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Impact of COVID-19 on animal production in Ghana

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Implications

- COVID-19 has affected the importation of animals and livestock products into Ghana with the potential of lowering the consumption of animal protein.
- There has been a reduction in the availability of feed resources and farm inputs for animal production, leading to price increases.
- Animal production activities, including feeding, management, and disease control, have been adversely affected as a result of lockdown due to the COVID-19 pandemic.
- Capacity building programs in animal breeding have had challenges as a result of restrictions, leading to the rescheduling of most programs.

Key words: COVID-19, feed resources, input supply, livestock production, lockdown

Introduction

COVID-19 is a highly infectious disease originating from Wuhan, a city in China (Lone and Ahmad, 2020), in November 2019. This virus has, since its emergence, caused widespread damage to the world, including both developed and developing countries. Aside from the health implications of the disease, other important areas, including the agricultural value chain, such as the livestock production sector, has had its share of the effects (Bisson and Hambleton, 2020) given its role in nutrition, livelihood, and food security.

The COVID-19 pandemic has also brought into focus a number of issues, including food safety and hygiene issues, intricately linked to the consumption of the animal resourced

foods, the high cost of production on the African continent versus cheaper imports now less available due to global movement restrictions, and the weaknesses in feed, veterinary, insurance, and other supply chains (AU-IBAR, 2020). Like other African countries, animal production in Ghana has not been spared the negative impacts on the activities of stakeholders along the livestock value chain from feed production and supply, communal grazing, sustainable use and conservation, and provision of veterinary services, including artificial insemination, livestock trade, transport, slaughtering, processing, and marketing of livestock products.

These suggest the need for various governments and stakeholders in the West African region, including Ghana, to put in measures to counteract the adverse effects of the pandemic in the livestock subsector and the agricultural sector as a whole. This paper examines the effects of COVID-19 on animal production in Ghana.

Effects on Food Supply and Demand

The first two cases of COVID-19 recorded in Ghana on March 12, 2020, were imported. Since then, the disease has been spreading in the country. As of October 7, 2020, there are 46,829 confirmed cases, 46,006 recoveries/discharges, and 302 deaths. The active cases now stand at 466 (Ghana Health Service, 2020). On March 30, 2020, there was an imposition of partial lockdown in some parts of the country for 2 wk as the virus began to spread. Decongestion and some market closures (Asante and Mills, 2020) led to shortages of some feed ingredients for formulating livestock feeds, including maize, wheat, soybean, and fishmeal, resulting in price increases of these commodities.

Ghana imports most livestock products from neighboring West African countries, the United States, Brazil, and the European Union. The live animal imports and importation of day-old chicks (DOCs) and parent stock into Ghana are as shown in Tables 1 and 2, respectively. Livestock trade mainly from the Sahel regions of West Africa into Ghana has been severely affected as a result of the closure of the land borders (Asantewa, 2020). For example, the quarantine posts for livestock recorded a decline in the average number of trucks conveying livestock, such as Sanga cattle (Figure 1) from

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Table 1. Live animal imports by species into Ghana

Year	Cattle	Sheep	Goats	Total	Share of total imports*		
					Cattle	Sheep	Goats
2008	1,081	1,401	1,514	3,996	27.1%	35.1%	37.9%
2009	10,119	4,987	6,098	21,204	47.7%	23.5%	28.8%
2010	11,389	4,843	3,711	19,943	57.1%	24.3%	18.6%
2011	9,384	2,835	2,495	14,714	63.8%	19.3%	17.0%
2012	23,622	9,840	10,008	43,470	54.3%	22.6%	23.0%
2013	21,131	16,738	16,953	54,822	38.5%	30.5%	30.9%
2014	20,948	22,188	32,012	75,148	27.9%	29.5%	42.6%
2015	17,968	15,763	20,004	53,735	33.4%	29.3%	37.2%
2016	23,575	13,854	16,900	54,329	43.4%	25.5%	31.1%
2017	32,249	47,526	46,665	126,440	25.5%	37.6%	36.9%
2018	54,566	65,950	97,703	218,219	25.0%	30.2%	44.8%

Source: Veterinary Services Directorate of Ministry of Food and Agriculture (2018).

*Statistics, Research and Information Directorate of Ministry of Food and Agriculture (2018) (Computed).

Table 2. Importation of day-old chicks and parent stock (numbers) into Ghana

Year	Broiler	Layer	Turkey	Parent stock
2009	454,640	1,036,872	6,972	58,822
2010	379,643	1,422,199	21,290	95,016
2011	547,205	2,461,140	9,180	9,180
2012	651,112	3,227,844	16,966	114,344
2013	1,088,865	4,481,602	9,286	126,288
2014	3,161,144	602,209	6,840	18,080
2015	246,948	2,573,326	19,497	111,692
2016	784,917	3,963,705	13,412	158,386
2017	724,580	5,476,815	14,945	86,099
2018	511,960	7,130,999	41,189	101,871

Source: Veterinary Services Directorate of Ministry of Food and Agriculture (2018).

neighboring countries to Ghana (Valerio, 2020), reducing revenue for the country, and a potential of affecting the already lower per capita consumption of animal protein in Ghana (Badu et al., 2020).

Effects on the Food Supply Chain

Travel bans affected the importation of food into the country, as well as the transportation of farm produce from food-producing areas within the country to market centers. Also, decongestion and closure of some market centers to enforce social distancing among traders reduced food supplies leading to a hike in food prices in most urban markets across the country, especially during the early days of the lockdown (Asante and Mills, 2020; Gakpo, 2020).



Figure 1. Sanga cattle.

A total of 3,579 cattle, 1,985 sheep, and 3,978 goats were imported 3 wk before the lockdown at the Paga animal entry point but were reduced to 1,525 (57%), 780 (61%), and 1,423 (64%), respectively, during the lockdown period (Tasiame et al., 2020). Moreover, the Kumasi slaughterhouse, which is purposely for slaughter and sale of meat, recorded an average slaughter of 725 cattle and 533 for sheep and goats, respectively, 3 wk prior to the lockdown but this reduced drastically leading to increases in the price of meat.

Effect on Input Supply

Ghana imports most agricultural inputs from other parts of the world. COVID-19 prevention protocols have reduced access to inputs and services for animal breeding and production. Movement restrictions and disruption of national and international trade routes have curbed farmer access to breeding materials and replacement stocks (e.g., DOCs and semen; FAO, 2020). Most agricultural inputs are now more expensive to import due to the closure of borders and restricted to commercial flights, thus increasing production cost and reducing profit margins of farmers. Additionally, uncertainty and fear have had a negative impact on planning decisions. For instance, when the COVID-19 lockdown was announced by the authorities in Ghana, poultry farmers procured raw materials in advance as farmers were not sure how long the lockdown was going to be and this led to huge losses and there was no market for the finished products as most clients had either downgraded or had closed down completely. According to the Ghana Poultry Farmers Association, supply exceeded demand and this glut in chicken and eggs has been a major loss to the poultry industry. Overall, there have been serious disruptions of income of especially women livestock farmers with serious consequences on household essentials and nutrition. On the other hand, local hatcheries have seen a tremendous increase in the demand for DOCs due to the closure of land and sea borders. Before the pandemic, local farmers were not interested in local DOCs with the perception that products from local hatcheries are inferior to imported ones. At the same time, COVID-19 provides an opportunity to increase the production of selected value chains. Scaling up investment in the government's Rearing for Food and Jobs (RFJ) Programme has boosted meat and egg production. Under the RFJ Programme, meat processing plants, small scale poultry farmers, hatcheries, and small ruminant farmers have been supported with resources to improve the productivity of their enterprises.

Effect on Animal Breeding Activities

The pandemic also resulted in an interruption of breeding programs. The movement restrictions and possible infection of the workforce resulted in a shortage of labor (FAO, 2020). Transhumance and pastoral practices faced challenges with regards to feeding and, hence, halted breeding programs as they may have not been able to provide concentrate feed as required for an intensive system of production. Workers call in sick, while others also avoid work for safety reasons, and all these disrupt program timelines.

The livestock production system in Ghana is predominantly extensive and, therefore, restrictions on the movement of herdsmen and their animals have had significant impacts on feeding and production. Most of the herders are young men hired by cattle owners to take care of their animals throughout the year. Unfortunately, the Ghana National Association of Cattle Farmers reports that, with the outbreak of COVID-19, most of the herders have left to look for other means of livelihood and this has had a major impact on their operations. Movement restrictions have also disrupted transhumance and crippled pastoralists' ability to feed their animals (FAO, 2020). Reduced access to animal feeds as a result of physical distancing and requirements for additional personal protective equipment has reduced the efficiency of industrial feed enterprises (FAO, 2020). Ruminant livestock keepers have thus resorted to "cut and carry" to feed the animals, which is very expensive for most farmers, leading to malnutrition and disposal of most of their animals sometimes at very low prices.

Services provided by veterinarians to livestock farmers have also been badly affected as a result of the restrictions. Generally, in Ghana, some livestock farmers are unable to access veterinary services for their stock due to the relatively low number of veterinarians and the high cost of services and medicines. Unfortunately, the COVID-19 pandemic has worsened this situation as the few service providers become more expensive and difficult to reach.

Effect on Capacity Building

Capacity building programs on animal breeding in Ghana, including sharing of information from research to stakeholders, education on the National Strategic Action Plan on Animal Genetic Resources, and training of field extension personnel have either been put on hold or restricted as a result of the COVID-19 pandemic. Additionally, various stakeholders for animal production have been rescheduled to the year 2021. However, such platforms provide an opportunity for researchers, industry players, farmers, and students in animal agriculture to discuss current issues germane to animal agriculture and share ideas on lessons learned and best practices. Graduate students who were supposed to travel and undertake some laboratory work in connection with their postgraduate research programs in some external collaborating universities have had challenges to undertake these stages of their program. These have serious implications for the training and mentoring of the next generation of animal breeders for Ghana. Although various attempts have been made to train livestock workers via various electronic platforms, these have largely been inaccessible due to power, infrastructure, and internet accessibility challenges.

Conclusion

The COVID-19 pandemic has impacted livestock production in Ghana negatively via demand and supply of food, input supply and veterinary services, and animal breeding and husbandry, as well as human and institutional capacity building.

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On the other hand, unique opportunities have emerged for stakeholders to support various activities in the value chain whilst ensuring sustainable livestock production and nutritional food security.