONS AND ANALYSIS**

The results obtained from the present study as well as discussions have been summarized under following heads :

#### **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 dubling and 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).

It is observed that the health facilities for live stock in Kolhapur district in 2015. 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. For increasing milk production of cow and buffalo there is need of supply pure and new verities artificial Insemination in the vi Insemination lage level. Second and most important problem in dairy industry is problem of Insemination to the animal. there is need of maintained and management and availability veterinary doctor.

#### **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. Which is helpful for increasing the income of the farmers.

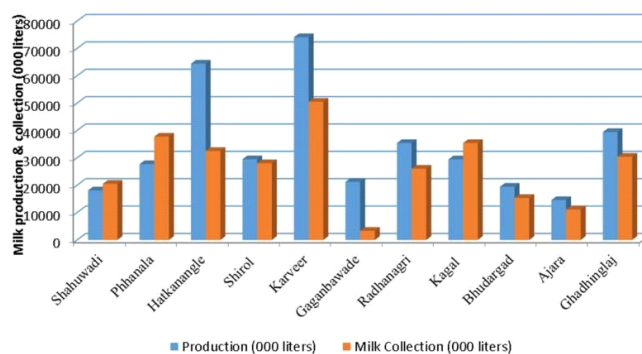
**Factors for doubling milk production :**

- Proper management and maintains
- Supply of input in chip rate because of high cost of feed (85-90%)
- Availability of veterinary doctor in each village
- Supply of artificial insemination daily in each village

**Factors responsible for milk collection :**

- High transportation cost
- Malpractices in milk
- Not clean and Hygienic milk :

It depicts that the Milk production and Milk collection of co-operative dairy units in Kolhapur District. In 2015 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 %), (Hatkanangle (16.15 %), (Ghadhinglaj (9.88 %) (and less contribution of the Ajara (3.65 %), (Shahuwadi (4.54 %) and (Bhudargad (4.54 %), (respectively. A higher percentage of in milk animal in milk 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. Beside of that milk collection by Karveer



Source: Socio-economic Abstract, Kolhapur District, 2015.

Fig. 1 : Kolhapur district : Milk production and collection

tahsil have highest contribution(16.13 %), (followed by Panhala (12.06 %), (Kagal (11.32 %), (Hatkanangle (9.88 %), (Ghadhinglaj (9.71%), (Shirol (8.96 %), (Radhanagri (8.32 %), (Shirol (8.86 %), (Changad (6.96 %), (Shahuwadi (6.55 %), (Bhudargad (4.99%), (Ajara (3.56%), (and Gaganbawada (1.6 %), (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 and Karnataka boundary.

**Tahsilwise distribution of co-op societies and milk producers :**

Kolhapur district is well known for the Co-operative movement in Maharashtra. Co- operative movement

**Table 1: Health facilities for live stock in Kolhapur district 2015**

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
<b>Total</b>		<b>07</b>	<b>89</b>	<b>79</b>	<b>175</b>

Source: Socio-economic abstract Kolhapur district, 2015.

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 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.

This table 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.

Out of the total co-op societies and member of Societies of the district the Karveer tahsil have highest (15.36 %) (dairy societies, followed Radhanagri (11.60 %), (Panhala (10.54 %), (Kagal (10.00 %), (Bhudargad (9.98 %), (Chandgad (8.70 %), (Ghadhinglaj (6.95 %), (Shahuwadi (6.88 %), (Hatkanangle (6.18 %), (Shirol (5.87 %), (Ajara (5.69 %), (Gaganbawada (2.20 %), (respectively).

There are positive relation between number of co-operative milk societies and number of Member. The

**Table 2: Tahsilwise milk production in Kolhapur district (2015)**

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, 2015.

**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, 2015.

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 %), (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 4446 Co-Operative Dairy Societies with 3.77 lakhs and 4 udh Sangh spread throughout the district. In 2013-14, total milk production and Milk collection of the Kolhapur district is 399101 and 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 %), (Hatkanangle (16.15 %), (Ghadhinglaj (9.88 %) and (less contribution of the Ajara (3.65 %), (Shahuwadi (4.54 %) and (Bhudargad (4.54

%), (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, 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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