

Impacts of COVID-19 on Agriculture and Agribusiness in India

Sumit Sheoran^{1*}, Swati Arora¹, Surya Kant Ranjan¹ and Nidhi Sharma²

¹Lovely Professional University, Phagwara, India

²Innocent Hearts Group of Institutions, Jalandhar, India

*Corresponding Author: Sumit Sheoran, Lovely Professional University, Phagwara, India.

Received: March 01, 2021

Published: April 06, 2021

© All rights are reserved by Sumit Sheoran, et al.

Abstract

Due to covid-19 whole world is affected; in India, agriculture and agribusiness are the economy's main backbone. GDP, live-hoods, economy, etc., are affected due to the covid-19 pandemic in the whole world. Due to Covid-19, Many experts feared this disease pandemic because of the problems and disturbance in the chain of distribution or supply of food and food products, quantity and food quality. Shortage of food and works are occurred due to this unusual shut down, and it affects Agriculture in many ways. The article's main objective is to provide specific data related to the effects of covid-19 on agriculture and agribusiness in India.

Keywords: India; Covid-19; Impact; Agriculture; Agribusiness

Introduction

The latest emergence of a new SARS-CoV-2 virus, also classified as coronavirus 2019 (COVID-19), is now one of the very critical disease outbreak crisis from the last 100 years [1-3]. Across the planet, lock-up conditions have been encountered to halt the transmission of the outbreak, creating damage to business practices and sudden regulatory shifts to minimize the health risk of the pandemic [4-8]. It covers India, the fifth-largest economy globally in 2019, which is now suffering an ongoing economic recession due to COVID-19. Many, if not all, sectors of the financial system have been hit by the pandemic [9,10]. Furthermore, empirical evidence of particular changes in the agriculture and food sectors is still emerging. Adhikari, et al. (2020) [11] and Mahajan and Tomar (2020) [12] identify the decrease in the electronic supply of different types of food (without any effects on tariff rates) throughout the initial stages of the very first Indian shutdown. The Indian Government took immediate action to stop the spreading of Sars-Cov2 by the nationwide shutdown of 21 days for the total population initiated on March 24, 2020. After that, the shutdown extends many times. Only a result of these measures is that disease outbreak has gradually expanded extensively across India compared to several

other regions [13]. The Government of India has commonly viewed the trend of transmission of COVID-19 as closely related to the 2009 H1N1 influenza epidemic, and it has initially thought that the virus is unlikely to spread evenly. As a result, after the end of a particular 21-day timeframe, it was previously planned to keep the full shutdown in only hotspot areas and unwind it elsewhere. Most citizens in developed economies usually involve agricultural processes and agricultural expansion [14], which are directly connected to its living standards, the economic system, social structures, and the ecosystem. The agricultural sector is also the primary source of work, revenue and food for local people in rural areas. As a result of vigorous COVID-19 mitigation measures at the regional level, commercial operations linked not just to Indian agricultural activities, but also farmers across South Asia have been hit many times due to the unusual situations that have possibly outstripped the serious effects of COVID-19 [15]. For, e.g., transport in India was largely halted during the lockdown, reducing yields and undermining food security. At the height of spring harvests, demand frequently failed to reach rural markets or "mandis" and seriously disrupted typical supply chains. The shortage of agricultural and other migrant labor has also impacted planting, harvesting and post-harvest operations

[15]. Also, the latest disease outbreak has caused trouble for the procurement process.

The world has experienced many pandemics in the last many decades, such as cancer, Swine Flu, HIV, etc. It left a high impact on the economy and allied sectors such as livestock, agriculture, and many other sectors. The world is at high risk of danger due to the covid-19 pandemic. In December 2019, the outbreak of Sars-Cov2 took place in China and center point of that virus is Wuhan and spread rapidly in all countries all over the world. This outbreak shocked all over the world in 2020. Due to rapid spreads of that covid-19 many professionals and businesspersons are feared that the shortage of food supplies might be running less, especially if the stock is not sufficient due to disruption in supplying (Glauber, *et al.* 2020; U.N. 2020) [16]. Due to high spreading and their effectiveness, contaminations require to stop their normal functioning. It has created predictions of a serious or sustained worldwide downturn. Kristalina Geogieva, the head of the international monetary fund, said that the toughest worldwide financial implications since the 1930's great depressions, with more than 170 countries expected to witness negative GDP growth per capita due to worsening COVID-19 pandemic [17].

Figure 1: Growth rate of GDP of different countries.

In India, the first case of COVID-19 is reported on January 30, 2020. After that, cases increasing steadily and significantly. At that

time, February 2021 total cases approx. 15000 all over India [18] as shown in the graph. Figure 2 the rate of doubling of COVID-19 cases is around 18 - 22 days.

Figure 2: Graph of the trend in the increase of the number of cases in February 2021.

Figure 3: Trends of the increasing number of SARS CoV 2cases in different countries.

Immediate impacts on agriculture

The pandemic called Covid-19 disease has a huge impact on humanity's actions and activities; agriculture is not free from this impact [19]. Moreover, it seems to beat the agriculture production system and food value chain. The pandemic's negative impact on supply and demand for an agricultural product might lead food security at risk [20].

Agriculture production

In India, most of the states have taken measures such as home safekeeping, bans travel, and closes so many businesses to control the infection progress. Such travel restriction had affected every stage of the agriculture product supply chain with a major impact

on food distribution [21]. Different agricultural organizations such as crops, livestock and fishery have been hit hard by pandemic [22]. In many states, as the pandemic spreads and countries continue to impose containment measures, the COVID-19 pandemic is likely to impact agricultural production and productivity through its disruptive effects on input production and distribution, leading to inordinate distortions of the planting calendars [23]. Due to global trade disturbance, farmers are facing a shortage of agricultural inputs like seed, fertilizer and pesticides [24]. Seed production and processing are also affected as some seed companies must source breeder and foundation seed from neighbouring countries, which is constrained by slow border clearance. The distribution of seed from centralized processing facilities is also likely to be affected by a similar predicament [23]. According to Singh, India alone needs 250 lakh quintals of seed for crop production in the Kharif season [25]. Therefore, the Zaid and Kharif season crop sowing might be affected if the pandemic is prolonged. Thus import-dependent countries seem to be highly affected by pandemic [26].

Agriculture labour crisis

Due to lockdown, many productions and marketing companies have shut down, which leads to slowing down the Indian economy, and hence many people lose their job to several companies. As a result, the working-class community started return resettles to their respective villages. As a majority of the village households were run by a money order economy, due to lockdown, the cash flow into the village was disrupted. So agro-input is not come due to money crisis [27]. With the limitation in movements, labor shortages are appearing at a time when it is needed, most importantly: during planting, weeding and top-dressing of fertilizer to agri crops. The consequence will be reduced cropped area and yields, as de la Fuente, *et al.* (2019) found out in the rice sector following the Ebola pandemic in Liberia [23]. Farmers are a relatively older population, as compared to the general worker population. The 2017 ag census shows the average age of farm operators to be almost 58 – at least a full ten years older than workers in most other sectors. Data from many different countries that have done huge testing suggest that COVID-19 has a much higher level of severity for the 60s and older people, meaning that preventive and protective recommendations from the CDC and state (and local) public health experts are critical for our farming population [28].

Agriculture exports

The COVID-19 is worrying a few exercises in agribusiness and supply chains. Fundamental reports show that the non-accessibility of transient work is interfering with some gathering exercises, especially in northwest India, where wheat and heartbeats are being

collected [29]. There are interruptions in the supply of produced agri-foods due to transportation issues and many issues. Costs of wheat, vegetables, and different yields have down, yet buyers are regularly paying more. Media reports show that the conclusion of cafés, sweet shops, and coffee houses during the lockdown is, as of now, discouraging milk deals. In the interim, poultry ranchers have been severely hit because of falsehood, especially via web-based networking media, that chickens are the bearers of COVID-19 [30].

Other disruption

Infrequent populations and less frequent travel may provide a natural social distancing for rural communities, but rural residents may face challenges as well. Many gathering places, such as schools and churches, are being closed and told to halt normal routines and events. As a substitute, in several areas such as high school and college students, classes and services are being taught online. This may be difficult for some rural residents as high-speed internet service is not available in some areas of the state, including some of our communities with a strong agricultural base [28].

Figure 4: Sectors affected by covid-19 (<https://www.mckinsey.com/featured-insights/americas/which-small-businesses-are-most-vulnerable-to-covid-19-and-when#>).

Conclusion

Due to Covid-19, all sectors are affected, i.e., schools, colleges, Pvt. businesses etc. Generally, COVID-19 was and remained to be a key threat to the agriculture sector in India and across the globe. However, the protocols continue easing with the vaccine and adaptation of disease management measures by removing lockdowns and curfews, and the agriculture sector continues to revive. However, the impacts are likely to be experienced though in a lesser weight in the next couple of years.

Bibliography

1. K Dhama., *et al.* "Coronavirus Disease 2019 – COVID-19". (2020).
2. K Dhama., *et al.* "An update on SARS-COV-2/COVID-19 with Particular Reference on its Clinical Pathology, Pathogenesis, Immunopathology and Mitigation Strategies- A Review". (2020).
3. Catrin Sohrabi., *et al.* "World Health Organization declares global emergency: a review of the 2019 novel coronavirus (COVID-19)". *International Journal of Surgery* 76 (2020): 71-76.
4. FK Ayittey., *et al.* "Economic impacts of Wuhan 2019-nCoV on China and the world". *Journal of Medical Virology* (2020).
5. AS Bhagavathula., *et al.* "Global, Regional and National Incidence and Case-fatality rates of Novel Coronavirus (COVID-19) across 154 countries and territories: A systematic assessment of cases reported from January to March 16, 2020". *MedRxiv* (2020).
6. P Chatterjee., *et al.* "The 2019 novel coronavirus disease (COVID-19) pandemic: a review of the current evidence". *Indian Journal of Medical Research* 151 (2020): 147-159.
7. P Kumar., *et al.* "Forecasting the dynamics of COVID-19 pandemic in top 15 countries in April 2020: ARIMA model with machine learning approach". *medRxiv* (2020).
8. RK Singh., *et al.* "The prediction of COVID-19 pandemic for top-15 affected countries using advance ARIMA model". *JMIR Public Health and Surveillance* 6 (2020): 1-10.
9. P Carberry and AK Padhee. "Containing COVID 19 impacts on Indian agriculture". *Agri-buzz. ICRISAT- 18* (2020): 2020.
10. DU Arumugam and DG Kanagavalli. "COVID-19: impact of agriculture in India". *AEAEUM Journal* 8.5 (2020): 2020.
11. J Adhikari., *et al.* "COVID-19 impacts on agriculture and food systems in Nepal: implications for SDGs". *Agricultural Systems* 186 (2020): 102990.
12. K Mahajan and S Tomar. "Here Today, Gone Tomorrow: COVID-19 and Supply Chain Disruption". Working Paper No. 28, 2020, Ashoka University, Department of Economics (2020)
13. P Kumar., *et al.* "Forecasting COVID-19 impact in India using pandemic waves nonlinear growth models". *medRxiv* (2020).
14. RK Singh., *et al.* "Modelling agriculture, forestry and other land use (AFOLU) in response to climate change scenarios for the SAARC nations". *Environmental Monitoring and Assessment* 192.236 (2020): 2020.
15. PE Pothan., *et al.* "Local food systems and COVID-19, A Glimpse on India's Responses". Rome (2020).
16. Glauber J., *et al.* "COVID-19: Trade restrictions are worst possible response to safeguard food security". *International Food Policy Research Institute* (2020).
17. <https://www.imf.org/en/News/Articles/2020/04/07/sp040920-SMs2020-Curtain-Raiser>
18. Andrews MA., *et al.* "First confirmed case of COVID-19 infection in India: A case report". *The Indian Journal of Medical Research* 151.5 (2020): 490-492.
19. Rupak Goswami., *et al.* "Multi-faceted impact and outcome of COVID-19 on smallholder agricultural systems: Integrating qualitative research and fuzzy cognitive mapping to explore resilient strategies". *Agricultural Systems* 189 (2020).
20. ILO. ILO Monitor 2nd edition: COVID-19 and the world of work (2020).
21. Padam Bahadur Poudel., *et al.* "COVID-19 and its Global Impact on Food and Agriculture". *Journal of Biology and Today's World* 9.5 (2020): 221.
22. Zhang X. "Chinese livestock farms struggle under COVID-19 restrictions". IFPRI Blog: Research Post. (2020).
23. Daniel Kyalo Willy., *et al.* "COVID-19 Pandemic in Africa: Impacts on Agriculture and Emerging Policy Responses for Adaptation and Resilience Building". *TAAT* (2020).
24. Marlow S. "COVID-19: Effects on the Fertilizer Industry". *IHS Markit* (2020).
25. Singh IS. "Agriculture in the time of Covid-19". *The Hindu Business Line* (2020).

26. Cullen MT. "Coronavirus Food Supply Chain Under Strain What to do?" *Food Systems Transformation* (2020).
27. Anirban Mukherjee., *et al.* "Implications of COVID-19 on Agriculture in Eastern Region". *Impact of COVID in Agriculture* 1 (2020): 63-66.
28. <https://www.agriculture.com/news/business/six-possible-impacts-of-covid-19-on-farming>
29. Dr U Arumugam., *et al.* "Covid-19: Impact of agriculture in India". *Aegaeum Journal* 8 (2020): 480-488.
30. M Yuvaraj. "COVID-19: Impact of Agriculture in India". *Vigyan Varta* 1 (2020): 25-27.

Assets from publication with us

- Prompt Acknowledgement after receiving the article
- Thorough Double blinded peer review
- Rapid Publication
- Issue of Publication Certificate
- High visibility of your Published work

Website: www.actascientific.com/

Submit Article: www.actascientific.com/submission.php

Email us: editor@actascientific.com

Contact us: +91 9182824667