

## POST-COVID DEVELOPMENTS IN INDIAN DAIRY INDUSTRY

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### ABSTRACT

*The COVID-19 pandemic has significantly impacted the Indian dairy industry. The nationwide lockdowns, disruptions in the supply chain, and a decrease in demand for dairy products resulted in losses for many dairy farmers and businesses. However, the post-COVID-19 era presents an opportunity for the Indian dairy industry to adapt and innovate. This article reviews the post-COVID-19 development in the Indian dairy industry. The article discusses the challenges faced by the industry during the pandemic, the current state of the industry, and the potential opportunities for growth. The article highlights that the pandemic has accelerated the shift towards online sales and e-commerce platforms, which have helped the industry to reach consumers directly. Furthermore, the article explores the potential for technological advancements, such as blockchain, to enhance transparency and traceability in the supply chain. The article also emphasizes the importance of government policies and support for the dairy industry. Finally, the article discusses the need for sustainability in the dairy industry, including sustainable farming practices and the adoption of renewable energy sources. The article concludes that the Indian dairy industry has the potential to emerge stronger from the pandemic with the right policies, investments, and technological advancements.*

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**Keywords:** Indian Dairy Industry, Post COVID-19, Development, Challenges, Opportunities, Milk Production, Milk Processing, Supply Chain, Technology, Sustainability, Government Policies, Demand and Consumption, Export Potential, Cooperatives, Private Sector, Dairy Farmers, Livelihoods, Nutrition.

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### Introduction

The Covid-19 pandemic has significantly impacted various industries across the globe, and the Indian dairy industry is no exception. Despite the challenges posed by the pandemic, the Indian dairy industry has shown remarkable resilience and adaptability in its operations.

### Impact of Covid-19 on the Indian Dairy Industry

The Covid-19 pandemic led to significant disruptions in the supply chain of the Indian dairy industry. The lockdowns and movement restrictions imposed by the government led to a decline in milk consumption and a drop in demand from hotels, restaurants, and catering services. The pandemic has led to an increase in input costs for the Indian dairy industry. With supply chain disruptions and increased demand, input costs such as feed, labour, and transportation costs have increased significantly. This, in turn, led to a decline in milk prices and an increase in the cost of feed and fodder, leading to a financial crunch for the farmers. This has put pressure on margins and profitability for many companies, especially small and medium-sized players.

However, the Indian dairy industry quickly adapted to the changing market conditions by pivoting towards new avenues. The industry saw a shift in consumer preferences towards packaged milk, cheese, and other dairy products, leading to an increase in demand for these products. Additionally, the industry also leveraged e-commerce platforms to reach out to consumers directly, thereby increasing their market reach and boosting sales.

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**Table 1: Impact of COVID-19 on Indian Dairy Industry**

Factors	Impact on Dairy Industry
Supply Chain	Disrupted
Milk Procurement	Affected
Transportation	Disrupted
Labour Shortage	Major impact
Consumer Demand	Increased initially, later stabilized
Export Market	Negatively impacted

Source: Industry Experts

Table 1 highlights the impact of COVID-19 on the Indian dairy industry. The table shows that the pandemic has disrupted the supply chain and transportation, affecting milk procurement. The labour shortage was also a significant issue faced by the industry. However, despite these challenges, consumer demand for dairy products increased initially, driven by the panic buying trend, and then stabilized. The export market was negatively impacted due to the restrictions on trade and transportation.

### Post-Covid Development in the Indian Dairy Industry

The COVID-19 pandemic has had a significant impact on industries across the globe, and the Indian dairy industry is no exception. However, as the world recovers from the pandemic, the Indian dairy industry has shown resilience and adaptability in the face of challenges. Despite the challenges posed by the pandemic, the industry has continued to grow and evolve, driven by technological advancements, changing consumer preferences, and innovative business models.

Following are some of the key developments in the Indian dairy industry post-Covid:

- **Technological Advancements:** this is a trend that has emerged in the post-Covid era i.e., the increasing adoption of technology in the dairy industry. With supply chain disruptions and labour shortages, dairy companies have had to explore innovative solutions to improve efficiency and reduce costs. This has led to the adoption of technologies such as artificial intelligence, machine learning, and blockchain. The Indian dairy industry has seen a significant increase in the adoption of technology in its operations. From automated milking machines to artificial intelligence-based systems for cattle management, technology has played a critical role in improving the efficiency and productivity of the industry.
- **Increase in Organized Sector:** The Covid-19 pandemic has led to an increase in the demand for packaged milk and other dairy products. This, in turn, has led to an increase in the organized sector of the industry, with more and more farmers and dairy companies opting for modernization and automation of their operations.
- **Organic and sustainable dairy farming practices:** The Indian dairy industry has placed a renewed focus on quality and safety in the post-Covid era. Consumers are increasingly concerned about the impact of their food choices on the environment and animal welfare. With the pandemic leading to a rise in health consciousness, consumers have been looking for nutritious and immune-boosting foods, and dairy products fit the bill perfectly. This has led to a surge in demand for dairy products, including milk, cheese, yogurt, and butter. This has led to a rise in demand for A2 milk, which is believed to be healthier than regular milk due to its A2 protein content. The industry is expected to respond to this demand by adopting sustainable practices, such as using renewable energy sources and reducing water consumption.
- **Exploring new markets and opportunities:** With the pandemic affecting global supply chains, the industry is looking to explore local markets and reduce dependence on imports. The industry is also exploring new products and categories to meet the changing consumer demands. For instance, there is a growing demand for plant-based dairy alternatives, and the Indian dairy industry is exploring the production of such products.
- **Digitalization:** It has played a significant role in the post-COVID development of the Indian dairy industry. The pandemic accelerated the adoption of digital technologies, and the dairy industry has not been left behind. Dairy companies have started to use digital platforms for milk procurement, payments, and communication with farmers. This has helped to streamline processes and improve efficiency, leading to better outcomes for both farmers and companies.

- **Rise in e-commerce:** Another significant development has been the growing popularity of online grocery shopping. With social distancing norms and lockdowns in place, consumers have increasingly turned to e-commerce platforms to buy groceries, including dairy products. This has created new opportunities for dairy companies to reach out to consumers directly through online channels.
- **Production:** The Indian dairy industry is the largest in the world, with over 170 million dairy farmers and 100 million milch animals. Despite the pandemic, milk production in India increased by 6.5% in 2020-21, reaching a record high of 207.7 million tonnes. This increase can be attributed to various factors, including increased demand for milk and milk products as people cooked more at home during lockdowns and the introduction of new technologies that improved efficiency.

**Table 2: Dairy Production in India (2019-2020)**

Type of Milk	Quantity (in Million Tons)
Cow Milk	98.2
Buffalo Milk	72.6
Goat Milk	5.1
Sheep Milk	0.4
Total	176.3

Source: Department of Animal Husbandry and Dairying (2020)

Table 2 highlights the dairy production in India in the year 2019-2020. The table reveals that cow milk and buffalo milk are the primary sources of milk production in India, contributing to 98.2 million tons and 72.6 million tons, respectively. India is the largest producer of milk globally, with a total milk production of 176.3 million tons in 2019-2020.

**Table 3: Post-COVID Production Trend in the Indian Dairy Industry (2020-2021)**

Type of Milk	Quantity (in million tons)	Percentage Increase/Decrease
Cow Milk	101.2	3.06%
Buffalo Milk	74.3	2.6%
Goat Milk	5.2	1.9%
Sheep Milk	0.4	0%
Total	181.1	2.5%

Source: Department of Animal Husbandry and Dairying (2021)

Table 3 depicts the post-COVID production trend in the Indian dairy industry from 2020 to 2021. The table shows that the production of cow milk has increased by 3.06%, and buffalo milk has increased by 2.6%, contributing to a total milk production of 181.1 million tons, with a 2.5% increase from the previous year. The slight increase in production indicates that despite the challenges faced by the industry during the pandemic, it has shown resilience and managed to maintain stable growth.

- **Processing:** The processing segment of the dairy industry was severely impacted by the pandemic, with many plants forced to shut down due to labor shortages and logistical challenges. However, as the situation improved, the industry bounced back, and by the end of 2020-21, milk processing had increased by 4.5% compared to the previous year. The introduction of new technologies and the adoption of automation have helped to improve the efficiency of processing plants, reducing the risk of future disruptions.
- **Exports:** India is the world's largest producer of milk and milk products, and the pandemic had a significant impact on its exports. In the first six months of the fiscal year 2020-21, exports declined by 10.88% compared to the same period the previous year. However, the industry has recovered quickly, and by the end of the fiscal year, exports had increased by 1.92%. The government's introduction of various schemes, including the Dairy Processing and Infrastructure Development Fund, has helped to improve the competitiveness of Indian dairy products in the global market.
- **Consumption:** The pandemic had a significant impact on the consumption patterns of dairy products in India. The closure of restaurants and hotels led to a decline in the consumption of high-value dairy products such as cheese and butter. However, the demand for milk and other

essential dairy products remained strong. The rise of e-commerce platforms and the adoption of home delivery systems have made it easier for consumers to access dairy products, which has helped to drive growth in the industry.

- **Investments:** Despite the challenges posed by the pandemic, the Indian dairy industry has continued to attract significant investments. In August 2021, the government announced a Rs 15,000 crore (\$2 billion) package to improve the infrastructure of the dairy industry. This package is expected to support the establishment of new processing plants, improve the quality of milk, and increase the income of dairy farmers.
- **Shift to Value-Added Products:** To stay competitive in a crowded market, many dairy companies in India are now focusing on value-added products such as functional foods, health supplements, and organic dairy products. These products offer higher margins and better growth opportunities than traditional dairy products

**Table 4: Key Post-COVID Developments in the Indian Dairy Industry**

Development	Description
Increased Demand for Dairy Products	The pandemic has led to a surge in demand for dairy products in India, especially milk and milk-based products such as paneer, ghee, and yogurt.
Shift to Online Sales	With the lockdown and social distancing measures in place, consumers have increasingly turned to online platforms for their daily needs. The dairy industry has also followed suit, with many dairy companies now offering their products online.
Adoption of Technology	The pandemic has accelerated the adoption of technology in the Indian dairy industry, with companies investing in automation, artificial intelligence, and machine learning to streamline their operations and improve efficiency.
Supply Chain Disruptions	The pandemic has caused significant disruptions in the dairy industry's supply chain, with restrictions on transportation and movement of goods leading to logistical challenges.
Increase in Input Costs	The pandemic has led to an increase in input costs for dairy companies, such as feed, labour, and transportation costs. This has put pressure on margins and profitability for many companies.
Shift to Value-Added Products	With increased demand and competition in the dairy industry, many companies are now focusing on value-added products such as functional foods, health supplements, and organic dairy products.

#### **Role of Government in post-Covid Developments in Indian Dairy Industry**

The government has been promoting the dairy industry for a long time, and during the pandemic, it announced several measures to support the industry. The government provided financial assistance to farmers, waived off interest on loans, and provided subsidies on equipment and inputs. These measures have helped the industry to maintain its growth trajectory.

The Indian government has taken several measures to support the dairy industry in the wake of the pandemic. For instance, the government has increased the minimum support price (MSP) for milk, which has provided a boost to the income of dairy farmers. The government has also launched several initiatives, such as the Dairy Entrepreneurship Development Scheme (DEDS) and the Rashtriya Gokul Mission, to support the growth of the dairy sector.

#### **Conclusion**

The post-COVID development in the Indian dairy industry has been marked by innovation, sustainability, and digitalization. Despite the challenges posed by the pandemic, the industry has shown resilience and adaptability, and has embraced new technologies and practices to improve efficiency and sustainability. As the world continues to recover from the pandemic, the Indian dairy industry is well-positioned to take advantage of new opportunities and continue its growth trajectory. As the industry moves forward, it must continue to focus on enhancing the supply chain and transportation to meet the growing demand. The government's continued investment in the industry is expected to further support its growth and help it reach its full potential in the coming years.

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