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Challenges in dairy farming: A case study of Ajmer district

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Abstract

Over the past few decades, the dairy sector has emerged as a lifeline of the rural economy in Rajasthan. However, given the high price elasticity of milk and milk products, the dairy sector has become one of the most vulnerable sectors of the rural economy. Therefore, given the importance of dairy sectors, for both farmers and consumers, there is a need for governments at various levels to address this crisis and establish a holistic framework for the overall growth of the sector. The nature of production and sale of milk in Rajasthan, milk producers are highly susceptible to even minor shocks as the demand for milk and milk products are sensitive to changes in the employment and income of consumers. Therefore, a lot needs to be done to save this critical sector of economy.

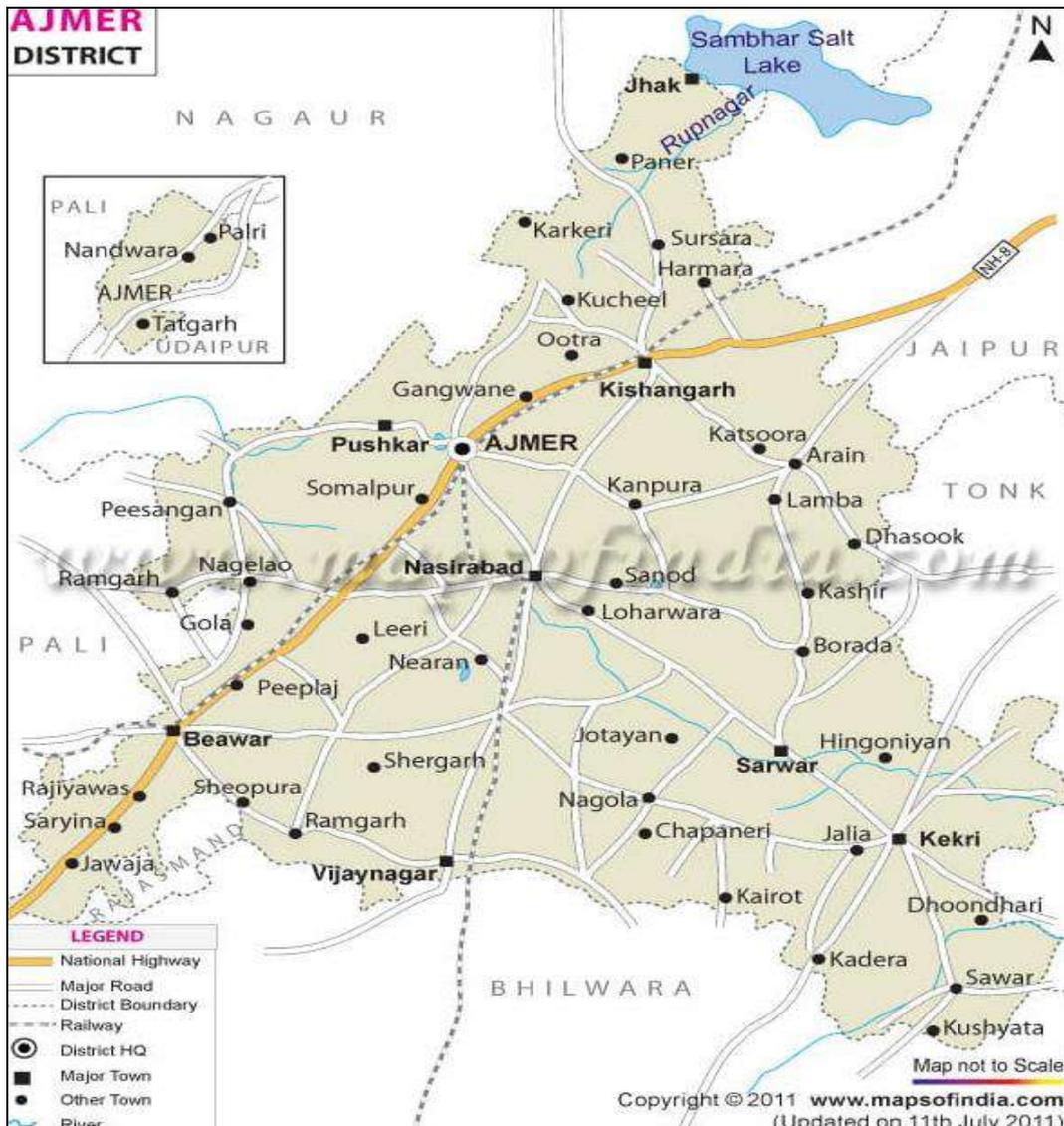
Keywords: Dairy sector, economy, farmers, consumer

Introduction

Dairy Farming supplements the earning of small and marginal farmers. It is a significant contributor to the disposable income of farm households. Dairy Sector not only generates employment opportunities but also supports ecological balance and sustainability. Demand for food of animal origins to grow higher in Ajmer District due to increasing human population, rising per capita income and increasing urbanization. Apart from improvement in productivity or yield, adequate attention is needed towards utilization of cattle dung in bio-compost, vermin-compost and bio-gas production. Dairy sector is facing various challenges as shortage of feed or fodder, breeding system, education and training, health, hygiene conditions, marketing and pricing etc in the study area.

Study Area

Ajmer District is a historical, social and economical valued district of the state of Rajasthan in western India. Ajmer city is the district headquarters. This District has an area of 8,481 km², and according to census of 2011 the population of the district is 2,583,052. The district is positioned in the center of Rajasthan between 25⁰38' to 26⁰58' North latitudes and 73⁰54' to 75⁰22' East longitudes. It is delimited by Nagaur district to the north direction, Jaipur and Tonk districts to the east direction, Bhilwara district to the south direction, and Pali district to the west direction. The eastern part of the district is generally flat, broken only by gentle undulations. The western parts, from north-west to south-west, are intersected by the Aravalli Range. Many of the valleys in this region are sandy deserts, part of India's Thar Desert, with an occasional oasis of cultivation. Some fertile tracts are also present, among these is the plain on which lies the town of Ajmer. This valley has an artificial lake and is protected by the massive walls of the Nagpathar range or Serpent rock, which forms a barrier against the sand. The only hills in the district are the Aravalli Range and its offshoots. Ajmer is almost totally devoid of rivers. The Banas River touches the south-eastern boundary of the district so as to irrigate the pargana of Samur. Four small streams as Sagarmati, Saraswati, Khari and Dai are also intersect the district.



Map 1: Location Map of Ajmer District

Objectives

1. To study about the dairy farming in the study area.
2. To study about the challenges of the dairy farming in the study area.

Hypothesis

1. At present time, dairy sector is experiencing various challenges which affect dairy farming negatively.

Methodology

Methodology in this paper is expounded as the systematic method to sort out the research problem. From many sources data have be collected, by using various techniques, delivering an exposition of data gathered and drawing conclusions about the research data. Primary data have been collected from survey. Secondary data collected from various departments, reports, books and research works.

Dairy Farming

Dairying, also called dairy farming, branch of agriculture that encompasses the breeding, raising and utilization of dairy animals, primarily cows, for the production of milk and the various dairy products processed from it. Growing demand for healthy products has made the milk and milk products more popular. Various combinations of fat and

solids-non-fat have made full-cream milk, standardized milk, toned milk and skimmed milk to find it’s usage with expected market value. In addition, value added products like ice cream, ghee etc. can earn better business margin. Population growth, increasing income, changing habits of food consumption, higher income elasticity for dairy products have helped to increase demand of milk or create opportunities for growth of dairy sector.

Table 1: Live Stock Population in Ajmer District

S. No.	Live Stock	Number	Percentage
1	Cows and Bulls	404726	8.52
2	Buffaloes	438804	9.24
3	Sheep	365108	7.69
4	Goats	730758	15.39
5	Horses/ Mares	561	0.01
6	Donkeys	1448	0.03
7	Camels	1516	0.03
8	Pigs	20552	0.43
9	Hares	369	0.01
10	Dogs	47278	1.00
11	Hens and Ducks	2737842	57.65
	Total	4748962	100.00

Source: Board of Revenue of Live Stock Census- 2012

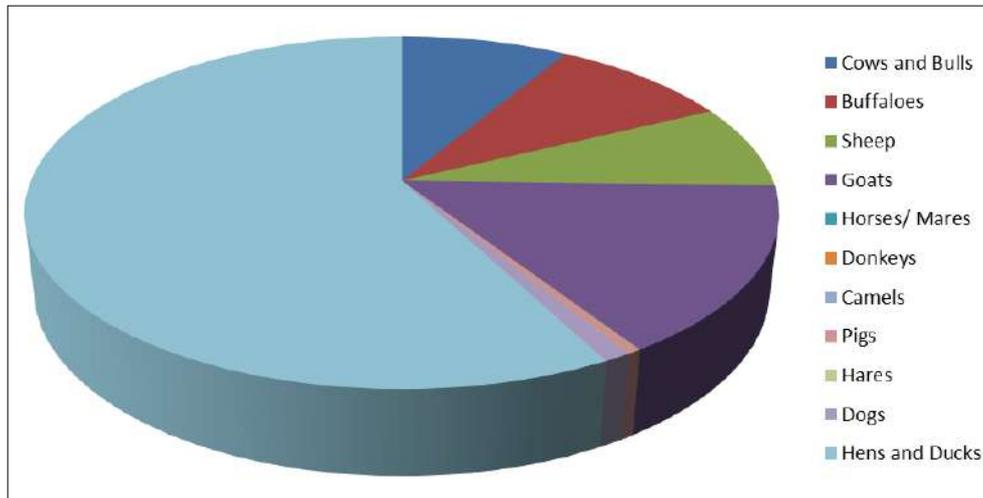


Fig 1: Live Stock Population in Ajmer District

Under dairy co-operative sangh, Ajmer the number of registered dairy co-operative societies till 31st march 2020 are 726 with a membership of about 470681 persons. It is informed that through these co-operative societies, the sangh had collected 3 lakh litres of milk per day. Payment is made to milk producers on the basis of fat and NNF contents in milk. Ajmer dairy co-operative sangh has set-up milk processing capacity of 1.5 lakh litres of milk per day for dairy product- milk, curd, ghee, paneer and shrikhand etc.

Dairy Farming Challenges

Rajasthan has a unique way of milk production, its processing, sales and marketing, and consumption of milk. However, average milk yield and average farm size scenario are definite in dairy farming of the study area. Apart from the absence of quality breed and business scale, tropical and temperate climate have posed additional challenges to dairy farming. The situations get more pronounced in dry region of Western Rajasthan. Socio economic impact of dairy sector is as sustainable contribution in generating employment opportunities in the study area. Production of low and high fat milk for consumption of general customers and selected customers respectively can fetch better revenue for dairy farmers. Milk producers can avail better price margin when they can sell their produce directly to consumers. A few major challenges faced by dairy sector are as follows:

1. Shortage of feed/fodder

There is an excessive number of unproductive animals in Ajmer district which compete with productive dairy animals in the utilization of available feeds and fodder. The grazing area is being reduced markedly every year due to industrial development resulting in shortage of supply of feeds and fodder to the total requirement. Ever increasing gap between demand and supply in feeds and fodder limits performance of dairy animals. Moreover, provision of poor quality of forage to dairy cattle restricts animal production system. The low capability of purchasing feeds and fodder by the small and marginal farmers and agricultural labourers engaged in dairy development result in inadequate feeding. Non-supplementation of mineral mixture results in mineral deficiency diseases. High-cost Feeding reduces the profits of the dairy industry.

2. Breeding system

Late maturity, in most of the Rajasthan cattle breeds, is a common problem. There is no effective detection of heat symptoms during oestrus cycle by the cattle owners. The calving interval is on the increase resulting in a reduction in efficiency of animal performance. Diseases causing abortion leads to economic loss to the industry. Mineral, hormone and vitamin deficiencies lead to fertility problems.

3. Education and Training

A vigorous education and training programs on good dairy practices could result in the production of safe dairy products, but to succeed they have to be participative in nature. In this regard, education and training of all the employees is essential so that they understand what they are doing and develop a sense of ownership. However developing and implementing such programs in the dairy sector requires a strong commitment from the management, which at times, is a stumbling block.

4. Cattle Health

Veterinary health care centres are located in far off places in the study area. The ratio between cattle population and veterinary institution is wider, resulting in inadequate health services to animals. No regular and periodical vaccination schedule is followed, regular de-worming programs are not done as per schedule, resulting in heavy mortality in calves, especially in buffalo. No adequate immunity is established against various cattle diseases.

5. Hygiene Conditions

Due to the poverty several cattle owners can't provide proper shelter to their domestic cattle leaving them exposed to extreme climatic conditions as Ajmer district faces in May and June months as well as December and January months. Unsanitary conditions of cattle shed and milking yards, leads to mastitis conditions. Unhygienic milk production leads to a reduction in storing quality and spoilage of milk and other products.

6. Marketing and Pricing

In Ajmer district, dairy farmers are not getting remunerative prices for their milk during supply into the markets. Due to the adoption of extensive crossbreeding programs with

Holstein Friesian breed, the fat content of crossbreed cow's milk is on the declining condition and low price is offered as the milk price is estimated on the basis of fat and solid nonfat milk content. There is also a poor perception of the farmers, due to lack of marketing facilities and extension services, towards commercial dairy enterprise as an alternative to other occupation.

7. Infrastructure

Adequate numbers of chilling centers are not available at village level in Ajmer district. Efficient cold chain distribution network is also absent. Besides, there is need of proper infrastructure and manufacturing facilities for value added Products.

Conclusion

There are several challenges against dairy farming like shortage of feed or fodder for cattle, poor breeding system, absence of education and training for farmers, unhealthy animals, unhygienic conditions, poor marketing and pricing etc in the study area. Rajasthan government needs to find a middle path which can safeguard the interests of both producers and consumers. It induces favorable changes in regulations like data security and movement of professionals. This will benefit a few key sectors in the study area. Further, the dairies will find it difficult to meet the stringent sanitary and phyto-sanitary regulations. Increase in import can affect the domestic production and status of self-sufficiency. It necessary to remove restriction of dairy products trade, quality should maintain and direct subsidies must be given for farmers.

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