

The Impact of Covid-19 Pandemic on Indian Agriculture: A Study

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ABSTRACT

In the year 2020, not only agriculture but all the sectors were severely affected by the Covid-19 outbreak. The present paper deals with the impact of the present crisis on agriculture globally as well as nationally. The paper also discusses the special packages that the Governments of a few countries around the world and Government of India have announced in order to boost the agricultural sector. The paper is based on secondary data available from various sources like articles from journals, newspaper articles, etc. The impact of the pandemic on agriculture has been quite devastating. The government is taking various steps in order to revive the agricultural sector. The authors are of the view that the packages will help the farmers, but in the long run so the government needs to take more concrete decisions to help the small farmers in the present situation by giving them more financial boost.

Keywords: *Agriculture; Covid-19; Impact of Pandemic; Financial Packages; Government of India (GOI)*

INTRODUCTION

Agriculture is one of the biggest enterprises of the country. 'People residing in rural parts of India are still heavily dependent on agriculture. Agriculture and related activities are the main source of livelihood for around 58% of population of India and its contribution to Gross Domestic Product (GDP) was nearly 17% (in 2014).' (Bhattacharya & Biswas, 2018)

Agricultural activities are primarily dependent on the vagaries of nature. In our country monsoon is a gamble, so it is understood that due to uneven distribution of rainfall, agriculture is severely affected. Apart from rainfall, agriculture in India is also affected by pest attacks, hail and other natural calamities like flood, drought etc. But in the year 2020 not only agriculture all the sectors are severely affected by the Covid-19 (or novel Coronavirus) outbreak.

The entire country has been locked down since end of March 2020, and work-from-home has become the new culture. In this situation one wonders about the future of agriculture, since it is impossible for the farmers to do their job from their homes. In the present paper the authors have thus tried to highlight the problems of the farmers during this ongoing crisis of the novel Coronavirus and also make a critical study of the financial packages announced by the government for the farmers.

LITERATURE REVIEW

Chatterjee and Oza (2017) stated that agriculture is one of those rare activities where the risk factor is very high, yet the return received by the farmers is too low. They are of the view that government and other has to work in partnership with private sector, technology provider, financial institutions and other stakeholders.

Basu (2020) is of the view that agricultural workers of the third world countries are one of the largest sections who are being dispossessed of their health and livelihood, thus a work class driven agenda is need of the hour.

FAO (2020) in their policy briefs have highlighted the misery faced by the migrant workers during this COVID-19 pandemic. They are of the view that protection of the workers at the workplace, giving them temporary work permits; safe mobility of the workers both inter-state and across countries, supporting employment and income for the vulnerable and matching of the labor demand and supply can be good response measures.

Ramakumar (2020) stated that though currently the food supply situation was comfortable, but it may pose serious threats if the lockdown was prolonged. He also found that supply-chain disruptions were quite obvious due to the pandemic, but it also forced a decline in the prices received by the farmers. There was huge disparity among the retail prices and wholesale prices.

Gu and Wang (2020) are of the view that the pandemic has negatively impacted the sales stage of the vegetable supply chain. They opine that agricultural insurance could play an important role in stabilization of the supply of vegetables to the urban areas.

Objectives

The objectives of the present study are:

- (a) To give an overview of the global impact of Covid-19 pandemic on agricultural sector and an account of the relief measures taken by Governments of few other countries around the world.
- (b) To give an account of the crisis faced by the Indian agriculture due to Covid-19 pandemic and to highlight the financial packages announced by the Government of India to boost the agricultural sector.

METHODOLOGY

The data have been collected from various secondary sources like books, journals, websites, and newspaper articles, etc. The present study is divided into three parts. In the first part the authors have explained the global impact of Covid-19 pandemic on agricultural sector and relief measures taken by a few Governments around the world for boosting the sector. In the second part the authors have highlighted how the Covid-19 pandemic has affected the Indian agricultural sector and made a study of the various financial relief packages announced by the Government of India for the agricultural sector. And finally, in the third part the authors have drawn conclusions based on the findings of the paper.

RESULTS AND DISCUSSION

The present section deals with both global and Indian impact of the pandemic on the agricultural sector. The section also discusses the relief measures taken by a few Governments around the world and Indian Government. For lucid understanding the section has been divided into two broad headings: Global Impact of COVID-19 Pandemic on Food and Agriculture and Relief Measures Taken by the Governments and Impact on Indian Agricultural Sector and Measures taken by the Government.

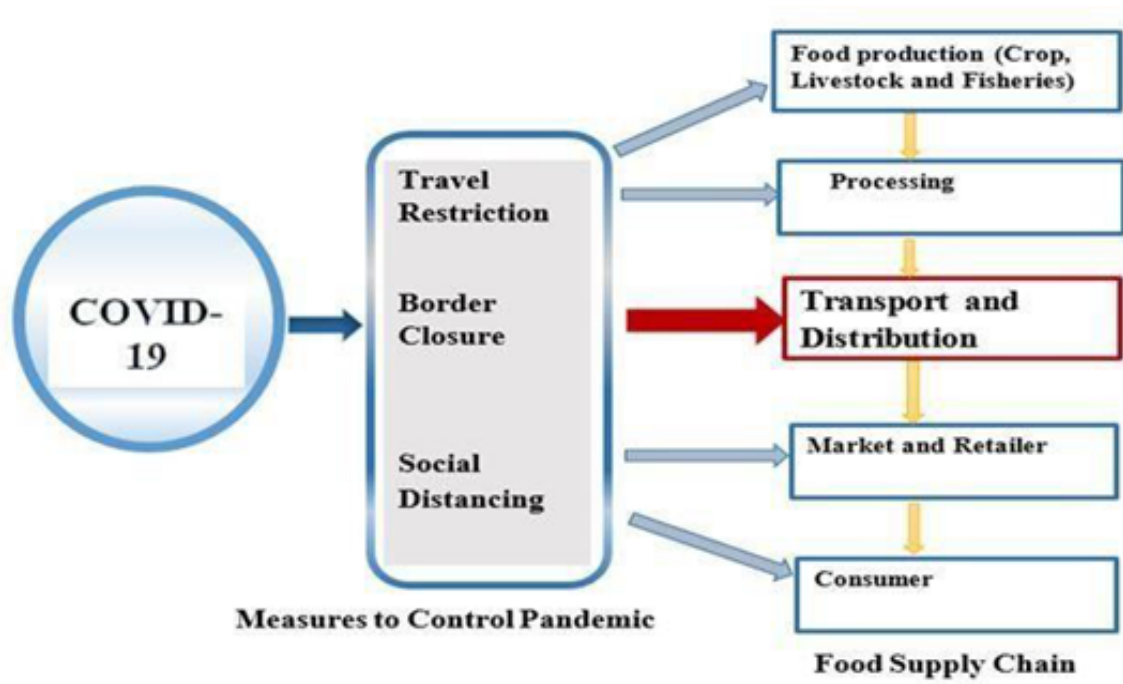
Global Impact of COVID-19 Pandemic on Food and Agriculture and Relief Measures Taken by the Governments

The present section is divided into two parts, in the first part the authors discuss the global impact of COVID-19 pandemic on food and agriculture and in the second part the relief measures taken by Governments of few countries across the world has been discussed.

Global Impact of Covid-19 pandemic on food and agriculture:

The pandemic and the subsequent lockdown caught the Governments around the world off guard. The challenges faced by the Governments were innumerable, food security of the citizens being one of them. According to the Food and Agriculture Organization (FAO) before pandemic around 135

million people in the world faced acute food insecurity, however, in post-COVID scenario the number was to rise to around 265 million. Also, worldwide the number of children suffering from malnourishment was projected to rise by 10 million (Ramakumar, 2020). The exhibit (Exhibit 1) below shows that the pandemic has affected all the stages of food supply chain, though the most serious effect was on transport and distribution.



Source: Poudel et al. (2020)

Figure 1: Impact of Covid-19 on every stage of Food Supply Chain

The production of the crops was not the problem, but with the international borders closed and other restrictions on the supply chain, the import-export was a major issue. The export of Asia had declined in March 2020 and also of Europe and North America in April. However, South America saw an increase in export of products as soybeans, sugar and meat compared to the same period in 2019. The food prices around the world also showed a downward trend (though it was an all-time high for staples like rice, wheat and maize) since the beginning of 2020 and the Covid-19 only worsened the situation. The impact of the pandemic on agricultural sector has been two-fold, (a) on food production and distribution, and (b) on food demand and security.

(a) On food production and distribution- Covid-19 pandemic has affected every stage of food supply chain. The global lockdowns have disrupted the supply of agricultural inputs like seeds, pesticides and fertilizers. The international fertilizer trade has been affected since China, which is one of the major fertilizer producer and exporter, had been under lockdown. With the international borders closed the sowing or planting had also been affected for the countries which depend on imported seeds, for example, India needs around 250 lakh quintals of seeds in the Kharif season. Lockdowns and travel bans have led to acute labor shortage on the fields.

(b) On food demand and security- The food demand is affected due to the reduction in income level of the consumers. Reduced income in turn affects the purchasing power of the consumers. The pandemic has affected around 81 per cent of the global workforce due to partial or full closure of businesses. The food prices are also affected due to sudden stock piling and panic buying. The disruption in international trade relations have also affected the food supply chain and food production which in turn may eventually give rise to food insecurity. The lockdowns forced the closure of the schools which suspended the free meal programs thus depriving around 10 million children of their daily nutritional requirements.

Brief account of relief measures taken by governments of few countries for agricultural sector:

Government had a major role to play in normalizing the situation. The role of the Governments can be divided into two phases, where phase 1 is management of the crisis and phase 2 is helping the agricultural producers by mending the supply chains.

Phase 1: In the first phase in order to restrict the spread of the virus in their respective countries the Governments announced lockdowns and other social distancing measures. But due to these restrictions there were shortage of agricultural labor as the high-value labor-intensive crops were dependent on migrant workers. Hence, many countries around the world classified agriculture and food processing as essential activities. Countries like Germany and United States eased the visa requirements for the temporary agricultural workers. Again, countries like Australia, New Zealand and Italy extended the working visas of the temporary and seasonal migrants. Temporary tariff reductions or duty reductions were allowed for agricultural and other food products in more than 20 economies. Many Governments in order to help the agricultural producers sell their unsold stock, and also for providing food to the poor engaged in stockpiling.

Phase 2: Governments of many countries around the world offered economic stimulus package to the agricultural sector so that the farmers can cope up with the new normal. After the initial panic buying since there was a sudden decline in the demand of agricultural products countries like Japan, Brazil, United States and Switzerland introduced storage aid and food aid programs. Support were also provided to the agricultural producers in varied ways like postponement of the rural debt repayment (in Brazil), access to credit (in United States and European Union), access to raw materials and other inputs (in Japan and China), upgradation of supply chain infrastructure (in India), loan guarantees (in Namibia), cash transfers (in Paraguay and Côte d'Ivoire), etc.

Governments of almost all the countries around the world have taken measures to revive the agricultural sector. In the following paragraphs details of measures taken by Canada and United Kingdom are given:

Canada: An emergency fund of worth USD 77.5 million for PPE kits of the food producers and also for automation of their facilities and packages. Increase in the Dairy Commission's borrowing limit by USD 200 million for helping in storage and also in avoiding food waste. A boost to the provincial governments worth USD 1.72 billion for cleaning up of the orphan and inactive oil and gas wells. Agri-insurance were to be provided to the horticultural sector for insuring the loss of production due to shortage of labor. The Surplus Food Purchase Program was to be expanded with an initial USD 50 million fund for redistributing the unsold inventories to the local food organizations for supporting the vulnerable Canadians. Provision of USD 62.5 million in order to support the new manufacturing and automated technologies for improving the productivity and quality of seafood products. Fisherman grants up to \$10, 000 per self-employed fisherman were also provided.

United Kingdom: For the sheep farmers who were affected by the poor wool price (worth up to £1.2 million). For the pig growers who were affected by the decline in price for the cull sows (worth up to £1.6 million). For the potato growers who were affected by the decline in demand from the hospitality and food service sector for processing potatoes (worth up to £2 million).

Impact on Indian agricultural sector and measures taken by the government

The present section is divided into two parts, in the first part the authors discuss the crisis faced by the agricultural sector due to the COVID-19 pandemic and the second part highlights the packages announced for the agricultural sector by the Government of India for overcoming the crisis.

The crisis of Indian agricultural sector due to Covid-19 pandemic:

The farmers associated with agricultural activities have to face various risks, for example weather risks, price risks, biological risks, institutional risks, political risks, labor and health risks and asset

risks. These risks pose serious threat to the farmers and since each risk is unique and is independent of each other their cumulative occurrence can be very severe for the farmers. Yet, apart from the above-mentioned risks farmers might also be affected by other unprecedented ones, the year 2020 being an example of it. The entire world is still fighting the unknown Covid-19 pandemic, because of which every country is facing lockdown situation time and again. During the first wave of the pandemic India has been locked down since March 25, 2020 and then unlocking in phased out manner since July 2020. Thereafter the country faced lockdown during the second wave also. Every sector has been facing the brunt of it and agriculture being no exception. As a result of which the economy (of our country as well as the world) is facing a low, experts are of the view that it will be taking at least 6 to 12 months to get back in the pre-pandemic situation. With all the other sectors locked down Indian economy has only agriculture to depend upon.

Lockdowns posed serious threats for the farmers of the country. For example, during the first lockdown the farmers were put in a very difficult situation as it was particularly busy time for the farmers due to the then ongoing Rabi harvest and the subsequent Kharif sowing. There might be a few other serious impacts of Covid-19 pandemic on Indian agriculture.

- Firstly, the markets and farm prices may get affected as due to the novel coronavirus outbreak consumers are now faced with tough choices about food and overall spending, so this might impact the food services sales. In agricultural sector since the migrant labors play a very important role the lockdowns may completely disrupt the system. According to a report by FAO (2020), restricted movements at national and international borders would lead to labor shortage which in turn would affect the food availability, global market prices and agricultural value chains.
- Secondly, there might be supply chain slowdown and shortages because of the disruption of services in the logistics and other connected industry sectors and also due to 'panic buying'. Since the supply chains are not working in full swing, the small farmers who are largely dependent on horticultural crops, perishable commodities livestock, fish farming, etc. are expected to lose their regular income flow. It has been reported that small farmers are destroying vegetables, spilling milk on roads or selling perishables at throwaway price due to excess supply whereas the cities are facing shortage of the same and paying a premium due to limited transportation.
- Thirdly, the farmers' health is a very important factor, as in our country a large number of the farmer force are ageing population and since they are the most vulnerable lot. Fourthly, the worker safety and the shortage of the Personal Protective Equipment (PPE) kits, the farmers need to be out in the field for hours, so it is essential that they take proper safety measures like masks, gloves, PPE kits etc. But in our country, we are striving to provide all our healthcare workers with PPE kits, thus it is obvious that it will be difficult for the farmers to get one.
- Lastly, so far, the novel coronavirus has been an urban disease but now with the migrant workforce returning to their villages the farm workforce needs to be more careful and ensure their safety.

Among the migrant workforce one category is the seasonal workers who take inter-district and inter-state employment in the agriculture and its related activities. They are manual workers who engage themselves in seasonal agricultural work and shift to non-farm manual work during the other times. But, now since the movement is restricted due to the national lockdown, they are getting deprived. When the lockdown was announced in the end of March, the areas which depend on rainfall did not have any standing crops but the areas which have irrigation facilities had crops (like wheat, vegetables, oilseeds, pulses, etc.) ready for harvest. Thus, this regional disparity is the primary reason for the migration of the agricultural workers. In the northern states of India, especially Punjab and Haryana, the wheat harvesting begins April onwards and hugely dependent on supply of migrant agricultural workers from the eastern states of the country (for example, Bihar and Jharkhand). According to an estimate, during this Rabi season, Bihar alone supplies around one million agricultural

workers to Punjab and around 0.6 million agricultural labor to the state of Haryana. (Basu, 2020) These workers not only take part in field operations but also in loading and unloading activities at government run procurement centers. Therefore, as a result the states where crops are ready to be harvested are striving with shortage of agricultural workers and the states from which the workers could not migrate are left with oversupply of labor which again has resulted in fall of agricultural wages.

Relief packages by the government of India to boost the agricultural sector:

The farmers use different risk reducing (ex-ante) strategies and risk coping (ex post) strategies for safeguarding themselves from the risks. The government also takes steps to help the farmers (for example crop insurance). Presently the Government of India (GOI) in order to boost the agricultural sector announced a stimulus package.

The Union Finance Minister has announced funds worth Rs.1 lakh crore for building agricultural infrastructure, and for boosting infrastructure projects at farm-gate and aggregation points. The FM also announced the decision of extension of the Operation Greens from tomato, onions and potatoes to all the other fruits and vegetables and referred to it as the TOP to TOTAL move.

Currently the farmers can only sell their produce to licensees in the Agricultural Produce Market Committees (APMCs). The FM said that the government has decided to formulate a central law that will allow the farmers to sell their produce at attractive prices without any inter-state trade barriers and also allow them to engage in e-trading of their produce. The farmers are allowed to make contract even before they begin sowing with food-processing companies, retailers and exporters which will assure their returns. The government has also decided to amend the Essential Commodities Act, 1955 and deregulate cereals, edible oil, oilseeds, pulses, onion and potato. The FM said that under the new law stock limit will be imposed only under exceptional situations like national calamities, famine and when the prices start soaring high.

Apart from this the government also announced a scheme of Rs. 10,000 crores for formalization of the micro-food enterprises. 'The government will launch the Pradhan Mantri Matsya Sampada Yojana (PMMSY) for integrated, sustainable, inclusive development of marine and inland fisheries. Rs. 11,000 crores for activities in marine, inland fisheries and aquaculture and Rs. 9,000 crores for infrastructure - fishing harbors, cold chain, markets etc. It will lead to additional fish production of 70 lakh tons over 5 years and employment to over 55 lakh persons.' (Express Web Desk, 2020) Rs.13000 crore drives have been announced by the government for 100 per cent vaccination of cattle, buffalos, sheep, goat and pig. An Animal Husbandry Infrastructure Development Fund of Rs. 15,000 crores have also been announced. 10 lakh hectares have been decided to be covered under herbal cultivation in the next two years with Rs. 4,000 crores. The government also announced Rs. 500 crores for the beekeeping initiatives.

The farmers will definitely be benefitted from the above-mentioned announcements made by the government in the long run, but they are not enough for addressing the current challenges faced by the farmers. Some experts are of the view that these are more of reforms than immediate relief for the farmers, so during this time of crisis government should address the current need of the farmers. The government has announced infrastructure development in marketing and processing however this is time consuming and may take longer than expected and thus not enough to address the current challenge. Again, the government has amended the Essential Commodities Act, 1955 and deregulated the stock limits of cereals, edible oil, oilseeds, pulses, onion and potato but instead of improving the situation of the small farmers it might worsen it. The small farmers often have limited storage available so they are forced to sell their produce immediately, so they will not be able to hoard it and make profit. Instead, the traders and other value chain participants may engage in hoarding which will lead to price hike. Thus, more concrete steps (for example creation of more rural jobs, providing the farmers with basic essentials like seeds, pesticides and fodder, etc.) need to be taken by the government for helping the farmers in this time of crisis.

CONCLUSION

The silver lining in this time of crisis is that India is expecting record food grain production of almost 300 million tons this year, so the government needs to ensure that the farmers are able to sell their produce and get good price. Predictions are also made that despite the adverse conditions the farm sector is expected to grow by an annual rate of 3 per cent. The sector is also expected to add around 0.5 per cent to the country's GDP in the year 2020-21. The additional contribution may prove to be extremely crucial and may prevent the Indian economy from contracting in the current fiscal year.

The authors are of the view that government should consider providing more direct support to the farmers. The government might make a lump sum cash transfer to the accounts of the farmers which will help them to recover the losses they faced due to the rotting of the Rabi crops on the field and will also help them to plan the forthcoming Kharif crop sowing in a better way. The authors feel the government might also waive off the loan amount taken by the farmers for the Rabi crop. The government should also take steps to vaccinate the rural population especially those associated with farming activities to ensure uninterrupted supply of agricultural produce, also given the available medical infrastructure in the rural belt vaccination is the need of the hour.

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