

## Ramification of Covid-19 Pandemic on Indian Agriculture

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ARTICLE ID: 38

### Abstract

The COVID-19 pandemic is the global humanitarian challenge the world has faced. It has significantly disrupted the agricultural system, livelihoods and rural Indian economy. The agricultural and allied sector contributes nearly one-sixth to the Indian national income and provides employment to nearly 50 per cent of the workforce. Even before the COVID-19 crisis, the low incomes of farmers were a critical issue in India with the Government of India setting a goal to double farmers' income by 2022. Ensuring the continued functioning of global and national food supply chains will be crucial in securing food supply, preventing a food crisis in countries that are already experiencing food and nutrition security challenges and decreasing the overall negative impact of the pandemic on the global economy. The last few quarters have witnessed a moderation of growth rate of the Indian economy. At this time when most sectors of the economy are reported to be under significant stress, the agricultural sector continues to be promising and cushioning the economy. The pandemic may have a serious impact on labour-intensive crop production and processing due to labour shortages. Appropriate measures should be adopted to support agri-food enterprises with a view to stimulating agricultural production and ensuring decent wages. In this context, attention needs to be paid to the hundreds of millions of agricultural wage workers who, while playing a crucial role in ensuring the continuity of the food supply are often among the most vulnerable, poor and food insecure.

**Key words:** Agriculture, Covid-19 pandemic, Economy, Impact.

### Introduction

The COVID-19 pandemic became a global that the challenge the world has faced after the World War II. It has significantly affected the agricultural system, livelihoods options and rural Indian economy. Some of the reasons for decline in agricultural activities



include lack of availability of labour and machines, need for social distancing, and restrictions on free movement of men and machineries. The agricultural and allied sector contributes nearly one-sixth to the Indian national income and provides employment to nearly 50 per cent of the workforce. Even before the COVID-19 crisis, the low incomes of farmers were a critical issue in India with the Government of India setting a goal to double farmers' income by 2022. Ensuring the continued functioning of global and national food supply chains will be crucial in securing food supply, preventing a food crisis in countries that are already experiencing food and nutrition security challenges and reducing the overall negative impact of the pandemic on the global economy. The last few quarters have witnessed a moderation of growth rate of the Indian economy. At this time when most sectors of the economy are reported to be under significant stress, the agricultural sector continues to be promising and cushioning the economy. The COVID-19 induced lockdown exacerbated food loss at production, marketing, distribution and wastage at household consumption level. For instance, due to lack of demand and logistics, food commodities such as milk, vegetables and fruits were wasted at farm level while distribution of milk by the Anand Milk Union Limited (AMUL) the largest milk cooperative in India was also affected.

As a case of COVID-19 has increased globally, the agri-food supply chains are likely to be disrupted badly. Although there might be surplus food in the supply chains at the beginning of the crisis, an imbalance to food supplies is instigated through panic-buying by the public who foresee the possibilities of scarcity in supplies during lockdowns. This imbalance may occur due to farmers affected by virus or due to interruptions in the markets by strategies to contain the virus. Diminishing demand by the reduction in purchasing power would also affect the ability of producers to invest in their products and will further deplete food production.

The pandemic may have a significant impact on labour-intensive crop production and processing due to labour shortages. Appropriate measures should be adopted to support agri-food enterprises with a view to stimulating agricultural production and ensuring decent wages. In this context, attention needs to be paid to the hundreds of millions of agricultural wage workers who, while playing a crucial role in ensuring the continuity of the food supply are often among the most vulnerable, poor and food insecure. There needs to be a focus on the safety and health of agricultural workers both when assuring the availability of adequate



numbers of seasonal agricultural workers in advanced economies, and the continuity of production in developing countries. The national statistical office released the estimates of Gross Domestic Product (GDP) for the first quarter (April-June 2020), suggesting a negative economic growth of 23%. In comparison, the construction sector shows a negative growth of 50%, followed by the service sector (47%) and the manufacturing sector (39%). In contrast, agriculture and allied show positive growth of 3%. During this lockdown, the Indian government enacted several emergency legislations to provide direct and indirect relief to workers and households. India's COVID-19 social assistance package, namely, PM-GKY, announced in March 2020 was designed to provide immediate relief to the vulnerable population. The PM-GKY provided cash direct benefit transfers (DBT) and in-kind supports (IKS) through existing schemes. International Food Policy Research Institute (IFPRI) examines the impact of India's government assistance package (known as Pradhan Mantri Garib Kalyan Yojana or PM-GKY), announced immediately after the lockdown, on the procurement of agricultural inputs for the upcoming farming season.

### **Impacts on agricultural production and incomes**

Limited mobility during lockdowns contributing to labour shortages for agricultural sectors in many countries, particularly those characterised by periods of peak seasonal labour demand or labour-intensive production. Uncertainty imposed by the crisis, restrictions on inter-state movements and absence of transportation disrupted the food supply chains and spiked food prices (Kalsi et al., 2020) and affected farm operations. The Government of India has managed the situation deftly with timely market reforms and social safety nets for the poor, migrants and farmers. On the other hand, disruptions downstream from the farm gate are in some cases causing surpluses to accumulate, putting a strain on storage facilities and for highly perishables, increasing food losses. For some products, supply side disruptions are being compounded by demand side reductions. In combination, these effects are putting a strain on farm incomes.

### **Strategy to strengthen the agricultural sector post COVID-19**

#### **✓ Shifting the focus from primary to secondary agriculture**

COVID-19 lockdown has disrupted agricultural labour markets that witnessed huge reverse migration. A survey reports that 45% of the migrants returned home during lockdown (Imbert, 2020). Structural weakness in the system should be addressed to enable recognition



of farming as an enterprise. Processes which add value to primary agricultural production systems and enterprises which source raw materials from crop residues, by-products and waste from primary agriculture should be promoted (Dey, 2019). Accelerating research on high-end secondary agriculture products is urgently needed. Development of fruit-based ice cream, converting bamboo or wood waste to fancy decoration, preparation of sweets from bovine milk, use of natural fibres and culled potato to prepare bio-plastics, pectin extraction from fruit peeled wastes and bio-ethanol production are some examples. Further, innovations in the post-harvest technologies of medicinal and aromatic plants which supply raw materials to herbal medicines, pharmaceuticals, cosmetics and food flavour industries could increase export potential and create employment.

✓ **Family farming**

In strategizing to strengthen the agricultural sector, we must pay attention to the concept of agricultural sustainability. Nothing comes closer as family farming to the exemplar of sustainable food production (FAO and IFAD, 2019). Family farmers not only produce food simultaneously they save biodiversity, produce nutritious and local foods, develop new strategies and develop innovations to tackle social, economic and environmental challenges (FAO and IFAD, 2019). FAO suggests affirmative policies to support family farmers as a solution to the unsatisfactory world food system in which one-third of the food produced goes to waste.

✓ **Collective farming/collaborative farming**

Crop farmers should heed the successful cases like dairy cooperatives to increase productivity and profits. Unlike cereals, pulses and vegetables, milk prices were not affected by the lockdown (Cariappa et al., 2020a). The procurement, processing and distribution system of dairy cooperatives resisted the exogenous shock. Crop farmers should come together either as cooperatives or farmer producer organizations (FPOs) or farmer producer companies (FPCs) and work in the network of the international food system. Through aggregation (of inputs used and output produced), economies of scale can be ensured. These steps together will have the potential to overcome challenges of production and marketing risks of the farmers.

✓ **Buffer stock**

Monetizing the excess stock in the buffer could be a potential source of revenue for the union government. The stock held by the Food Corporation of India has in store more than double the buffer stock norms and is worth at least Rs.1,50,000 crore (Gulati, 2020). Monetizing the surplus besides revenues may also reduce huge maintenance and logistics costs. This amount could be invested in promoting rural agriculture enterprises or capacity building, drought proofing, etc. Again, to reduce wastage through scientific storage is urgently needed.

✓ **Reforms in agricultural finance**

Access to cheap loans has to be enabled, especially for small and marginal land holders to revive the sector. Restructuring agricultural loans and repayment schedules, withholding the declaration of long-term loans as non-performing asset (NPA), interest subvention on availed loans during the moratorium period etc. should be implemented to safeguard the livelihoods and welfare of the poor.

**Coping strategies after COVID-19**

- Concerted efforts and integrated global response are inevitable for the effective response, control, and prevention of the pandemic. There is a need to attentively expand social and food safety programs, especially in rural areas, to provide food and necessities for households with a considerable decline in incomes.
- An alternate and effective coping strategy for the food assistance program wherein the vulnerable sections like migrants, landless laborers, pregnant women, pro-poor, etc. can be assisted with a fixed amount of cash transfer to meet their basic livelihood needs.
- Appropriate interventions like strengthening the storage capacity for enhancing the buffer stock, processing and distribution will help to counter the adverse situation.
- Capitalising the advantage of Information and Communication Technologies (ICTs), functioning and efficiency of the supply chain management can be increased extensively. For instance, the mobile procurement of perishable commodities can be incentivized.
- Promotion of a decentralized food system to make the emerging economies self-reliant and protecting the local food system. This also will help to facilitate in achieving a healthier food system.



- Proper public awareness should be provided such that the people become informed not to hoard essential items and to maintain basic hygiene which is vital for stabilizing the markets.

### Conclusions

Livelihoods and economy were at risk during the corona virus pandemic. The pandemic affected both the Indian and global agricultural system. A global food security crisis is in potentially looming that cannot be countered without understanding the impacts of COVID-19 on the agricultural system. Disruptions in supply and value chains leads to food wastage, unleashing volatility in prices and having implications to food and nutritional security. In India, restriction on movement, transportation problems and reverse labour migration have disrupted domestic supply chains which ultimately contributed to rises in wholesale and retail prices of a few commodities like pulses, wheat flour, milk and vegetables. Although buffer stock of food grains and harvest from previous crops restricted any immediate fallout but was not sufficient when three-fourths of the consumers reported price hikes in the essential commodities. Although India has emerged as self-sufficient and a net exporter of food in recent years, the pandemic led chain of events has variously affected the domestic agricultural systems specifically production, marketing and consumption. As the pandemic continues to threaten the global food system, the role of state becomes much more pertinent. In order to protect and livelihoods of millions of people in agricultural system, the state should increase spending on social safety nets immediately and take up other short- and medium-term strategies. The governments must swiftly plan to enhance their capacity in the agricultural sector by implementing new risk management programs and reforms coupled with insulating the livelihood of people by cash or food assistance programs to meet their basic needs.

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