

Effect of COVID19 on Agriculture and allied sector

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During these challenging times, how does Indian agriculture respond to the crisis and how do government measures affect 140 million farm households across the country and thereafter impact the economy of a very important country in the developing world? We assess the immediate challenges that COVID19 has posed to the farm sector and suggest mitigation measures to ensure a sustainable food system in the post-crisis period.

Immediately after the nationwide lockdown was announced, the Indian Finance Minister declared an INR 1.7 trillion package, mostly to protect the vulnerable section (including farmers) from any adverse impacts of the Corona pandemic. The announcement, among a slew of benefits, contained an advance release of INR 2000 to bank accounts of farmers as income support under the PM-KISAN scheme. The Government also raised the wage rate for workers engaged under the NREGS, the world's largest wage guarantee scheme. Under the special scheme to take care of the vulnerable population, Pradhan Mantri Garib Kalyan Yojana (Prime Minister's scheme for the welfare of the poor), has been announced. Additional grain allotments to registered beneficiaries were also announced for



the next three months. Cash and food assistance to persons engaged in the informal sector, mostly migrant labourers, have also been announced for which a separate PM-CARES (Prime Minister Citizen Assistance and Relief in Emergency Situations) fund has been created.

The Indian Council of Agriculture Research (ICAR) has issued state-wise guidelines for farmers to be followed during the lockdown period. The advisory mentions specific practices during harvest and threshing of various rabi (winter-sown) crops as well as post-harvest, storage and marketing of the farm produce.

The Reserve Bank of India (RBI) has also announced specific measures that address the “burden of debt serving” due to the COVID 19 pandemic. Agricultural term loans and crop loans have been granted a moratorium of three months (till May 31, 2020) by banking institutions with a 3 per cent concession on the interest rate of crop loans up to INR 300, 000 for borrowers with good repayment behaviour.

Major Problem in due to lockdown and its solution in India.

1. Food and nutrition security

- Loss of income from workers who are full of partially furloughed affecting their ability to purchase food;
- Stay-at-home orders and restricted physical access to food markets, indigenous food gathering activities;
- Closure or diminished capacity of institutions that support food social safety nets, such as food banks and school feeding programs; and
- Market disruptions such as an issue with the ability of supermarkets to rapidly from centralized distribution system following unprecedented demand (i.e. panic buying) for pantry staples.
- The inability of farmers or entrepreneurs to transport fresh vegetables, fruits and milk from the point of production to local markets or supermarkets in nearby towns or cities caused their wastage.



Government's warehouses are overflowing with 71 million tons of rice and wheat. It is better to offer universal coverage of distributions in the next few months. Nutrition programs like Integrated Child Development Services (ICDS), mid-day meals, and Anganwadis (rural child care centers) should continue to work as essential services and provide rations and meals to recipients at home. There is a need to add eggs to improve nutrition for children and women.

Migrant workers.

There are about 40-50 million seasonal migrant workers in India. In recent days, global media have broadcast images of hundreds of thousands of migrant workers from several states trudging for miles on highways; some walked more than 1000 kilometers to return to their home villages. They should get both cash transfers and nutritious food.

Several state governments have started innovative programs to help informal workers and Migrant workers.

Unemployment

COVID-19 has led to the agriculture industry having to furlough several workers regardless of job type and level. Farmers, agronomists, veterinarians, suppliers and even clerical staff members have all been affected depending on how a particular business has decided to adapt to the pandemic. The massive dismissal of workforces is a result of the low demand for products and services, causing massive losses to the business. Maintaining a workforce when the money being spent is more than the money earned leads to the displacement of workers.

Loss of income

Depending on the dynamic of the agriculture business, when there is no production, there is no income the level of production directly influence income. This means that workers need to find alternative ways to have a source of income to provide for their needs at a difficult time like this.

What are the implications of the COVID-19 situation – now and in the future – for food production, agriculture and fishery/aquaculture supply chains and markets?

The food supply chain is a complex web that involves producers, consumers, agriculture and fishery inputs, processing and storage, transportation and marketing, etc. At the onset of the crisis, the food supply chains were strained as many countries imposed

restrictions on the movement of goods and people across and within borders. As a result, the challenge was not the availability of food but easy access to it. Next, anxious over all the uncertainties linked to the food supply, some countries restricted food exports, making this situation even more challenging.

Table 1. Impact of COVID-19 on the Indian agricultural system.

Agricultural system	Category	Immediate effects of the lockdown
Production (n = 225)*	High growth (Tamil Nadu, Punjab, Haryana, Uttar Pradesh)	<ul style="list-style-type: none"> • Shortage of labour in Punjab, Haryana and Tamil Nadu (100%) • Reverse migration in Uttar Pradesh • Fear of infection to perform farm operations • Report of increased adoption of DSR technology in parts of Punjab and Haryana owing to labour shortage
	Low growth (Maharashtra, Karnataka, Odisha, Puducherry)	<ul style="list-style-type: none"> • Disruption to input supply (100%) • Reverse migration in Maharashtra • Fear of infection to perform farm operations
Marketing (n = 225)*	Perishables	<ul style="list-style-type: none"> • Logistics disruption (100%) • Colossal losses and throwaway prices • Distress sale in Odisha • Restricted movement • Limited sale points
	Semi/non-perishables	<ul style="list-style-type: none"> • Logistics disruption (100%) • Relatively less loss in comparison to perishables • Record procurement of wheat (38.9 mt) backed by state policy • Restricted movement • Limited sale points
Consumption (n = 729)**	Red (n = 322)	<ul style="list-style-type: none"> • 45.7% had no access to market • 72.7% perceived increase in food prices • 91% changed their shopping behaviour • 38.6% experienced income shock • 78.8% changed their consumption basket
	Orange (n = 276)	<ul style="list-style-type: none"> • 51.7% had no access to market • 79.4% perceived increase in food prices • 94.2% changed their shopping behaviour • 47.1% experienced income shock • 78.3% changed their consumption basket
	Green (n = 131)	<ul style="list-style-type: none"> • 33.7% had no access to market • 73.3% perceived increase in food prices • 90.8% changed their shopping behaviour • 41.2% experienced income shock • 77.9% changed their consumption basket

Note: Compilation from survey results (Cariappa et al., 2020a).

*A dipstick survey conducted by telephone and personal interview from farmers in Haryana, Punjab, Uttar Pradesh, Maharashtra, Odisha, Karnataka, Tamil Nadu and Puducherry.

**A pan-India online survey conducted via google form (<https://forms.gle/Z4FRqSeKads7CRWLA>) across three regions (post-stratification) as per the intensity of COVID-19 incidence viz., red, orange and green. Red indicates the high rate of COVID-19 incidence, Orange indicates the moderate rate of COVID-19 incidence and Green represents the low rate of COVID-19 incidence or no incidence (classification as per the Government of India).

These protectionist measures were partly introduced to avoid driving up local food prices as the weakening of national currencies made it more advantageous for food producers to export rather than sell domestically. The resulting food price inflation could have had significant consequences- making poverty worse and leading to social and political unrest. Fortunately, excessive protectionism was avoided and many of the initially imposed restrictions have been removed, with countries adopting overall a restrained and reasonable approach. Globally, the food supply has been adequate, and markets have been stable so far. For example, global cereal stocks are at comfortable levels and the outlook for wheat and



other major staple crops for 2020 is positive. However, disruptions to the food supply chains remain, situations vary, and there are still many unknowns.

Key points due to a lockdown of agriculture-related.

Due to the decline in agriculture and allied sector production, direct income support may be provided to farmers in general and those engaged in the poultry and fisheries sector in Particular. In this connection, enhancing the income support through PM-KISAN could be a good option.

- I. Due to disruption in the marketing of Agri produce in mandies and rural hats, and reduced farm gate prices, the income of farmers declined to lead to poor recovery. Therefore, an interest waiver for an Agricultural term loan for at least one year may be thought of.
- II. Microsoft activities need to be reactivated through the injection of liquidity to the NBFC-MFI sector so that small business activities on payment and roadside shops could be resurrected in semi-urban and rural areas.
- III. Banks should be nudged to enhance credit linkage and /or the next dose of credit to Eligible SHGs.
- IV. MSME sector to be supported through enhanced credit support (working capital) to lower interest rate, interest subvention and waiver of interest for at least two quarters for existing loans.
- V. Opportunities for mask making, sanitisers, direct delivery of food grains, vegetables, fruits to be encashed by SHGs and FPOs.
- VI. A provision may be considered for NABARD grant assistance to FPOs purchase of Small road transport vehicles to take advantage of new emerging opportunities for direct selling of agriculture and horticulture produce to consumers.
- VII. Awareness programme on COVID-19 by SHGs, FPOs and FCs in rural areas may be done on a massive scale to check the growth of the corona pandemic.
- VIII. Universalization of MNREGS for covering more and more labourers, including those Migrant workers who have returned from bigger cities.
- IX. MSMEs may be encouraged to produce PPE kits and hand sanitisers, etc.
- X. Rural godowns and cold storage infrastructure capacities in rural regions need to be augmented.



- XI. Model farm equipment bank/fodder bank with FPOs may be developed with support from NABARD.

Conclusions

On the whole, at the national level, the impact of COVID -19 and the resultant Lockdown had been quite harsh on the agriculture and allied sector in the majority of Districts. Among various subsectors, Rabi crops were least affected as its harvesting Was on the verge of completion but allied sectors such as poultry, fisheries and Pig/Goat/sheep sectors witnessed a drastic fall in demand due to misplaced Rumours leading to declining production as well as declining farm gate prices. However, prices of agriculture inputs were estimated to be rising mainly due to disruption in the Supply chain and closure of shops and markets.

Although banking activities were Exempted from lockdown, yet basic services viz, loan deposit and recovery were severely hampered in the majority of the sample districts in the country. However, the silver lining was the increase in digital banking transactions in the majority of the sample districts. The microfinance sector and MSME sector were the biggest Casualties with disruption in more than four-fifths of the sample districts thereby seriously hampering the livelihood in the unorganized sector which provides Maximum employment in the rural areas. The activities of FPOs and FCs also came to a complete halt. However, these rural institutions including SHGs grabbed the Opportunities provided by the situation of stitching face masks, PPEs and Preparation of sanitisers thereby helping the society also earning some income for their members. Further, FPOs in close coordination with local administration in some of the districts were quite instrumental in the door to door delivery of fruits, vegetables and dry rations to the needy.