

Implications of Covid – 19 Pandemic on Agriculture in Imo State, Nigeria- A Review.

Implicaciones de Covid - 19 Pandemia en la agricultura en el estado de Imo, Nigeria - Una revisión.

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ABSTRACT

The outbreak of coronavirus (COVID-19) in the world has negatively affected agriculture and stray animals. The crisis includes revenue losses, poor harvest, mortality, morbidity, famine, travel restrictions and lack of interest agricultural activities. The spread of COVID-19 globally, has paralysed every facet of the economy. It has proved beyond doubt that COVID-19 affected the whole world. The aim of this paper is to understand the implications of COVID-19 through the detailed assessment of the pandemic from the Nigerian perspective. The paper adopted an extensive literature review in order to address the academic gap. This paper further established that COVID-19 will have short to long term negative impacts on Nigerian and African economies respective.

Keywords: COVID-19; Agricultural Farm Labour; Mortality; Morbidity; Socio-Economic.

RESUMEN

El brote de coronavirus (COVID-19) en el mundo ha afectado negativamente a la agricultura y a los animales callejeros. La crisis incluye pérdidas de ingresos, malas cosechas, mortalidad, morbilidad, hambruna, restricciones de viaje y falta de interés en las actividades agrícolas. La propagación de COVID-19 a nivel mundial ha paralizado todas las facetas de la economía. Ha demostrado sin lugar a dudas que COVID-19 afectó al mundo entero. El objetivo de este artículo es comprender las implicaciones de COVID-19 a través de la evaluación detallada de la pandemia desde la perspectiva nigeriana. El documento

adoptó una extensa revisión de la literatura para abordar la brecha académica. Este documento estableció además que COVID-19 tendrá impactos negativos a corto y largo plazo en las respectivas economías de Nigeria y África.

Palabras llave: COVID-19; Trabajo agrícola agrícola; Mortalidad; Morbosidad; Socioeconómico.

INTRODUCTION

COVID-19 is a single RNA virus with crown like protein spike that stick of lung organ in its severe cases to cause pneumonia, and physical trauma that results to bursting of the lung arteries and veins to cause septic shock. The rate of infection is determined by the race of the susceptible host, the environment, chemical toxin released by the COVID-19 and its biological mediated level of genes (Haines and Kuruvilla, 2004). The infection in the susceptible race, signs and symptoms varies from asymptomatic, mild, and severe to super spreaders, who have potential characteristics of high virulence like discordant partners in HIV but often remain asymptomatic in nature (Shereen, 2020).

Coronavirus which causes severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) are highly infectious viral strains that belong to the group β - coronavirus family. Bats are believed to be the common origin-host of these viruses. The current pandemic caused by a similar coronavirus (SARS-CoVID-19) is also suspected to have originated from bats.

The coronavirus lockdown has not only contrived the billions of individuals round the world, but has put Nigeria's four legged strays in extreme distress, scarcity of fodder and veterinary care. Unavailability of food and water within the sweltering regions is impacting stray animals throughout the whole country. Strays are struggling to seek out food to kill their hunger thanks to downing shutters of restaurants and eateries. They need nothing to eat, not even leftovers that they always relied on. During this Covid-19 pandemic, animal welfare has become a crucial aspect of our lives, including pets, livestock and laboratory animals and mostly stray animals. There are many sorts of animal cruelty like neglect of animals, misuse of animals, exploitation of animals and testing of animals. The purpose of this review is to describe the impact of COVID-19 on Agriculture, stray animals and to provide practical recommendations for those animals along value chains to reduce this impact and ensure continuity of the food supply chain and animal health.

Corona viruses are minute in size (65 - 125 nm in diameter) and contain a single-stranded RNA as a nucleic material, size ranging from 26 to 32 kbs in length (Figure 1) (Ghazanfar, 2020). There are three known subgroups of corona viruses' family namely:

alpha (a). beta (b). gamma (c) and delta (d) coronavirus. Acute lung injury (ALI) and acute respiratory distress syndrome (ARDS) are reported to be caused by the severe acute respiratory syndrome coronavirus (SARS-CoV), H5N1 influenza A, H1N1 2009 and Middle East respiratory syndrome coronavirus (MERS-CoV).

COVID-19 caused by SARS-CoV-2 affects airways and lungs, is becoming overpowering and it had been declared pandemic as it meet epidemiological criteria to be called so by spreading to over 100 countries in a span of week (Jiang, 2020). Its clinical features include cough, fever, dyspnea, among less frequent feature's headache, gastrointestinal symptoms such as nausea, diarrhea, vomiting. Its human to human transmission is reported to occur through respiratory aerosols and close contacts (Cui, 2019).

The virus is primarily spread between people throughout close contact, often through small droplets produced by coughing, sneezing or talking. The droplets usually drop to the ground or onto surfaces rather than remaining in the air over long distances. People may also become infected by touching a contaminated surface and then touching their face. In experimental settings, the virus may survive on surfaces for up to 72 hours. It is most infectious during the first 3 days after the onset of symptoms, although spread may be possible before symptoms appear and in later stages of the disease. Most people infected with the COVID-19 virus will experience mild-to-moderate respiratory illness and get well without requiring special treatment. Older people and those with underlying medical problems such as cardiovascular disease, diabetes, chronic respiratory disease and cancer are more likely to develop serious illness (Mehta *et al.*, 2020).

The intake of animals abandoned at shelters is additionally increasing day by day, either with the mistaken belief that animals can expire COVID-19, or that the virus has left owners unable to worry for them. These challenging times involve urgent measures. Four Paws is giving dogs and cats a lifeline, by feeding stray animals wherever possible, campaigning to finish the dog and cat meat trade and addressing the challenging situations faced by local shelters. In this COVID-19 pandemic, our lives, pets, livestock, laboratory animals and mostly stray animals were affected. The risks posed to animals during COVID-19 should be considered a welfare point of view additionally to zoonotic point of view. In this pandemic all the considered vital food sources like Restaurants and most markets are closed during lockdown, therefore food availability to strays were reduce or blocked. As lockdown and physical distancing measures are enacted, peoples are staying home, causes devastating conditions to strays to seek out food with difficulty.

Majority of corona virus located in the respiratory tract of human beings, causes benign communicable disease, which are closely associated with common colds or flu colds infections in the Tropical Africa and the sub Saharan Africa countries. COVID-19 is a single RNA virus with crown like protein spike that stick of lung organ in its severe cases to cause pneumonia, and physical trauma that results to bursting of the lung arteries and veins to cause septic shock. The rate of infection is determine by the race of the susceptible host, the environment factors, chemical toxin released by the COVID-19 and its biological mediated level of genes, the virulence in white race is higher than in black race (Casona, 2019).

The impact of COVID-19 on the agriculture is devastating, complex and varied across diverse segments that form the agricultural value chain. This impact will reverberate across the larger economy and will linger longer than few months. Commercial crops are drastically hit as they tend to be more dependent on farmers. The Shortage of farmers due to Covid – 19 pandemic has resulted in a sharp increase in daily wages for harvesting crops. In several areas, the rise is as high as 50%, making it un-remunerative for produce since prices have collapsed due to either lack of market access including the stoppage of transportation and closure of borders. This is per contra to areas where farmers have gone back to their homes from urban and peri-urban areas and this has led to a sharp reducing price in agricultural produce. This is the case of crop live *Allium cepa* (onion), *Mangifera indica* (mango), *Gossypium hirsutum* (cotton), inland fisheries, vegetables, roots and tuber crops.

Due to insurgency in the Northern parts of Nigeria, farmers tend to shy away from farming to prevent being killed by terrorists. The price hike in labour cost and lack of access shows that farmers are losing heavily. They are allowing the crop to rot in the fields a better 'stop loss' mechanism. However, as the Covid-19 continues to wreak havoc on many countries and create a lot of changes in people's everyday lives all over the world, the broader economic crisis is also emerging and creating major challenges to food security and nutrition. Many of the affected countries have implemented a regional lockout policy. This strategy enforced a plethora of Covid-19 security measures such as movement control, supermarket, restaurant and market closure, quarantines and supply chain and trade disruption which greatly impacted agricultural production, food supply and demand.

About 820 million people worldwide suffer chronic hunger not eating enough caloric energy and balancing diet to lead healthy lives. They are extremely vulnerable to any interruption in their livelihood or to food access. Moreover, small-scale farmers are impervious as they hindered to working on their land and accessing markets to sell of their agricultural produces. For instance, evidence suggests that quarantines and panic during the

outbreak of the Ebola Virus Disease (EVD) in Guinea, Liberia and Sierra Leone in 2014 - 2016 resulted in a spike in chronic food insecurity, hunger and malnutrition.

Protectionist measures across the globe could exacerbate the impact of the Covid-19. Panic-buying disrupts the distribution of food. As Covid-19 spreads, they temporarily produce many stock-piling staples and fresh produce, leaving markets empty. Agricultural economists worry about Covid-19's current situation and impending implications. The food supply chain is a dynamic network involving producers, consumers, agricultural and fisheries input, processing, storage, transportation and marketing. Disruptions are limited as food supply has been adequate for now, and markets have been stable.

However, the limitation is prolonged, resulting in increased rates of food waste. This scenario is so apparent in rural areas, where the smallholders used to sell their produce on at morning and night markets. Small-scale farmers are vulnerable because they are prevented from working on their land and are likely to impede the access of farmers to markets, limit their productive capacity and discourage them from selling their produce. Covid-19 is having a far greater impact than the end of the supply chain; farm workers, logistics suppliers and more are struggling to keep up and it affects the supply of fresh produce and staples. For example, lockdown and trade barriers due to the Covid-19 pandemic have pushed agricultural commodities firmly into the spotlight potential volatility in both supply and cost. These have raised fears over food supply.

Global eating patterns in the aftermath of the widening Covid-19 pandemic have changed drastically. Usually when lower incomes and uncertainty cause people to spend less and result in lower demand. Consumption habits and consumer behaviour shift globally and this scenario can be clearly observed among urban people because of restricted supply of fresh food. With stalls and restaurants closing down as entire countries get into lockdown; retailers across the world have been struggling to satisfy rising demand at the supermarket or via delivery apps. Canned foods and fast snacks are back in trend while some natural products are flying away from the shelves. During the lockdown, people are less visiting food markets that affect their food choice and consumption. Urban people more prefer to consume canned or processed foods and also fast foods.

There is no doubt that the effects of these pandemics are multisectorial (cut across all facets of the economy) (Smith, 2019). In other words, the pandemic will negatively affect the health sector, finance, accounting, business directly or indirectly. Global economic experts estimate a 0.5% fall in global growth due to COVID-19 pandemic (Munjeyi, 2020). The outbreak of COVID-19 brought a hugely negative impact on the global economy - the

world is plunged into a massive recession especially in the first quarter of 2020. The COVID-19 pandemic is said to be worse because there is no treatment or vaccines to fight it. Researchers are carrying out experiments in a bid to find a solution to COVID-19. African union (AU) found out that: beyond COVID-19 impact on human health (materialized by morbidity and mortality), COVID-19 is disrupting an interconnected world economy through global value chains, which account for nearly half of global trade, abrupt falls in commodity prices, fiscal revenues, foreign exchange receipts, foreign financial flows, travel restrictions, declining of tourism, hotels and frozen labor market.

MATERIALS AND METHODS

The paper is based on extensive literature review and analytical approach methodology and it describes the effects of Covid – 19 lock down on Agricultural Farm Labour in rural areas of Imo State, Nigeria. This paper further followed a secondary data research approach, which enable researcher to fill the gap in a body of knowledge with regards to COVID-19 in Nigeria. This paper however assessed the impact of pandemics from a historical perspectives as well as providing emerging evidence.

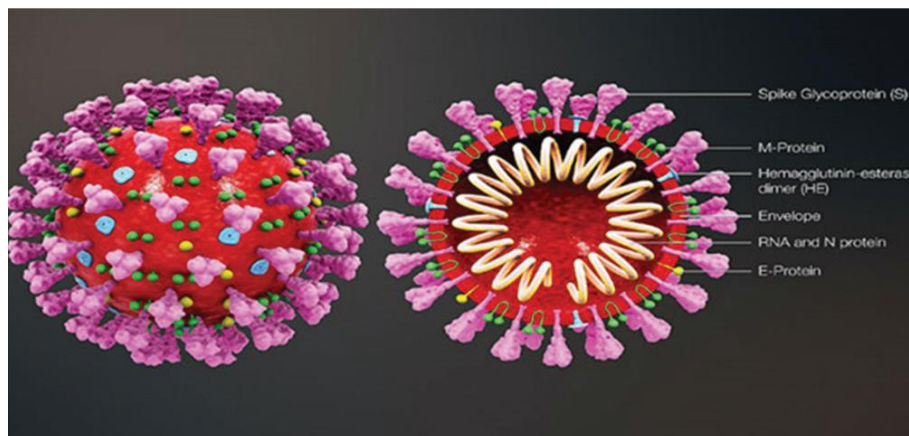
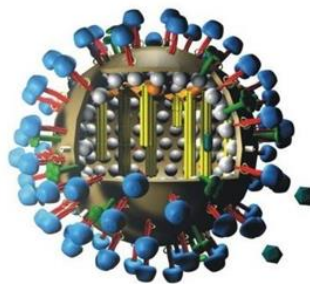


Figure 1: Corona Virus. Internet source.

RESULTS AND DISCUSSIONS

The COVID-19 pandemic is a threat to the world economy and the world is likely to plunge into a worse recession (Salehi *et al.*, 2020). Due to high level of un-readiness and the complicated nature of the virus, Africa is likely to be severely affected (Cyranoski, 2020). The spread of the new coronavirus is a public health crisis that could pose a serious risk to the macro economy through the halt in production activities, interruptions of people's movement and cut-off of supply chains. Economies across the globe are under severe strain. Supply chains have been radically disrupted, tourism and air travel is paralysed and currency markets are at an all-time low thereby witnessing supply and demand shock (Ban Ki-Moon, 2020). COVID-19 however affects all sectors including health, finance, agriculture, tourism and travel (Saltman, 2011).

Growth rate and commodities: Economists expected a sharp decline in the global GDP by 0.412% and major economies such as China 4.9%, Europe 0.8% and other 2.4% (Muhammad, 2020). Cherry (2017) believe that the global GDP growth rate will decline by 1.5% in 2020 due to the closure of industries and the "stay at home" measure.

Thus, African countries such as Algeria, Angola, Cameroon, Chad, Equatorial Guinea, Gabon, Ghana, Nigeria and the Republic of the Congo would be negatively affected following the decline in crude oil prices.

As conclusions and Recommendations, the COVID-19 pandemic has exposed another, major risk of our global food system with its long supply chains and endless nodes. If we consider other disruption, find social gatherings, schools, colleges, meals were also disturbed. The facilities of e-marketing, on-line teaching, internet connectively was poor in rural areas, the social distancing was mandatory due to COVID-19 that has affected agricultural areas. The rural areas people should be kept informed by the experts and must go by the recommendations of federal, state and local authorities.

Covid-19 crisis has also pointed not only deficiencies of our Health Care systems, but also ways for their improvement. The main condition of the possible improvement success is to consider Health Care as a Public Affair of the Countries, States, governments, coordinated by better than now empowered and well-funded international institution, WHO. COVID-19 could be regarded as the "deadliest pandemic" in the 21st century. It will have long term consequences such as traumas and fear of the unknown.

As recommendations, this paper recommends that Africa should adhere to the World Health Organisation protocols. At the same time it must strike a balance between saving lives and protecting the economy. Great thinkers and economists "are predicting a

continent-wide recession, but Nigeria and South Africa, which have been “treading water in recent quarters, are going to take a big hit” (WHO, 2020).

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