

A study on Challenges faced by Dairy Sector in India during Covid -19

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Abstract:

India is currently ranked as the largest milk producer, dairy industry being the major commodity in agriculture contributing 5% of the national economy, witnessing 6.4% (CAGR) in the past 5 years. Indian dairy industry is expected to grow by 9-11% in financial year 2022. Dairy sector is dominated by fluid milk with emerging value-added products such as cheese, yogurt, flavoured UHT milk growing at a faster rate than other products. Pandemic has affected severely the lives of farmers who depended purely on milk produce by decrease in purchase price, Industries faced challenges to sell and supply milk, worker shortages and increase in production costs, consumers faced challenge to purchase the dairy products and raise in dairy products cost, since lockdown was imposed throughout. The study is viewed in three different dimensions, especially farmers, dairy industries, consumers and the problems faced by them in pandemic situation. The new experience of pandemic also led to shut down of many dairy industries due to lockdown that was imposed on schools, restaurants and hotels.

The purposes of this study based on the conceptual data to identify the challenges faced by dairy industry in India during COVID-19 pandemic. The authors in the paper have tried to suggest the best progress that is required to overcome the future pandemic situations for dairy industries. Specifically, data has been collected from the online portals and e-papers to identify and analyse the challenges faced by the dairy industry during pandemic condition. The need of the hour is to also identify the best possible actions that can be taken by dairy industries and government to meet the challenges faced. The government cooperation is required for hand in hand program with dairy industries by planning long term strategies like providing financial reliefs to industries, discounting on taxes and setting up standard MSP (Minimum Support Prices) to farmers and allowing the best possible supply chain to reach customers. The basic challenge in faced to maintain quality and quantity with supply chain being diversified. The dairy product being perishable requires suitable logistics with supply chain operations to ensure the freshness.

Keywords: Farmers, dairy industry, consumers, supply chain, challenges, suggestions.

Introduction

A dairy is a business enterprise established for the harvesting or processing (or both) of animal milk – mostly from cows or buffaloes for human consumption. A dairy is regularly situated on a committed dairy cultivate or in an area of a multi-reason cultivate (blended homestead) for gathering of milk. As an attributive, the word dairy is suggested to milk-based items, subordinators and forms, and the creatures and specialists engaged with their generation: for instance, dairy cows, dairy buffaloes. A dairy cultivate produces milk and a dairy plant forms it into an assortment of dairy items. These foundations constitute the worldwide dairy industry, a segment of the sustenance business.

India is the world's number one producer of milk followed by United States of America, China, Pakistan and Brazil and India records around 22% of milk production when compared with the entire world. White revolution started by Dr. Varghese Kurien, which is been termed as 'operation flood', world's biggest dairy development program in order to make India self-dependent India is into 100 % of its own dairy creation and is expressed to be the world's biggest customers of dairy items. In India the dairy business has vital significance, dairy items constitute as a noteworthy wellspring of nutritious sustenance to a great many individuals in India and the main adequate type of creature protein for extensive veggie lover portions of the Indian population.

Covid-19 was a challenging situation, due to wide spread of virus and increased mortality rate in the country, lockdown was imposed this led to the problem in life's Milk producers (Farmers), Milk processing plants (industries), Consumers of dairy products. All three dimensions were affected severely in the Covid-19 situation due to increase in demand of dairy products and shutdown of retail outlets and was also problems found in milk procurement from farmers.

It is observed that the status of dairy sector, relating to the procurement of milk, demand and supply boost or slowdown challenges will also be helpful in the study based on challenges faced by dairy sector in India during covid-19. The challenges are the most important part in any business activity, in fact the study on existing knowledge of dairy industry in pandemic situation will help the Dairy industry and other related organization to understand much better about how to face future occurring situations like same and get benefitted with support of government too.

Review of literature

1. Ali Abid and Dr. Shang Jie, (2021), The Authors in their research article have highlighted the effects of covid-19 on agricultural food, lockdown imposed high amount of pressure on business activity related to agricultural goods and also impacted demand and supply gap. The paper also explains the SWOT analysis to identify the SWOT factors involved in current study. The study aims at bridging the gap between supplier and consumer via government involvement through digitalization.
2. Debanjan Das, (2020), The Authors in their research paper have highlighted about the unlocking of the lockdown along with the discussion on rural economy and the procedures followed by maintaining social distancing, the study also explains about the central government's refusal to react on the crisis, study also explains about how dairy sector can overcome the challenges faced.
3. Wang Qingbin et al (2020), The Authors in their research article aimed at coming out with the new policies by understanding the impact of covid-19 on dairy sector. The data for the study is been collected from the China and United States for the comparison on the impacts on both nations. The findings suggest both the countries have been affected by supply chains, labor shortages, due to lockdown.
4. Pinky Barua, (2021), The Author in their research paper have focused on the problems faced by farmers and dairy industry of Assam during the period of lockdown. Study also identifies that farmers of Assam has thrown their milk in rivers, ponds due to no

proper supply chain market for business. The study also identifies the scenario to uplift the livelihood of farmers and economy of dairy sector.

5. Amit Manohar(2021), In this research paper author have states that, early days of lockdown has affected the dairy sector at the worst level in supply chain management issue,going forward as the logistics department improved its working level to supply the milk to the door steps of consumers. The study also gives the information about how dairy sector took up the challenge and implemented, manufacturing flexibility, supply chain collaborations and ease of digitized market platforms.
6. Alejandro Acosta et.al (2021), the authors in the research article discussed about the rapid spread of covid-19 in the world and its effects on global dairy sector and it also tells dairy industry is majorly affected sector compared to other foods in other countries business activities, per capita income, and market structure of dairy sector was also affected. The study also discuss about the implications and the results obtained during covid-19.
7. KishanModi,(2021), The writer in this research article discussed about the retail industry and supply chain problems during second phase of lockdown and the chance to a local brands to cover up the market with timely production and supply, the study also says people were locked in the houses this led to the increase in demand due to immunity building and this led to increase in per capita income.
8. Gunjan Bhandari, Priyanka Lal,(2021), The authors in their research article have highlighted about availability of feed and fodder, fall of milk prices, fall in demand and the estimated loss incurred by dairy farmers due missed artificial insemination.

Based on the Review of Literature, Research Gap Identified:

It is observed that based on the literature survey carried out about the effects of covid-19 on farmers, dairy production industries and consumers, it is identified that the authors have discussed about the supply chain, laborshortage and demand issues that were found in US and China and as link the same challenges were also faced in India during covid-19 during lockdown. The author's in their research papers have discussed how local brands covered the market on big brands with sale due to no proper transportation facility, also farmers have faced problems with fodder management, fall in milk prices due to restrictions on door-to-door delivery, and missed artificial insemination which led to decrease in milk production etc.

Based on the review of literature, the authors in this paper has tried to come out with the conceptual model to meet the challenges of the competitive environment and the suggestive measures to face the challenges identified in the micro environmentrelated to quality, availability, awareness and affordability of dairy products during lockdown.

Objective of the study

The study aims at understanding the challenges that took place in the dairy sector industry which comprises of Farmers, dairy processing industry, consumers and to come-out with the best possible suggestions and support that can help the cause to overcome the problems if the same situation is raised in the near future.The authors in

this paper has tried to come out with the conceptual model to meet the challenges of the competitive environment and the suggestive measures to face the challenges.

SWOC analysis during Covid-19 in india:

Strength

1. Existence of highest number of cattle populations in India, which records around 190 million in number.
2. Availability of surplus farmers for milk production.
3. No cost waged labours in milk production, since most of the household woman are involved in this activity of dairy farming.
4. Availability of large number of dairy processing plants in the Country.
5. Adoption of high-class technology which can convert raw milk into milk powder.
6. Increase in consumption rate of milk by consumers.

Weakness

1. Limited transportation facility.
2. Lack of awareness about clean milk production.
3. Lack of proper knowledge about storage of raw milk.
4. Poor fodder facility to cattle.
5. Poor health care facility to cattle.
6. Absence of proper data management.

Opportunity

1. Improvement in use of digital marketing platforms.
2. Sale and purchase of dairy products through the benefit of online portals
3. Dairy development led to the employment of many unemployed youth during lockdown.
4. Creation of many substitutes of raw milk.
5. Educating public about nutritious content in raw milk to improve immune system.

Challenges

1. Guidelines was imposed on all retail shops to open only during certain period of time in the morning which led to the fall of business.
2. Ban on door-to-door delivery of milk and other items.
3. Huge problem of transportation which affected smooth functioning of supply chain.
4. Stock of huge raw milk in the processing centres, which led to perishability of milk.
5. No frequent supply of milk to the consumers, since all shops was closed.
6. Also affected many rural and urban poor children who was beneficiaries of government midday meal schemes, where milk was provided as nutritious source.
7. Cattle health and fodder management was disturbed, which reduced the production of milk.

Challenges faced by farmers, dairy industry and consumers

1. Restrictions on door-to-door delivery

Due to self-imposed ban on door to door delivery during pandemic sale of liquid milk to house hold people was stopped , this also made people to go panic buying with very less exposure to online buying mode in India.

2. Fixed time duration to open milk parlours and Retail shops

Covid-19 changed the timings of shops to perform sales and there was a strict guideline followed, whereas retail shops were not allowed to open whole day, this led to the fall of sales. This also left consumers unhappy because of no frequent availability of milk.

3. **Decrease in pricing**

Due to lockdown individual farmers who used to supply milk to houses at high cost, forcefully wanted to supply to Cooperative societies at low cost due to difference in SNF (Saturated natural fat).

4. **Perishability nature of milk**

Due to perishable nature of milk and supply chain issue, many farmers wanted to let flow their milk in the streets.

5. **Animal fodder management**

Lockdown led to the closure of animal fodder shops, animals were forcefully made to depend on green fodder, which automatically resulted in decrease in milk production.

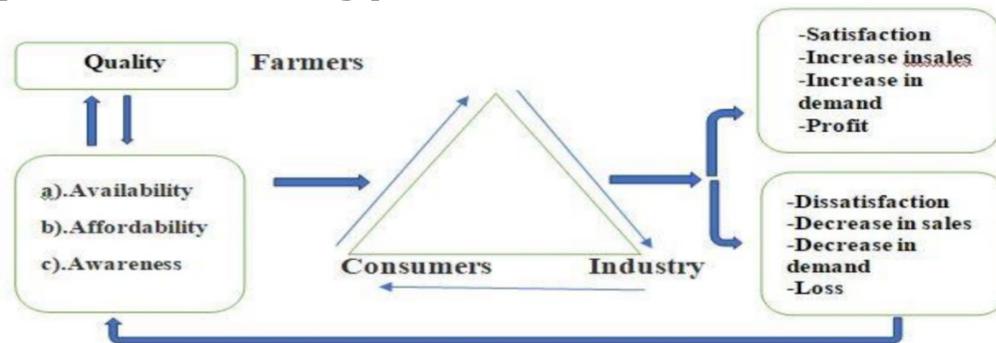
6. **Cattal health and artificial insemination issues**

Since farmers are not much aware about the medications provided by veterinary doctors, led to the death of many animals and also there was om huge fall in artificial insemination program of government which also decreased the production of milk.

7. **Huge stock of milk in processing units**

Due to problem of supply chain in the market and lockdown of market led to the stock of milk in the processing centres with less sales.

Conceptual model on research gap identified and how it is related to Covid19



Source: Authors

The authors in this conceptual research paper tried to come-out with a model that explains the link between farmers, dairy processing industry and Consumers being the continuous process. During the pandemic situation – Covid, the supply chain was adversely affected which led to the challenges in maintaining the quality of milk by timely production, delivery, processing and consumption. The conceptual model is self-explanatory. Quality being an important factor in perishable goods, influences the supply chain process during situations like lockdown. Dairy processing industry should adopt proper storage system in-order to ensure availability of raw milk and also the mode of supply to the consumers via online ordering or door to door delivery, so that the milk can be supplied to the consumers at affordable prices even though when there is a fluctuation in demand, supply and procurement. Dairy processing industries should also create effective awareness programs about the supply of quality milk to the consumers on time with maintaining hygienic in the supply chain, which in-return makes consumers satisfied towards the service and product which also increases the

business, if not it leads to the dissatisfaction among consumers and fall in sales, leading to the Loss to the manufacturers and the farmer

Suggestive measures to be considered to overcome challenges:

1. Government should fix some minimum support price to the production of milk in uncertain challenges like pandemic.
2. Compensations has to be provided by taking in details of perishability of milk due to supply chain gap.
3. Fair remunerative price per litre has to be provided by cooperative societies even the supply increases, so that many farmers will be motivated to supply milk to cooperative societies even during normal situations unlike covid-19.
4. Continuous fodder supply cycle to the cattle has to be maintained by government at cheaper subsidized price, so that cattle will not fall malnourished or shortage of food which leads to decrease in milk production.
5. Government should also maintain mobile veterinary facilities to treat animals in remote locations at their door steps with all medicinal facilities and artificial insemination program.
6. Industries and cooperative societies that process milk has to acquire high-capacity storage plants and also highly equipped technicians as well as machines so that over stock of raw milk can be converted in to by products at the earliest.
7. Industries and cooperative societies should try adopting to the online marketing portals and activities as marketing platforms to overcome future challenges of lockdown.

Conclusion

Today's dairy sector industry plays an important role in economical and social lies of the country like India, as the census recorded nearly 190 million cattle population in the country and also 5% of the national economy, witnessing 6.4% (CAGR) in the past 5 years. Farmers and mostly rural woman are unpaid and they highly depend on milk production and cattle farming which provides them the livelihood and the source of income was severely affected during the covid -19 even though government has allowed supply of it and movement of the products related to it in the market, since it was the new phase of experience and the new challenge to all sectors of the market, they supply chain management including traditional marketing of milk was affected due to the imposition of lockdown.

Shutdown of Restaurants, hotels, and all-party halls left dairy industries under loss, due to huge production and no demand except in the household markets, this also led to the over stock of goods inside the industry and which led to the wastage since its of perishable in nature. This made industries to procure milk at less quantity compared to earlier with slight changes in the price.

Consumers normally depend on milk on daily basis, as the day starts with milk related drink, time bound was fixed in a day to purchase milk and its substitutes and later shops was shut which led to the increase in demand and short fall in availability. Consumers also faced the challenge of brand compromise issue and also faced issue of increase in price due to back door marketing activity during lockdown.

Since it was a conceptual study on the topic SWOC analysis is been explained in-order to keep forward all strengths, weakness, opportunities and challenges faced by dairy industry during covid-19 period.

The authors in this conceptual research paper tried to come-out with a model that explains the link between farmers, dairy processing industry and Consumers being the continuous process. During the pandemic situation – Covid, the supply chain

was adversely affected which led to the challenges in maintaining the quality of milk by timely production, delivery, processing and consumption. The way forward explains about all possible outcomes and support required during need of the hour along with the government support to withstand the situation and come out with a model to be prepared for future occurring of the same event.

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