

## International Journal of Agriculture Extension and Social Development

Volume 7; Issue 3; March 2024; Page No. 471-474

Received: 02-12-2023  
Accepted: 03-01-2024

Indexed Journal  
Peer Reviewed Journal

### COVID-19 Impact on agriculture: A review

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DOI: <https://doi.org/10.33545/26180723.2024.v7.i3f.461>

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#### Abstract

The expand of Covid-19 pandemic affected all parts of the human society by creating massive socio-economic panic across all the sectors including agriculture, commerce, shipping, manufacturing and tertiary sectors across the world. The agricultural and food sector were considered as the most crucial part of the developing economics across the globe, which was completely exposed during the Covid-19 pandemic.

Due to the spread of the coronavirus pandemic (COVID-19), global agriculture is currently out of balance. The agriculture companies states that the two primary ways that COVID-19 affects agriculture are the supply and demand for food. In an attempt to disrupt the movement of agricultural products into markets, the virus started to spread over multiple countries.

Farmers have limited access to agricultural inputs. Open-field vegetables and spring crops like wheat, barley, and maize cannot be grown during a pandemic. Agriculture is now facing significant effects as a result of the pandemic. Each and every thing which are linked to agricultural production to the final consumer has been impacted by COVID-19. Noticeably, the Indian economy was dealing with rising food prices even prior to the start of the COVID-19 pandemic. A significant part of our existence is agriculture. Agriculture has been seriously impacted by the coronavirus outbreak. Numerous factors have affected the supply chain for agriculture, agriculture is the most significant area of human progress. No income exists when there is no production, depending on the workers of the agricultural industry.

COVID-19 pandemic affects the lives of many farmers all over the world and has a negative impact on agriculture sector.

**Keywords:** COVID 19, agriculture production, foodgrain production.

#### 1. Introduction

The agriculture industry is a broad spot in the Indian economy during the 2020–2021 coronavirus pandemic. The Indian and global economy has suffered greatly. The 2019 novel coronavirus, also known as severe acute respiratory syndrome coronavirus 2 (SARS-COV 2), is the infectious agent that causes COVID-19. Coronavirus were seen in Wuhan, China in December 2019, and it was declared a pandemic on March 11, 2020, after the virus spread over the world.

Covid-19 is severe in India as compared with other countries. The first Covid-19 positive case was identified in Kerala in India on 27 January 2020. Since then, it started spreading at an alarming rate. In order to prevent its spread, the Government of India had announced a nationwide lockdown on 24 March 2020. The lockdown had adversely affected all the segments of the Indian society. Agriculture is one of the priority sectors severely affected by the lockdown. If a nation's agricultural sector is confronted with challenges, the population's well-being will be affected (Tambi *et al.*, 2021) <sup>[10]</sup>. The strict lockdown measures resulted in the restrictions of major economic activities such as production, exports, commerce, logistics, processing, manufacturing, etc.

It has an undesirable and prominent influence on agriculture

and allied sectors of the country. The pandemic lockdown has resulted in the agrarian crisis across the nation by influencing and disrupting the food demand, food supply and value chain of various agricultural goods and commodities. In the country like India where majority of the population, approximately 140 million, depends directly or indirectly on agriculture and food sectors as the primary source of their income the impact due to the Covid-19 pandemic created an imbalance and affected the economy of the nation. The FAO report, "State of Food Security and Nutrition in the World", estimates that the Covid-19 pandemic could add about 130 million people worldwide suffering from chronic hunger and malnutrition in 2020 (FAO *et al.*, 2020) <sup>[11]</sup>.

The COVID-19 viruses can be transmitted through direct surface contacts or respiratory droplets while sneezing or coughing. The virus has also been shown to affect with individuals with low immunity. COVID-19 symptoms are Respiratory sickness, fever, heart problems, vomiting, and loss of taste and smell. Preventive measures are Using masks in public areas, social distancing, hand sanitizer, and vaccination. Diagnostic test are RT-PCR and CT scan.

More than 60% of Indians depend on agriculture, this is the backbone of the Indian economy. Spread of covid 19 around the world, imposition of nationwide lockdown from 23-

march-2020 to 31-may-2020, agriculture emerged as a absorbing sector. The GDP is contributed by the agriculture sector is 23%. Although it feeds a 1 billion people. The agriculture sector is suffering a lot of problems as a result of the COVID-19 outbreak. Lockdown disrupted the economic activities and food supply chains significantly.

Farmers suffer greatly during lockdowns since all marketplaces and industries are closed. Agriculture is important because it increase crop yields, diseases resistant varieties is developed, it is Used in medicinal plants and it Provides raw materials for food, and other products.

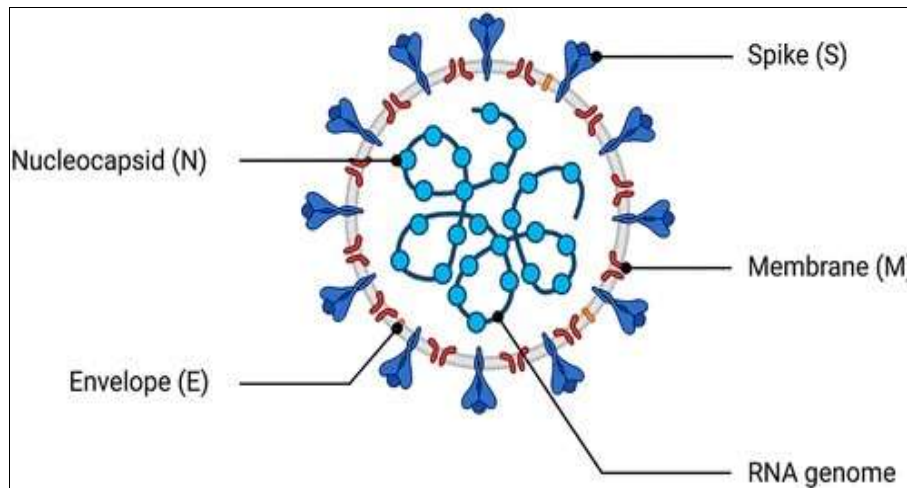


Fig 1: Corona Virus

## 2. Economic Impact of COVID-19 on Agriculture

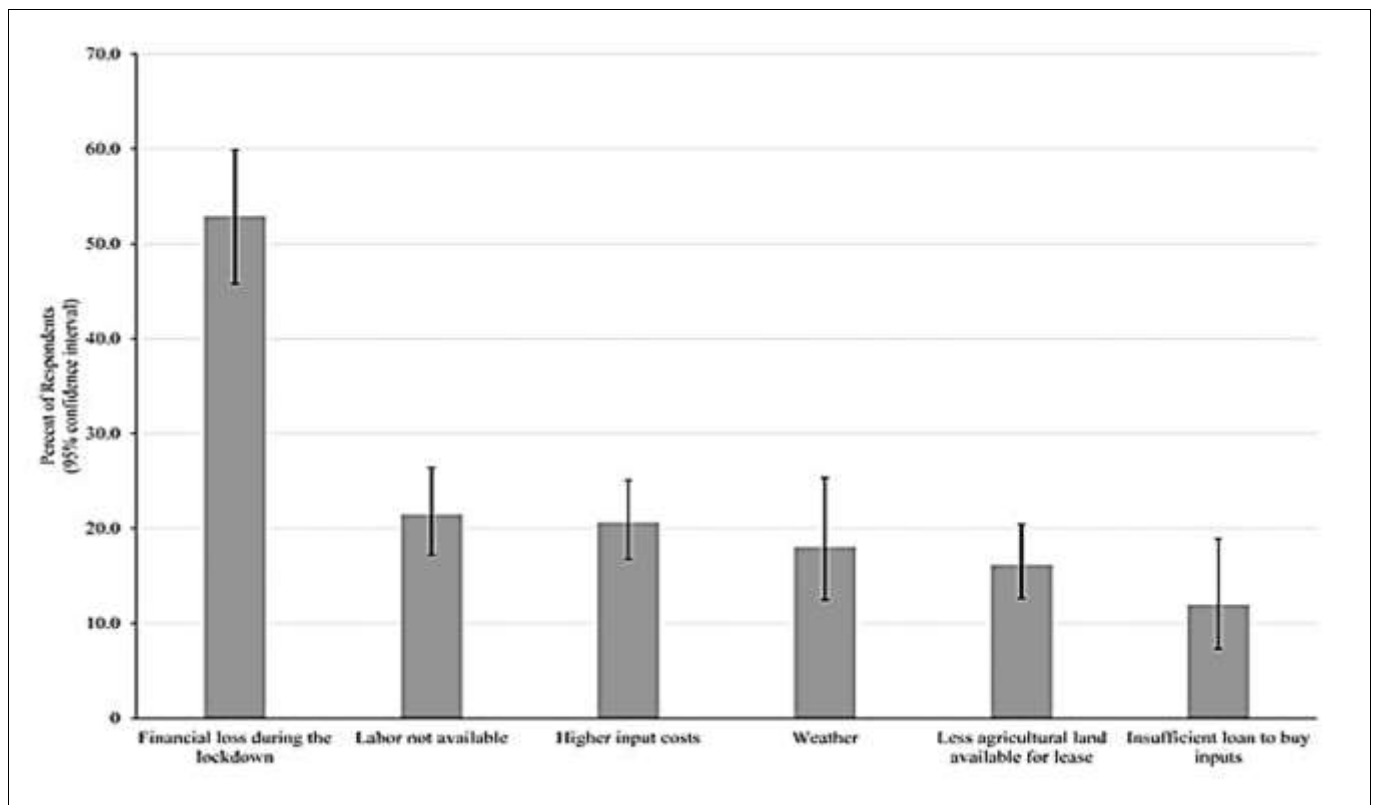


Fig 2: Impact of Financial loss and Food prices during lockdown

### 2.1 Impact on food grain production:

Worldwide, Changes in the supply and demand of nutrients are expected by the Food and Agriculture Organization (FAO). The United Nations have warned that the COVID-19 pandemic may lead to global food shortages. The World Food Program (WFP) has noticed that millions of people

could experience food insecurity as a result of the COVID-19 pandemic. The states of Punjab, Haryana, Madhya Pradesh, Uttar Pradesh, and Rajasthan are the primary producers of rice, wheat, and pulses. The production of food grains is affected during lockdown.

## 2.2 Impact on transportation, exportation, and distribution of agriculture products

The stoppage of transport restrictions, border closures, and road blockages have a significant impact on the movement of migrant workers, harvesters and labors. The lockdown on agricultural machinery caused supply chain disruptions for farmers, agricultural inputs, and exports. The same way that people couldn't go to retail stores to make purchases, fertilizers and seeds couldn't move. Markets and mandis are closed due to a lack of transportation. Commodity import and export are significantly impacted by coronavirus.

## 2.3 Impact on Fruit/vegetable processing

A shortage of workers for crop cultivation impacted planting and harvesting as a result of the worldwide pandemic, because of the COVID-19 lockdown, perishable food commodities including fruits and vegetables are severely impacted. Most of the industry is unorganized in the agriculture sector. Owned supply stores and sabji mandis are closed during lockdown. This network is totally disrupted by COVID-19. Due to their inability to access marketplaces for purchase and sale, small farmers will also be negatively impacted.

## 2.4 Impact on Dairy products

During a coronavirus, market, shops, dairy and retail establishments are closed. Milk and other perishable foods have been adversely impacted by the lockdown. Without the right preparation, milk cannot be processed. Farmers that raise cattle have converting milk into butter and ghee, which have longer shelf lives. There have been significant losses for farmers. Due to logistical issues that led to a mismatch in supply and demand, thousands of litres of milk have been wasted in several regions of the nation.

## 2.5 Impact on Food Price

The lack of market access and disruptions to the food supply chain and transportation have led to an increase in the price of agricultural globally. Indications that food costs will be rising in the third week of March 2020. The increases are marked for rice, wheat, legumes, fruits, vegetables, milk, curd, butter, and other items. Disruptions to the agricultural supply result in a 64% rise in product costs. The impact of COVID-19 on farmers' livelihoods. The agriculture sector is a source of income for more than 1 billion people across the globe.



Fig 3: COVID-19 impact on agriculture

## Conclusion

This review concluded that COVID -19 Impact on agriculture, farmers are facing difficulties in many ways. Pandemic affect the lives of all over the world, but especially Farmers are suffering from basic needs and they don't have money to lead their life. Farmers family become financially weak and they are not able to sell food. These situations affect the lives of farmers, Govt needs to take a step and help the agriculture sector financially, so that the biggest agriculture sector of the Indian economy doesn't lost during the difficult times and all these things are beneficial for Indian economy and agricultural world. This pandemic crisis has started a new era in the agriculture and food industry. It has created several challenges in the agriculture and food ecosystem worldwide. It has affected major areas of production, processing, food supply chain, dietary changes, logistics, etc. along with national economy and food security.

Innovations such as development and introduction of new products and services, introducing new financial schemes, family farming, community farming, roof top farming, hydroponics, digitalization, etc. will address the modern challenges in agricultural sectors moving a step ahead towards resilience and sustainability.

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