



Strategy for coping up with post-pandemic challenges faced by livestock farmers in India

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ABSTRACT

This paper presents the impact of COVID outbreak on livestock husbandry sector and economic loss to dairy and poultry farmers in India. Lack of communication, shortage of inputs, poor access to veterinary care, disruption of supply chain and closure of market were the major problems. Several recommendations have been made to address these problems of natural calamities in the future.

Keywords: COVID, Farmers, Livestock, Post-pandemic, Strategy, Veterinary

When India declared a national lockdown in March 2020 due to COVID-19 outbreak, normal life was suddenly disrupted, although the timely decision of the Government was well appreciated. However, the immediate worry was food security, particularly in the urban areas. An immediate priority next day in the morning was to procure grocery, vegetables, meat, eggs, milk and other dairy products and most of the people wanted to stock these commodities in bulk at least to last for 1–2 weeks. This created crowd and scarcity in cities. The supply situation improved gradually during the next 3–4 days. However, the lockdown adversely impacted agricultural production and income of farmers due to non-availability of inputs, labour, transport services, disruption of supply chain, lack of storage space, shift in consumer demand resulting in mismatch between demand and supply, and wastage of agricultural commodities. Among the livestock keepers, poultry and dairy farmers were the worst hit across the country. As dairy and poultry together contribute over 80% of the total value of the livestock produce, the impact was very significant.

Impact on livestock sector

As presented in Table 1, in 2018-19, the total value of the output from livestock was ₹ 11.6 lakh crores, equivalent to over 4% of the GDP (GoI 2020). A major contribution of 66.63% was from milk and milk products, with the total annual milk production of 187.75 million tonnes. The poultry sector contributed 12.82% to the total output through 4.06 million tonnes of poultry meat and 103.3 billion eggs. While the dairy sector had an annual growth performance of 6%, poultry sector maintained over 8% annual growth. Poultry was the first sector to be affected

by the lockdown, as even before the enforcement of lockdown in India, the rumours of poultry birds as the likely carrier of the COVID-19 virus was widely circulated, and this reduced the demand for chicken and eggs in several parts of the country. The lockdown further reduced the demand for meat of all species across the country, due to several logistic factors, although there was no restriction on opening of meat shops. It was difficult for people to move long distances in search of freshly slaughtered meat, as most of them were not used to consuming frozen meat. Many of these non-vegetarians thus preferred to shift to milk products. Thus, the price of live poultry birds came down to as low as ₹ 10-30/kg, in April 2020, and 45 days of lockdown impacted 10 lakh broiler poultry farmers and 2 lakh layer farmers, causing a loss of over ₹ 27,000 crores (Singh 2020). With the subsequent relaxation of transport chains, there was some recovery in the demand, but the supply-demand gaps continued further, causing storage problem in some regions, and wastage in other regions. Most of the poultry farms also suffered from shortage of feed supply, labour, and timely veterinary care, which compelled many hatcheries to destroy incubated eggs and freshly hatched chicks due to the uncertainties. The situation was very panicky and farmers were directionless, without any support (Biswal *et al.* 2020).

The dairy sector was also hit hard by COVID-19 in many ways. Firstly, the farmers could not supply milk to the milk collection centres because most of the dairies were not operating in full capacity and there were also restrictions on the movement of people and transport. Simultaneously, there was a drastic decline in the consumption of milk and milk products, due to non-availability of milk in urban outlets, caused by breakdown in milk supply chains. Closure of roadside tea stalls and eateries, and hotels which consumed about 15% of total milk also affected selling of

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Table 1. Value of the livestock outputs in India in 2018–19 at current prices

Item	Total production	Value of output (₹ crore)	Per cent of total
Milk and milk products (million tonnes)	187.750	772,705	66.63
Meat group (million tonnes)		242,629	20.92
Meat	8.110	224,928	19.40
Beef (million tonnes)	1.872	30,625	02.64
Mutton (million tonnes)	1.776	75,668	06.53
Pork (million tonnes)	0.400	6,613	00.57
Poultry meat (million tonnes)	4.060	112,022	09.66
Meat products		7,766	00.67
By-products		13,071	01.13
Eggs (No. in billion)	103.320	36,691	03.16
Wool and hair (million kg)	40.420	745	00.06
Dung		65,383	05.64
Silk and honey		10,036	00.87
Incremental stock		31,447	02.71
Total value of output from livestock		1,159,636	100.00

Source: National Accounts Statistics 2020, Central Statistical Organisation (GoI 2020).

milk by millions of small dairy farmers. As a result, they had to resort to distress sale, by reducing the price up to 50%, particularly in areas where the milk cooperatives were not functional. Many milk cooperatives also reduced the procurement price by ₹ 3–5 per litre due to loss of milk in handling and processing (Biswal *et al.* 2020). Closure of sweet shops and restriction on cultural ceremonies and professional events further reduced the consumption. NDDB has reported that during the first one month of COVID outbreak, the liquid milk procurement had declined by 8.8% (Shashidhar 2020). However, in subsequent months, the demand for paneer, ghee, and cheese increased gradually, due to forced shift of non-vegetarian population to dairy products. However, the demand for ice-cream, milkshakes, and lassi had declined significantly, as the consumers did not want to take any chance of catching cough and cold. Farmers owning large number of milking cattle and buffaloes were unable to carry out the operations such as feeding and milking, due to non-availability of labourers. There was also a disruption in the supply of feed and fodder, particularly in peri-urban areas. Lack of veterinary services also affected the milk production significantly. However, accurate data on the loss incurred due to disruption of veterinary services was not readily available. Goat farmers who possessed only 3–5 animals/family, were probably least affected, but in the absence of regular market outlets, the sale of goats at fair price was difficult and they were forced to postpone the sale. This affected the cash availability for their daily livelihood and special needs.

Marketing of livestock was also severely affected by the lockdown across the country. The present practice of livestock market involved many traders at different levels, as it was very difficult to sell the animals directly at Mandi by most of the owners. As a majority of the livestock farmers were small holders, they usually sold only 1–2 animals at a time. If these animals were in good condition, particularly

the cows and buffaloes which were in advance stage of pregnancy or in milking, young heifers or a pair of bullocks ready for performing tillage operations, then other farmers looking for such animals came to the farm gate and made the deal directly. Other animals which were not good in production or in good health, or when the farmers wanted to make distress sale to meet their urgent cash needs, they approached the local traders for selling. However, the normal process of Mandi based livestock marketing was managed through physical aggregation by the village level traders and middlemen, who maintained these animals for a few days, and the trader from the city collected and transported them by a tempo or truck, directly to the Mandi on the day of the trade. It was difficult for individual farmers to sell their animals in Mandi, as they had to travel 3–20 km with their livestock, which cost ₹ 100 to 1000 per animal for transportation. In addition, there were indirect costs such as loss of labour, and if the animal was not sold, they had to bear the cost of transporting the animal back to their farm. With the outbreak of the COVID-19 pandemic, direct sales at the village level completely stopped as no one wanted to interact with unknown persons and the movement of traders and transporters was heavily restricted. Even the Mandis were closed and the movement of buyers was restricted. Hence, the sale of livestock was significantly reduced. Due to this situation, the farmers could not raise finances wherever they needed to meet their other expenditures. Keeping the unwanted animals caused an additional burden of feeding, without any returns. The problem of uncertainty is still persisting and there is an urgent need to address this issue on priority.

Spread of diseases due to the movement of livestock was another threat to productivity of large animals. While many of the diseases affect the productivity, some of the diseases are fatal and a few of them are zoonotic diseases affecting human beings. These diseases are generally transmitted to healthy animals either when they go out for

grazing on village common lands or when the infected animals are brought from other farmers, without screening for diseases. Hence, screening of animals for major diseases has been introduced at the Mandis, but this practise is not being followed rigidly due to several reasons. Now with the inability of the disease investigation staff to move to the field, buying animals directly from other farmers without screening them for diseases can cause health problems for livestock and human beings. This problem must be addressed on priority.

Managing post-COVID-19 problems

The Government of India has already provided several reliefs to support the farmers who have been suffering from the adverse effects of this pandemic, with major focus on health care, food safety and employment generation. Several recommendations have also made by the academicians and policy makers to improve the economy of the farming sector. Cariappa and others (2021) have suggested a 10-point strategy for strengthening the sector against the crisis and sustainability issues, caused by COVID-19. These include providing social safety nets, price and revenue risk management, shifting the focus from primary to secondary agriculture, strengthening family farming, organise collective farming operations, investment in agricultural research and development, maintaining buffer stock, staggered procurement and pricing, bringing reforms in agricultural finance and strengthen stakeholders partnership. The following recommendations have been made to address the problems of the livestock sector.

Strategy for mitigating the impact of COVID-19 on livestock sector

COVID-19 pandemic has exposed human kind to a new vagary of nature, which has posed a challenge not only to the common public but also to the scientific and medical fraternity and national economy. Learning from the bitter experience of the disease spread and the lockdown imposed on the movement of people, it is necessary to develop suitable mitigation measures to face such problems in the future. With regard to the management of livestock and providing economic safety, the following initiatives can be considered.

Development of infrastructure to strengthen the value chain: To reduce the vulnerability, farmers should keep their livestock healthy, with regular supply of inputs and timely veterinary care. Thus, the following activities can be initiated. They should have alternative options to carry out the daily operation and marketing of the produce.

- To keep the livestock in good health, all the animals should be vaccinated against prevalent diseases.
- Suitable diagnostic kits should be developed, for instant testing against common transmittable diseases such as T B, J D *Brucellosis*, *Mastitis*, *Metritis*, etc. to enable the farmers and paravets to periodically screen the livestock against major diseases, and before selling or buying animals, without involving the

services of the disease investigation laboratory.

- Suitable veterinary first aid kit should be developed with necessary basic medicines to treat common ailments and injuries by farmers themselves, with the guidance of the vets and paravets. Treatment against injuries, abscesses, ecto and endo-parasites, mastitis, metritis, indigestion and bloat, milk fever, etc. can be easily undertaken by livestock owners themselves, without waiting for the visit of the veterinary doctor. If necessary, farmers can consult the veterinarian on phone before treating animals, making use of the medicines provided in the kit.
- Fodder and feed are most essential for feeding the animals every day and any disruption in the service can create a panic situation resulting in starvation of livestock and hike in feeding cost. Scarcity of fodder is a very common problem faced by farmers, after every natural calamity. Farmers feel very torturous to keep their livestock starving. Hence, steady supply should be assured in all the regions in the country. To address this issue, establishment of fodder banks was recommended earlier, but it had very limited success, because the farmers would buy fodder from the fodder bank only during drought years, which would come once in 3–4 years and the fodder would go waste causing heavy loss during normal period with good monsoon.
- To overcome this problem of managing the fodder bank without incurring heavy losses, fodder banks based on crop residues like paddy straws and stalks of other cereals and pulses can be established in the areas where these crops are grown and residues can be procured immediately after the crop harvest and stored in chaffed and compacted condition, to be ready for shipment in the same form or after converting into complete feed, by mixing with other ingredients, depending on the needs. Such facilities can not only prevent fodder scarcity, but also help to keep the cost down. During the years when there is no demand for fodder, the crop residues can be diverted to other uses such as raw material for paper, pulp, fuel or organic manure, instead of wasting. Establishment of complete feed production units should be encouraged for regular supply of feed to small farmers and landless families, to take advantage of animal husbandry for their livelihood.
- Unlike ruminant feed, poultry feed industry has been well established with good distribution network. This can be further improved by setting up village level producers' groups, who can organise themselves for bulk procurement of inputs and marketing of the produce locally.
- To address the shortage of skilled and unskilled labour, labour saving and substituting mobile equipment should be made available for purchase or on hire basis. Equipment like chaff cutters, feed mixers, milking machines, milk storage tanks and

processing equipment can be made available on hire basis at the village level where labour availability is disrupted due disease outbreaks and natural calamities. Such equipment can be maintained by the dairy or farmers producer companies at the block level and transported to different locations wherever needed.

- There is a shortage of milk processing unit as well as bulk milk coolers in rural India. Due to lack of better supply chain management, all milk produced is not procured properly and the existing network may not function during calamities. In such areas, the dairy farmers can be guided to process the surplus milk profitably, to avoid any wastage. The Government can give incentive to small farmers to set up small processing centres to procure and process milk at the village level.
- The present system of marketing of livestock is very cumbersome and exploitative and small livestock owners are the worst affected, as they have to depend on the middlemen for disposing off their animals. To prevent such exploitation, the Government should set up a Livestock Trade Platform, or E-Pashu Bazaar, where the sellers can register their animals available for sale. Then the buyers can search on this site for suitable animals. With the introduction of e-trading system, buyers can directly approach the livestock owners and strike the best deal, benefitting both the parties. Government and livestock development agencies can develop standard formats to upload the details of the animals to be sold through e-market. Instant disease investigation kit can be very handy to screen animals on the spot, before transportation by buyers.

Management of uneconomic animals: Maintaining uneconomic livestock can be a big burden on farmers during pandemic and other calamities. Hence, suitable measures can be introduced to help farmers to dispose-off their unwanted animals either by opening Go Sadans (Cattle welfare Centres) or by exporting the animals. The Government may also consider opening livestock trade across bordering nations like Nepal, Myanmar, Bangladesh, Sri Lanka and other countries.

Financial support: Government should also relax the norms for availing credit to ease the financial crisis during calamities. Farmers should also be compensated for loss

incurred due to calamities, based on fair estimate, either partially or fully, relying on the available resources.

Policy support: As a policy support to farmers, the Government should provide clear and transparent communication about the current status of the calamity, demand and supply situation, information about the market and transport situation of livestock. The Government should also minimise trade restrictions and keep domestic, regional and international markets open, while avoiding the trading costs wherever possible.

There is an urgent need to review the prevailing laws of the Veterinary Council and suitable modification should be made to empower the farmers to take better care of their animals and carry out minor veterinary treatment by paravets or farmers themselves. Suitable short term training can be organised to enable the paravets and farmers to carry out minor veterinary care.

Establishment of helplines: During calamities farmers feel helpless to manage their problems. Hence, a committed helpline can be established to guide livestock owners in solving their problems.

With the above initiatives, livestock owners can tide over the calamities and earn their livelihood.

REFERENCES

- Biswal J, Kennady V and Rahman H. 2020. Impact of COVID-19 and associated lockdown on livestock and poultry sectors in India. *Veterinary World* **13**(9): 1928–33.
- Cariappa A G A, Acharya K K, Adhav C A, Sendhil R and Ramasundaram P. 2021. Impact of COVID-19 on the Indian agricultural system: A 10-point strategy for post-pandemic recovery. *Outlook on Agriculture* **50**(1): 26–33.
- GoI. 2020. Output and Value Added from Livestock Sector. National Accounts Statistics 2020. Central Statistical Organisation, GOI. 8.2.: <http://mospi.nic.in/publication/national-accounts-statistics-2020>.
- Shashidhar A. 2020. Coronavirus impact: Dairy industry faces 30% dip in demand. *Business Today*. <https://www.businesstoday.in/current/corporate/coro-navirus-impact-dairy-industry-faces-30-dip-in-demand/story/400517.html>. Retrieved on 18-04-2020.
- Singh A. 2020. COVID-19 Rumours, Fake News Slaughter Poultry Industry. *SME Futures*. <https://www.smefutures.com/COVID-19-rumours-fake-news-slaughter-poultry-industry-rs-22500-crore-lost-5-crore-jobs-at-stake>. Retrieved on 18-04-2020.
- Swain B B, Vijayalakshmy K and Rahman H. 2020. Impact of COVID-19 on livestock sector in India: An economic analysis. *Journal of Entomology and Zoology Studies* **8**(4): 1701–03.