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A Comparative Analysis of Dairy Farming Practices and Sustainability in India and Key Global Markets

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Abstract

Dairy farming contributes well to the eradication of poverty in the rural area of India since it is still a developing country. But when compared to many developed countries dairy farmers' economic empowerment India's dairy farmers are very low because of many reasons. In view of this, the study aims to know the economic empowerment through dairy farming in India and abroad and to make a comparative analysis between India and selected abroad countries in dairy farming. The study gathered secondary data to achieve the aforesaid objective. The study found that smallholding dairy farmers are more in India since they can earn their daily bread through dairy farming but their economic empowerment is not up to a mark. The challenges play a very important role in the success of dairy farming in India. Even some dairy farmers succeeded but their numbers are very small. Hence both dairy farmers and government should work on facing the challenges and achieving whatever they want in this industry.

Keywords: Dairy Farming, Economic Analysis, Developing Countries, Developed Countries

Introduction

Dairy farming is a major agribusiness in the field of agriculture. It has its own name and fame in the world of agribusiness. Dairy farming is contributing to the empowerment of dairy farmers as well as to the country's economic development. More than 26% of agricultural GDP is contributed by dairy farming and it individually contributed 4.9% GVA in 2017-18. It shows how dairy farming is working for the empowerment of dairy farmers as well as the country. When we consider the empowerment of dairy farmers in India as well as abroad it is totally different. The Indian dairy farmers are earning money as per holding of milch animals as well as their production capability. Dairy farmers abroad also earn money, but it differs as compared to Indian dairy farmers because their holding herds are different and their milk yield is high. The value of currency also differs so its comparison is difficult whatever it is the study aims to do valid research and understand the concept and differences of their earnings and expenses and how both are economically empowered through dairy farming.

The number of holdings of milch animals and their breed or genetics is very important in dairy farming. Because those things decide how long a dairy farm will run. Finally, maintenance and the weather matter a lot in this field. When we compare these things between India and abroad, we can see a lot of differences. Because in India most of the smallholding dairy farmers don't even know they are doing business. India is the second-largest holder of cattle in the world and the highest milk producer in the

world. Indians consume more dairy products as compared to the rest of the world. Hindus worship cows, which is not what most of the world doesn't do.

When comparing business in dairy farming between India and abroad, we can see a lot of differences. The advancement in technology, basic infrastructure, knowledge of dairy farming, weather conditions, availability of land, etc. factors impacts more on the economic empowerment of dairy farmers. India is a developing country and our weather is also not very suited to foreign breeds, so it is difficult to do dairy farming as like abroad. Though many modern dairy farms are exist and produce more milk-like dairy farmers abroad. But India includes a large number of small dairy farmers, so their earnings are very low, so their economic empowerment is also difficult.

The objectives of the study are to find out about economic empowerment through dairy farming in India and abroad and to do a comparative analysis between India's dairy farming and selected countries' dairy farming. The milk production per cow is very different in India and abroad and the quality of milk is graded as A1 and A2. Like this, many of the chores of dairy farming are different between countries, so the study is going to give something which may show how India is different from dairying abroad, even though it is the world's highest milk producer.

Materials and Methods

The study gathered secondary data which are published in different websites, magazines, newspapers, and articles and also through personal observations; it differentiates the performance of dairy farming between India and abroad. The present study analyzed and interpreted the comparative data of selected countries by using percentages, and averages.

Results and discussion

Dairy farming around the world is not the same. For a better understanding of any concept, statistics play an important role. In the present study, the researchers gathered the published data from the recognized private and government institutions to find out and make a comparative study of India and selected countries' dairy farming.

Comparative analysis of dairy farming in India, Poland, and the USA

Table – 1 The dairy structure in India in comparison to Poland and USA

Description	Units	India	Poland	USA
Milk production and dairy farms				
Milk production	Mill Ton ECM*	157.4**	12.4	89.2
Average milk yield	kg/ cow/year	1248	5504	9633
Number of dairy farms	Thousands	76136@	286	51
Average farm size	cows/farm	2	8	182
Annual Average Growth rate				
Milk production	%	4.7%	0.1%	1.9%
Number of dairy farms	%	1.8%	-9.3%	-4.7%
Milk production per farm	%	2.9%	11.0%	6.9%

Source: IFCN data based on national statistics and estimation.

*ECM refers to Energy Corrected Milk with 4% fat and 3.3% proteins.

**Refers to cow and buffalo milk

@ refers to mostly milk producing households

The above table data gathered from the IFCN dairy reports clearly shows the differences between the three nations' dairy farming. The data differentiates the performance of the selected countries in the field of dairy farming. It shows India is the highest milk producer as compared to Poland and USA, i.e. 157.4 million tonnes in a year. The average milk yield is 1248 kg per cow per year in India, but Poland and the USA produce 5504 kg and 9633 kg respectively. It shows that India is the largest milk producer but it is also inefficient at producing milk yield per cow per year. The USA ranks first in efficiency compared to India. India has the highest number of dairy farms, i.e. 76136000 (mostly milk-producing households). This shows that the numbers of milk producers are greater in India, so only India produces more milk, but its production per head is very less compared to the USA. The average farm size of cows per farm is 2 in India but in Poland and USA 8 and 182 respectively. It shows how the USA's dairy farming is big, as its production per head is more and their earnings also more and they can bear the cost and can able to get advanced equipment and technologies in the field. The annual average growth rate is more in India in respect of milk production, i.e. 4.7%, and also the number of dairy farmers, i.e. 1.8%. But milk production per farm in India is very low as compared to Poland and the USA, i.e. 2.9%, 11%, and 6.9% respectively. Poland ranks first as compared to the other two countries. Here we can also observe a number of dairy farms in Poland and the USA, which shows that big dairy farmers are producing more milk and small dairy farmers may not able to compete with them, which may be the reason for the reduction in the number of a dairy farm.

Table – 2 Top 5 average yields per cow in the world

World Rank	Country	Average litres per cow
01	Saudi Arabia	10,133
02	Israel	10,035
03	Republic of Korea	9,816
04	United States of America	9,314
05	Denmark	8,389

Source: FAOstat

The above table shows the top five countries' average milk yield per cow in the world. India is yet to produce that much milk per cow at lactation or in a year. The average milk production per cow at the global level is 2,200 liters, but in India it is different. When we divide 10,133 by 300 days, we can get 33.7 liters of milk per cow produced in Saudi Arabia. But in India in 2019, a survey by statista.com website was 11.67 liters for exotic cows, 7.85 liters for crossbred cows, and 3.85 liters for an indigenous cow. This shows that Indian dairy farmers are unable to produce average milk production as the top 5 countries do.

Differentiation between India and abroad dairy farming

As discussed above, the dairy farming followed in India and abroad is different in many cases. In milk production, India is tops in the world. Dairy farming is not a new concept to Indians. But they don't know how to do business in dairy farming. Nowadays, the exotic breeds, and crossbreeds are famous in India, but their production is much less than other developed countries' production. The reason for this

may be those are not the origin of India and they may not be able to live in this location as comfortable as in other countries. The weather conditions also play an important role in successful dairy farming with breeds like HF, Jersey, and Crossbreed with the indigenous breeds in India. If the weather is the only factor, then Saudi Arabia produces the highest milk per cow in a year as compared to the rest of the world. So here we can understand that the country's technological advancement and its wealth in the world also affect, as a factor in the development of any sector. In India, we cannot expect that much advancement in any field. In dairy farming, also, the technological advancement is very little and has yet to be updated in this field.

Economics

The labor cost per liter of milk production in India for a 9 cow dairy farm is equal to the 350 cow dairy farm in the USA. The cost of quality feed is high in India as compared to the USA since they farm a lot of lands and grow sufficient feed for their animals. In developing countries like India, dairy animals are the sole assets of landless.

Markets and trade

The dairy industry is unorganized in India. It is estimated that more than 80% of milk is marketed by informal market traders in most developing countries. Around 89% of world dairy products exports made by developed countries only. In the world market, butter, cheese, and milk powder are the most traded dairy products, but in India, most of the consumer prefer raw milk. Raw milk can't be stored for a long time as compared to cheese and milk powder. This also affects the profitability of dairy farms.

Smallholders in the value chain

In India, more than 80% of dairy farmers are small and their contribution to making India number one in milk production is tremendous, but their economic empowerment is not recognizable. Small dairy farmers are increasing day by day in India, but in developed countries like the USA and Brazil, they are decreasing since they understand that there is no economic scale for smallholder.

Dairy development

Dairy contributes to the economic growth of the country and it provides food security and reduces poverty, especially in rural areas of developing countries like India. The number of smart and large dairy farmers is small in India and their contributions are also smaller as compared to developed countries. Dairy farming is one of the businesses that can be done by landless, so only in India many smallholders are there.

Conclusion

Dairy farming plays an important role in the development of dairy farmers and also the rest of the people who are dependent on this field. Indian breeds are well known for their milk, which is recognized as A2 milk on the world market and very good for the health of humans, but it did not get a valid price in India. Their production is very much less compared to foreign crossbreed and exotic breeds, so most of them are in the extinction stage in India. Whatever it is here, the study found whether dairy farmers in India are economically empowered through those dairy animals or not. Many dairy farmers even have indigenous cows who have success in dairy farming in India, as compared to those who run dairy farms

with exotic and crossbreed. Finally, the conclusion of the comparison is that success in dairy farming fully depends on the dairy farmer, and also some external factors may impact, but if the dairy farmer is well known in this field and has the ability to convert challenges into opportunities in this field, he will definitely achieve success. If a dairy farmer succeeds, then automatically he will empower himself in the field of dairy farming.

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