



Raising Poultry and Cattle in Covid-19 Era

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Introduction

On Dec. 31, 2019. China alerted the world health organization (WHO) to several cases of unusual respiratory illness and phenomenon in humans in Wuhan, a port city of 11 million people in the central Hubei province [1].

Gradually COVID'19 became a pandemic and was identified by the WHO as a communicable disease caused by severe acute respiratory syndrome Coronavirus -2 (SARS-2) [2].

The transmission of covid '19 could be traced to the Pangolin (Figure 2) according to Chinese researchers suggesting the disease as zoonotic (Figure 1) [3]. The rising rate of COVID'19 cases in various countries raised issues related to disruption of ecosystem, climate change, land use change for industrial agriculture, deforestation, biodiversity loss and depletion of the ozone layer as the contributory factors to COVID '19 spread [4].

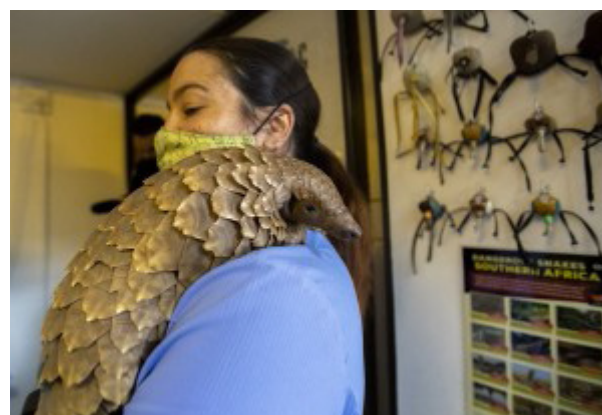


Figure 1: Pangolin a possible transmitter of covid 19 in humans (universe.byu.edu).





Figure 2: A pangolin. (The thirdpole.net).

Currently, various countries have come up with protocols towards containment of COVID'19. Measures involved Government enforcement of curfew on the masses, complete lockdown of national and international movements, isolation and quarantine of suspected infected cases and contact individuals [5,6].

These measures brought problems such as inability to transport live animals and animals' products such as milk, meat and eggs to the markets, unavailability of access to feed and drugs for ranging animals and their management, shortage of labour and professional services [7,8].

Globally, this increased the cost of poultry and livestock feed which invariably increased the cost of poultry and livestock products [5]. This plays a negative role on food security of most countries in the world. It stretches the demand for livestock beyond that of supply [9]. The shortage not only had a direct impact on consumers but also on food business operators who were unable to obtain their usual supplies. Largely, poultry and livestock rely heavily on availability of feed and fodder, mostly comprised of maize, wheat and other food grains. About 70% of the total cost of ranging poultry and livestock goes into feed procurement [7,10]. Due to the high demand for animal protein and feed, the price of maize and other feed components increased within a short time in 2020 and continued in 2021 indicating an associated rise in the cost of feed [11]. This created a big challenge to both poultry and livestock farmers who bore high cost of production due to high cost of feed and less profit from market sales. This makes it difficult for farmers to break even and hence have drove most poultry and livestock farmers out of business [6].

Strategies towards raising poultry and livestock during covi'19 era

Essentially, animal proteins and fiber-rich foods are necessary for building strong immunity against COVID'19 [12]. Poultry and livestock provides high value animal protein for the majority of the world's population [13]. Livestock and poultry product such as milk and eggs respectively plays important role on the immunity of the upper respiratory system [14]. Against this backdrop, there should be concerted efforts towards the sustenance of both the poultry and livestock production even in the current state of COVID'19 pandemics.

The Centers for Disease Control and Prevention and the Occupational Safety and Health Administration legislated on the guideline for livestock processing plants in the U.S. after its shutdown and reopening [15]. Some of these measures include increasing sick leave and medical insurance of plant workers,

provision of means of transportation, avoidance of crowded social housing and modification of physical environment. These measures meant well but seems unrealistic as it concerns low income employees who cannot afford such luxury.

A more realistic guideline would be directed to the livestock plant owners to enhance the welfare of their workforce and improve their working conditions, wages and access to health care [16]. Efforts towards achieving improvement on plant worker's wages were made by the German Agriculture Minister by proposing a legislation that would enforce direct hiring of employees of processing plants thereby ending the sub-contract culture responsible for poor payment of plant workers [17].

Other strategies include

1. Brief work shifts

Livestock plant workers should not be allowed to operate on long work shifts while working in proximity with co-workers. Brief work shifts should be designed for workers to reduce their contact hours with co-workers thereby reduce the chances of spread of COVID'19 [18]. This approach would also encourage improvement in the pay and welfare of plant workers.

2. Maintaining face mask

Livestock plant workers must be encouraged to maintain the use of face mask to reduce the rate of transmission of infection to co-workers and contamination of processing plants [15].

3. Designation of transport vehicle for livestock and poultry

Research, revealed significant association between occupational exposure to livestock animals as a panacea to spread of contagious viral diseases. However, there is no evidence of susceptibility of Pigs and poultry to SARS-CoV-2 virus associated with COVID'19 [15,19].

4. Explore alternative feeding source

Efforts should be geared towards conducting research into alternative source of feed formulations using locally available sources and less dependent on maize, wheat and other concentrates. Efforts should be made towards utilization of sources such as insect meals, leaf meals, seaweeds, organics such as ginger and turmeric for feed and medication [10]. These alternatives could be fortified with materials such as groundnut husks, crayfish dust in levels suitable for poultry and livestock production. This process can be enhanced with improved technology such as the use of Solid State fermentation-enzyme system to ensure alternative feed source with improved nutritional values without negative effect on the performance of poultry [20].

5. Investment on improved farming system

Countries that are largely dependent on the importation of goods were most devastated by the lockdown imposed to curb the spread of covid'19. Transition to mechanized farming using technologies increases efficiency and production of agricultural food sector of a country. Countries such as Qatar is currently benefiting from their shift from importation of products to investment on home grown technologies to boost its local food supplies and enhance food security [21].

Conclusion

For sustainable poultry and livestock production in this covid'19 era, there should be concerted effort to support farmers in order to maintain the production cycle, meet the demand

and supply chain and regulate the ever rising inflation ravaging the market in this crisis period. Poultry and livestock products could be enlisted as “Essential products” to ensure uninterrupted supply chain. The government could regulate the rising cost of maize, wheat and other concentrates for feed formulation in order to reduce the cost of production. In addition to legislature on feed cost, the govt could support research into alternative source of feed for poultry and livestock production. In order to encourage implementation of guidelines by plant workers, efforts could be made towards increasing their wages, reduce their work shift, and encourage the use of face mask. Also implementation of technology into agricultural food sector to enhance food supply and food safety.

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