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Effect of COVID-19 on the livestock sector in Bangladesh and recommendations

Md. Sahidur Rahman a,*, Goutam Chandra Das b

a One Health Center for Research and Action, Akbarshah, Chattogram, 4207, Bangladesh
b Department of Livestock Services, Upazila Livestock Office and Veterinary Hospital, Sadar, Noakhali, 3802, Bangladesh

A R T I C L E   I N F O

Keywords:
COVID-19
Livestock
Marketing
Production
Recommendations
Food security
Food policy

A B S T R A C T

COVID-19 and its accompanying effects have severely affected an estimated 0.3 million dairy farms and 65–70 thousand commercial poultry farms in Bangladesh. Many of them closed down or halted productions due to the burden of continuous losses. Reports showed that about 12–15 million liters of milk have remained unsold, which has caused a daily loss of 570 million Bangladeshi Taka (6.7 million USD) in the dairy sector only. Furthermore, the poultry sector has also encountered a loss of a minimum of 115 billion Bangladeshi Taka (1.35 billion USD) within just two weeks from March 20 to April 4, 2020. The situation might accelerate the arising food crisis due to the collapse of the livestock sector during the COVID-19 pandemic and turn it into a humanitarian catastrophe. Hence, the government should retaliate through the provision of financial assistance to livestock farmers, and the proclamation of emergency veterinary services on the earliest basis. In addition to that, the government could develop long-term, sustainable strategies and projects through multi-sectoral engagement to ensure further capacity building of farmers and other stakeholders.

1. Introduction

The coronavirus disease (COVID-19) is caused by a novel coronavirus (CoV) called SARS-CoV-2 belonging to the species Severe acute respiratory syndrome-related CoVs (SARS-CoV) within the subgenus Sarbecovirus, genus Betacoronavirus. After the first outbreak in Wuhan city in China, this pneumonia-like illness perpetuated to surge in different countries and turned into a pandemic that has affected 212 countries and territories around the world at the date of writing this article [1]. To stem its spread, countries have been taking assorted public health measures for safeguarding. In Bangladesh, the first case was registered on March 8, 2020, and up to the November 19, 2020, overall 441,159 confirmed cases and 6305 deaths have been reported [2]. Boosting body immunity is essential to fight COVID-19 and animal protein and fiber-rich foods play a crucial role for this purpose [3]. Livestock serves as an important source of high value animal protein for the large majority of the world’s population [4]. Milk retains the positive value of increasing immune homeostasis in the upper respiratory tract of humans, including the oropharynx [5]: So, more attention must be paid to the livestock sector to continue the production and distribution of safe products for consumers throughout the country. Poultry and dairy are two of the most promising livestock sectors in Bangladesh, with 0.3 million dairy farms and about 65–70 thousand commercial poultry farms currently operating in the country [6]. Poultry rearing by women is common practice in almost all families in villages and plays a crucial role in self-employed and livelihood development of the poor women [7]. According to the data provided by the World’s Poultry Science Association- Bangladesh Branch, the poultry sector produces around 33 million eggs per day, and creates a demand of about ten million and seventy thousand day-old chicks per week [8]. The Department of Livestock Services reported that the contribution of livestock in the Gross Domestic Product (GDP) of Bangladesh is 1.47%, with GDP growth rate of livestock at 3.47%. Approximately, 20% of the people in the country are directly and 50% are partially engaged with the livestock sector in Bangladesh [9]. The updated data on the production capacity of milk, meat and eggs in Bangladesh are stated in Table 1 below.

2. Effects of COVID-19 on livestock production and marketing

To contain the COVID-19 infection rate, the government of Bangladesh has imposed a nationwide lockdown, effective from March 26, 2020 [10]. This strategy inflicted a huge strain on all aspects related to livestock production and marketing in the country. Restrictions of movement and social distancing have led to an absence of labor. The...
banning of transport caused a shortage of animal feed and other logistical supplies, along with limited veterinary services. Following the lockdown, the closures of dairy food outlets and restaurants, as well as the prohibition of all types of social and cultural programs, had sharply decreased the market demand for milk, eggs, and meat. Furthermore, in Bangladesh the various social networks several unverified news have been circulated regarding domestic animals, especially chickens, that are able to transmit SARS-CoV-2 virus to humans and this has led to a further drop in demand [11,12]. There is no scientific evidence of viral transmission from animals to humans, neither via direct contact nor via meat consumption. COVID-19 is a human pandemic that potentially represents a risk for domestic animals. Previous studies have demonstrated that SARS-CoV-2 replicates poorly in dogs, chickens and ducks, while cats, ferrets, minks, cattle and sheep are permissive to infection [13–20]. All such types of uncertainty have discouraged farmers from continuing the production of livestock which severely affected the livelihood of farmers and the economy of the country.

Along with the decrease in livestock production, the COVID-19 pandemic has also had a significant adverse effect on the supply chain. The lack of transportation facilities and the absence of value chain actors or middle-men have hampered the proper distribution, which has led to the deterioration of farm products and unexpected price down at the producer level. As milk is a perishable item, milk marketing channels have encountered problems very early on in this situation. Reports have found that farmers have had to throw away their farm milk onto the street as an act of a symbolic protest as there were no alternative ways to sell. Bangladesh Dairy Farmers’ Association claimed that about 12–15 million liters of milk have remained unsold, which has caused an estimated daily loss of 570 million Bangladeshi Taka (BDT) (6.7 million USD) [6]. On the other hand, Bangladesh Poultry Industries Central Council estimated that the figure of the loss was at least 115 billion BDT (1.35 billion USD) within the short period of 20th March to 4th April. Moreover, due to the closing of marginal poultry farms, the price of day-old chicken also dropped sharply by almost 100% [21]. A recent study in Bangladesh estimated the reduction of 30–45% in day-old chicks’ production, 35–40% in poultry feed production and 40–50% in the sale of medicines [7]. As a result, COVID-19 has imposed a great threat to the food security of the country.

It is alarming that the COVID-19 pandemic might eventually lead to a gigantic economic crisis. The International Food Policy Research Institute (IFPRI) projected that about 14–22 million people around the world are in danger of extreme poverty even if we are able to control the COVID-19 spread and overcome the pandemic [22]. There is a possibility of implementing bans on the export of food products by most of the leading exporting countries. In consequence, livestock-derived food products won’t be available in places where it will be required most. Hence, any failure in strong policymaking could accelerate the food crisis, and may worsen the disaster in Bangladesh.

3. Recommendations

It is essential to support farmers to continue the production cycle, flourish the market demand and use alternative supply chains in order to block and tackle the emerging threats facing the marketing channels in this crisis period. Livestock feed and medicine, as well as livestock-originated foods such as milk, meat, and eggs, should be declared as emergency goods to ensure an uninterrupted supply chain. To stabilize the market demand for these products, the government should include milk, meat, and eggs in the countrywide relief package immediately. The dairysector in the country should be constantly monitored since milk is a very nutritious, yet perishable, item. In addition to production, there should also be a focus on the preparation of dairy food items by promoting dairy entrepreneurship from the marginal level. An alternative solution could be establishing milk collection and cooling centers at different milk pockets or higher production zones around the country. The government should provide subsidies with proper allocation to farmers and also provide relaxed agricultural loans for adapting within a short time. Strong collaboration and participation of non-government organizations, along with academic institutions and industries, are vital for effective decision-making at this stage. However, many emerging and reemerging diseases of humans could be zoonotic, and directly pose threat to animal health. Internationally, the contribution of veterinary services is considered distinctive in ensuring global health security. Hence, the veterinary services in Bangladesh should be recognized as an emergency service. Proper utilization of digital technologies for networking among stakeholders and rapid information sharing, along with the use of other agricultural technologies for hygienic and cost-effective farm management, could help in overcoming the impacts of any future disasters like COVID-19. For sustainable capacity building, the government could introduce evidence-based strategies with the implementation of dairy and livestock development projects that could cover the emerging needs of the future.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Table 1

| Products | Unit       | Year 2018-19 |
|----------|------------|--------------|
| Milk     | million metric ton | 9.92        |
| Meat     | million metric ton  | 7.51        |
| Egg      | million      | 17,110       |

Source: Livestock Economy 2018–19, DLS [9].

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