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Impact of COVID-19 Pandemic on Dairy Industry in Punjab: Major Concerns and Policy Options

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CDEIS Policy Brief Series on Punjab Economy

The COVID-19 pandemic has shaken the economies globally and added to the existing problems and their intensity like climate change, poverty, unemployment, migration, education, and of course, health. Developing economies have suffered even more due to their vulnerabilities to such sudden and large shocks. India is no exception to this trend and has regional variations in the impact of COVID-19 as there is much disparity and specificity in the levels of development of state economies. Punjab being an agriculturally grown state though still highly dependent on its agriculture and rural non-farm economy for significant proportion of its population and their livelihoods in the presence of public resource crunch has also faced this COVID-19 onslaught while being in economic, social and environmental crisis.

In this context, it was thought fit to get an independent set of policy directions from scholars in their respective domains based in Punjab, outside Punjab and even overseas to encourage public policy debate in and outside the state about the nature and magnitude of Punjab's economic and developmental crisis and the COVID-19 implications for it and explore possible ways forward to make the economic and social systems of the state move out of the situation of economic and policy inertia.

The policy briefs in this series numbering more than 20 examine issues ranging from agricultural sustainability, environmental and market aspects of the agricultural systems to allied sector and informal and small-scale sector livelihoods including dairy and MSMEs. The marginalised group livelihoods like women, schedule castes, and farm labour and other rural and migrant workers also get adequate attention. The sectors of health and education are also examined. On the fiscal front, institutional credit for recovery and revenue of the state post-GST are analysed. The larger aspects of governance, federalism and diaspora also get a coverage as contextual and overarching themes.

We hope that these briefs would serve to encourage more informed debate and discussion in the interest of the betterment of the state economy and society to aid post-COVID recovery and medium and long-term sustainable development policy making.

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Abstract

The livestock sector continues to drive rural livelihoods and contribute significantly to the agricultural economy of Punjab. Within livestock sector, milk accounts for about 80% of the total value of output of livestock. In the recent times, dairy sector has undergone rapid growth and structural shifts in terms of establishment of dairy cooperatives, producer companies and private dairy companies, which are seen as one of the several pathways to diversify and boost the rural income and livelihoods in crisis ridden agrarian state of Punjab. It is argued that imposing of lockdown and curfew disrupted all the economic activities and created disruptions in agriculture and allied sectors, which may have serious implications for food production and farmer incomes. In this context, it becomes imperative to explore how was the dairy sector in Punjab, particularly the milk producers, affected due to the outbreak of COVID-19? How did the milk producers and the state government respond to COVID-19 pandemic to ensure sustainable dairy based livelihoods which would also work in the post-COVID-19 period? The study reveals decline in milk sales and procurement, increase in cost of dairy production, rise in animal health issues resulting in low milk productivity as veterinary services and dairy input supplies were affected due to the outbreak of COVID-19. The study brings out policy implications of these changes and suggestions to meet challenges from such pandemic outbreaks to make the dairy enterprise a win-win situation for all the stakeholders.

Impact of COVID-19 Pandemic on Dairy Industry in Punjab: Major Concerns and Policy Options

Naresh Singla

1. Brief Background

The livestock sector continues to drive rural livelihoods and contribute significantly to the agricultural economy of Punjab. The livestock sector accounts for 36.93% share in agricultural GVA of the state and witnesses an average growth of 5.40% during the period of 2012-13 to 2018-19 as compared to only 0.8% in crop sector (GoP, 2020). About 28.5% of the agricultural workforce are engaged in the livestock sector (Subash and Kaur, 2017). Milk is the main product of the livestock sector, which accounts for about 80% of the total value of output of livestock (NDDB, 2014).

Punjab produces about 12,599 thousand tonnes of milk and accounts for 6.7% of the milk production in the national milk basket (NDDB, 2018-19). On an average, about two-third of the milk produced is marketed, while one-third is retained for home consumption. The major share of milk in Punjab is handled by unorganised sector, largely dominated by private milk traders/ vendors/milkmen, who buy milk directly from producers and supply milk either directly to the urban consumers, or to informal institutional buyers (restaurants, tea stalls, etc.) or wholesalers and local retailers such as halwai shops/ creameries/city-based private dairy shops etc. (Kumar, Staal and Singh, 2011; Kaur and Singh, 2020).

Punjab also has a well-established network of milk cooperative societies at village level, which started as early as in 1973 on the pattern of Amul model under apex body, Punjab State Cooperative Milk Producers' Federation Ltd. (popularly known as Milkfed Punjab). As a result, Punjab has developed a vast network of milk cooperatives with 8,018 village level dairy cooperative societies, with about 4.10 lakh milk producers as its members, affiliated to 11 district milk producers' unions with 10 milk processing plants, which on an average procure about 17.66 lakh litres of milk per day against a consolidated milk handling capacity of around 21.85 lakh litres per day (NDDB, 2018-19a). Besides, Nestle India Limited, which is one of the first private players in the organized dairy sector, is also involved in milk procurement in Punjab since 1961. In 2015, Nestle procured about 1.2 million litres of milk per day from about one lakh farmers (Punjabi, 2015). Recently, Punjab has also seen the entry of Baani Milk Producer Company (MPC) Ltd. in 2014, which was operationalized as a producer company under the guidance of NDDB Dairy Services (NDS), a wholly-owned subsidiary of NDDB. Baani MPC Ltd. has enrolled 51,590 milk producers, of whom about 25% are women and 35% small holders from 1218 villages in 9 districts of Punjab (NDDB, 2018-19a). Thus, dairy sector in Punjab has witnessed rapid growth and structural shifts in terms of establishment of dairy cooperatives, producer companies and private dairy companies, which are involved into procurement, processing and retailing of milk. These are seen as one of the several pathways to diversify and boost the rural income and livelihoods in crisis ridden agrarian state of Punjab (Kaur and Singla, 2018; Kaur, 2019).

2. Dairy Industry and COVID-19

Since milk is a highly perishable agricultural commodity, demand and supply of milk were quite volatile even in the pre-covid-19 period. The demand for milk and milk products is ever rising, elastic and influenced by several factors such as rising urbanization, increase in dietary consciousness such as preference for low fat milk, rise in income level etc., whereas, supply of milk is often constrained by the several factors such as type of bovine, quality and cost of feed, availability of credit and risk-cover, availability of health and breeding services, functioning of livestock markets, information asymmetry in the markets etc. (Rajeshwaran, Naik and Dhas, 2014). COVID-19 pandemic has spread all over the world. In order to reduce the mortality

rates, the different countries have responded to the pandemic by imposing lockdown and stringent measures such as imposition of curfew as was done by Punjab. Covid-19 has disrupted all the economic activities. The covid-19 driven lockdown is unique as both demand and supply have fallen down. All the economic activities of the economy have responded differently to the covid-19 pandemic.

However, the disruptions in agriculture and allied sectors has posed a major challenge as the vast majority of the workforce is still engaged in agricultural and allied activities, which may have serious implications for food production and in ensuring food security. It is expected that the implications will be more severe in various sub-sectors of agriculture in the crisis ridden rural economy of Punjab, where the income from farming is continuously dwindling, costs of production are rising and farm indebtedness and suicides are rampant.

As outlined earlier, the dairy sector is one of the major economic activities within the agricultural sector, which has performed much better as compared to all other sub-sectors of agriculture in Punjab. However, the dairy sector in Punjab is also likely to face several problems and challenges in the ongoing period of covid-19 as are faced globally and nationally. For example, in Canada, the milk producers have resorted to dumping of milk as the processing facilities are closed due to Covid-19. However, the supply chain of milk was found to be more resilient to the impacts of COVID-19 than other sectors as milk producers are financially more stable, losses are pooled, and production/marketing efforts are relatively well coordinated (Weersink, Massow and McDougall, 2020). Similarly, in the US, the impact of covid-19 has led to a shift in demand due to unpredictable and dramatic societal changes, which have lowered the milk prices, disrupted the supply chain, and left the dairy industry without any government support (Mulvey, Peters and Rutkowski, 2020).

On the other hand, in India, it is argued that smallholder dairy sector has adjusted well during Covid-19 (Lele, Bansal and Meenakshi, 2020). However, an empirical study by Popat, Ashish, Kadam and Mane (2020) in Satara district of Maharashtra revealed that during the period of Covid-19, prices of milk paid to the milk producers and milk procurement by dairy cooperatives were lower and inconsistent than those during the pre-covid-19 period. The payment to milk producers was also irregular during Covid-19 period. Still, the evidences of the likely impacts of Covid-19 on the dairy industry in terms of milk sales, procurement, costs of production and logistics, animal services etc. are largely missing in the case of India in general and Punjab in particular. In this context, it becomes imperative to explore how does the dairy sector in Punjab, particularly the milk producers, get affected due to the outbreak of Covid-19? How do the milk producers and the state government respond to Covid-19 pandemic to ensure a sustainable dairy production system in the post-Covid-19 period? The first section explores the impact of Covid-19 on milk sales and procurement by dairy cooperatives vis-à-vis vendor driven markets, while the second section brings out impact on cost of milk production and logistics. The effects on animal and training services are discussed in sector three of the paper. Last section attempts to find out likely impacts on inter-linked credit transactions in formal and informal credit markets.

Decline in Sale and Procurement of Milk

During Covid-19 curfew, there was a sudden drop in demand for milk. The sale of dairy products had gone down due to health concerns, there was reduction of income of the dairy households, migration of labour to home states happened, and there was closure of sweet shops and eatries. The small milk producers, who mainly supply milk to unorganised milk vendors suffered more than those who sold to well organised cooperative system of Milkfed and various private diaries. Some of the milk producers, particularly those selling to traditional milk vendors had to dispose of their milk at a price lower than the cost of production. The Milkfed too faced difficulty during Covid-19 to handle the additional milk procurement due to a surge in fresh milk supply and a concurrent major drop in demand for milk and milk products. The daily milk procurement was 26.5 lakh litre per day as on April 1, 2020, which was around

32% cent higher than their installed capacity. Some private milk plants agreed to procure milk from the farmers on the condition of deferred payment, while others started to practice a weekly milk holiday i.e. no milk collection on that particular day (Kaur and Singh, 2020). The disruptions in supply chain in milk procurement by private players and unorganized diaries led to diversion of milk towards the milk cooperatives, resulting in subdued producer prices (Rath, 2020). The Milkfed had to reduce procurement rate by Rs. 3 per litre for cow milk and Rs. 4.50 per litre for buffalo milk during Covid-19. However, Milkfed has performed reasonably well as compared to milk vendors and traditional local diaries. Milkfed converted additional milk into skimmed milk powder (SMP) and ghee. Milkfed has also started door to door delivery of milk and milk products in order to release the pressure of excess supply.

Increase in Cost of Dairy Production and Logistics

The cost of producing milk and milk products has gone up during Covid-19 period. The cost of producing milk has increased due to the increase in cost of feed, while transportation of green fodder and wheat husk (tudi) is also affected due to the lockdown. About Rs. 350 billion feed industry in India is also reeling under severe crises as additional costs of logistics and raw materials accrued due to lockdown can not be passed on to the end users vis-a-vis the farming community engaged in rearing of cattle and other subsidiary activities. Further, disruption of logistics is a much more severe problem in livestock sector than crop sector as shortage of feed will likely lead to starvation and death of the milch animals. The problem is also compounded on account of the fact that dairy animals have short production cycle and animals require feed on a day to day basis to complete their cycle (Kumar, Nuthalapati and Saxena, 2020).

Rise in animal health and their productivity issues

Animal health services, which are already limited, are affected at several places due to imposition of lockdown, which has restricted the movement of veterinary doctors and availability of veterinary medicines. Though the services of veterinary doctors come under essential services, they do not operate as they did in pre-Covid period for fear of Covid-19. Further, most of the resources are diverted for prevention, diagnostics and minimization of COVID-19 impacts (Kumar, Nuthalapati and Saxena, 2020). This has raised serious concerns in terms of adverse impacts on the health and productivity level of the dairy animals. A study by Kaur and Singla (2018a) reveals that provision of veterinary service and technical services provided by Milkfed to milk producers turned out to be one of the major reasons for their association with Milkfed. Therefore, it is likely that effects of Covid-19 on animal health and their milk productivity will be relatively low among Milkfed farmers than those selling milk to other channels due to better access to veterinary and technical services.

Impact on interlinked credit transactions

Milk production is largely carried out as complimentary activity along with crop production. The regular flow of cash income from dairying not only helps the milk producers to buy crop inputs and animal feed for their cattle, but it also helps them to resettle the credit transactions done in informal and formal credit markets. It can be corroborated with the study by Singh, Kaur and Kingra (2008), which revealed that higher the income from dairying, lesser is the extent of indebtedness among the farmers in Punjab. However, during Covid-19, due to lower price for milk, effect on milk productivity, lack of assured procurement, availability of animal feed and lack of veterinary services due to lockdown , there is not only reduction of income from dairying, but also in regularity of income, which has serious implications for the producers, particularly landless and small farmers. Therefore, the milk producers are unable to pay/clear off their dues.

3. Policy Suggestions

In view of the emergence of the COVID-19 crisis, the following policy suggestions can help to protect the dairy industry in general and milk producers in particular to deal with COVID-19 like situation in Punjab.

a) Since milk procurement through dairy cooperatives tends to be more resilient than vendor-driven milk markets and losses to the milk producers are more in vendor-driven markets during the COVID-19, there is a need to create local milk grids, and linking milk grids to vendors, organised dairies and processors in the state and across adjoining milk deficient regions of other states/UT such as Jammu and Kashmir and Rajasthan. This will help to clear off the excess supply of milk during situation like COVID-19 and therefore, help the milk producers in getting remunerative price rather than depressed price.

b) There is a need to strengthen and expand the capacity of Milkfed, private plants and producer companies through easy financing from the commercial banks, cooperative banks and other financial lending agencies to meet working capital requirements of dairy plants, which will help to increase their operational capacity and meet the challenges of COVID-19 like situation.

c) Also, revamping of functioning of village level dairy cooperatives is required in order to ensure uninterrupted supply of cattle feed, provision of veterinary and technical services at milk producer's door steps and other inputs to meet the challenge of COVID-19 pandemic and afterwards.

d) The milk producer companies can play a much greater role than cooperatives during the period of COVID-19 by ensuring fair prices for milk, transparent transactions, ensuring participation of landless and small land holders and women, dairy inputs and technical services etc.

e) Last but not the least, the setting up of a milk price stabilization fund can pave the way for stabilizing the income of the dairy producers, which in turn can help to sustain the diary sector post-COVID.

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