

COVID-19 - Impacts on the Indian Agriculture

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Abstract: *COVID-19's economic implications once again catapulted agriculture into the mainstream discourse. The reverse migration of labourers to India's hinterlands is having a differentiated impact across regions. While agricultural operations in the well-endowed regions are about to suffer, the hinterlands will have received an excess supply of labourers, throwing up new challenges and opportunities. In this context, it is worthwhile to revisit the role of agriculture in economic development to throw light into the policies the sector will need to adopt to recover better. This article talks about some of the impacts of lockdown within agriculture. The impacts of the economic slowdown on agriculture are also discussed.*

Keywords: Agricultural, development, labourers, slowdown, COVID-19

1. Introduction

Agriculture is the backbone of any economy. It is the primary sector which generates employment, so that the entire circle of economic circulation goes on. When we speak about the Indian economy, the majority of the population is restricted to this sector. The Indian economy has got a huge hit from the coronavirus pandemic and resultant lockdowns. The International Monetary Fund expects the global output to cut by 4.9 per cent in 2020 and India's GDP to contract as much as 4.5 per cent. But the agriculture sector is the silver lining in the year 2020-21, said the monthly economic report for July published by the department of economic affairs. The monsoon this year is predicted to be 102 per cent of the long - period average. A normal monsoon augurs well for India, as a considerable component of the rural workforce in employed in the agricultural sector. While most economic activity came to a standstill in April-May 2020 due to Covid-19 induced lockdown, farming activities were exempted from the nationwide lockdown to facilitate uninterrupted harvesting of Rabi crops and sowing of kharif crops. This was a major enabling factor for the smoothness of agricultural commodities throughout the lockdown period and across both, rural and urban areas, the story pointed out.

Indian agriculture has fared pretty well during the recent period. The annual growth was 3.5 to 5 percent during the concluding five years and the growth broad-based both in terms of the production and regions. The advanced estimates of agricultural production for 2019-20 are optimistic and the growth is likely to be more than 3.5 percent. Food grain production is likely to be 292 million metric tons (2.4 percent higher than 2018-19), as per the second advance estimates. Likewise, the horticultural production in 2019-20 is expected to be 0.84% higher than 2018-19. Only it is to be noted that any deviation in normal operation may give some set-back to these estimates, particularly the impact of late rains and hailstorm on Rabi crops. Further, as per the FCI as of March 2020, the stocks of wheat and rice in the central pool stand at 58.49 million metric tons, which has more than doubled the operational buffer-cum-strategic stock of 21.04 million tonnes. All these points to more than adequacy of the food supply in the country.

The lockdown in the wake of COVID-19 has disrupted economic activities and the supply chains significantly. The millions of people are infected with COVID-19 globally and the death toll is climbing fast. It is expected the lockdown shall flatter the infection curve soon and essential economic activities and services shall be in place. In India, the rate of infection, luckily, is not that rapid due to timely interventions by the government, but the impact of COVID-19 coincides with the economic slowdown. It is anticipated that the lockdown shall further reduce the economic growth about 10 percent or more. This is probable to have an impact on demand for agricultural products, dislocation of a labour force and disruption of supply chains. These developments shall have implications for the societal safety net programs of the government.

With the ongoing pandemic, livelihoods of all the farmers and the masses who are indulging in this sector are at high risk. In some nations, COVID-19 has disappeared while in some it is coming back. Just a short span of the pandemic will leave an everlasting impression on the agricultural sector. The pandemic will go away, sure, but we do not know when and we do not recognize the quantum of the negative impact it will leave on the economy. Leading writers and researchers have said that there might be a food crisis unless measures are taken fast to protect the most vulnerable food supply chains alive.

Economic Impact on Agriculture: World

Globally, the Food and Agriculture Organization (FAO) expects shifts in the supply of and demand for nutrient. It warns of a world "food crisis" if states do not protect vulnerable people from hunger and malnourishment, and de-clog food supply chains. Likewise, the United Nations has warned that the Covid-19 crisis could trigger "food shortages" around the world. The World Food program (WFP) has noticed that the Covid-19 crisis is "threatening to affect millions of people already made vulnerable by food insecurity and malnutrition." The Ebola outbreak in Sierra Leone (2014 -16) led to a major rise in hunger and malnutrition. Small and marginal farmers will also be severely affected if they are unable to continue working their land, earn remunerative product prices, and gain access to markets for purchase or sale. World agricultural prices show signs of a rise for the third week of March 2020. The

increases are marked for rice and wheat. One reason for this rise has been the stockpiling by households of rice and wheat, and the restrictions levied by different countries on food exports. For instance, Vietnam, the world's third largest rice exporter, has stopped exporting, which may bring down the global rice exports by 15 per cent. If India and Thailand ban exports, world rice prices may rise sharply soon. Russia, the world's largest wheat exporter and the largest wheat supplier to North Africa, is expected to restrict its exports. Kazakhstan, one of the world's greatest sources of wheat flour, has already banned its exports. Similar trends are observed in other crops too. Serbia, to cite an instance, has stopped the export of its sunflower oil. Commentators have wondered if these policies suggest the onset of a "wave of food nationalism" that would disrupt the nature of trade flows that have existed after the 1990s.

Economic Impact on Agriculture: India

Let us first begin with the question of prices. It is significant to note that even before the Covid-19 pandemic began, Indian economy was facing a rise in food prices. The food inflation had begun to jump from the middle of 2019, reaching, by January 2020, levels previously attained in 2013-14. On the wholesale price indices (WPI) for selected crop groups, available only till February 2020, that while WPI for food articles has been rising from August 2019 onwards, the boost was driven by a rise in the prices of vegetables; within vegetables, the price of onions, followed by potato and tomato, drove the WPI up. While onion prices have come down, vegetable prices remained high even in February 2020. Granting to the RBI's, 7-the bimonthly monetary policy statement, dated March 27, 2020: "as regards inflation, the prints for January and February 2020 indicate that actual outcomes for the quarter are running 30 bps above projections, reflecting the onion price shock". Nonetheless, the RBI's assessment is that food inflation pressures will fall, since aggregate demand is likely to weaken because of the Covid-19 crisis. Consumer price indices (CPI) for food also indicate a similar tendency of a rise after August 2019, with some weakening in January and February 2020.

A) Peak harvest with no procurement:

- This is the apex of the Rabi season in India and crops like wheat, gram, lentil, mustard, etc. (Including paddy in irrigated tracts) were at a harvestable stage or almost reaching maturity.
- This is also the time when the farm harvests reach the minds for assuring procurement operations by designated government agencies.

B) Labour unavailability due to reverse migration:

- The non-availability of Labour has hurt operations in many regions.
- Consequently, the shortage of migrant labour has resulted in a sharp increase in daily wages for harvesting crops.
- Some parts of agriculture that have the luxury of deploying technology for harvestings, like Paddy and Wheat, are relatively more isolated since they often do not have to depend on large numbers of manual labour.

C) Fall in prices:

- Agricultural prices have collapsed due to lack of market access, including the stoppage of transportation and closing of borders.
- The rise in labour prices and lack of access means that farmers are staring at huge losses and hence allowing crops to rot in the fields, a better 'stop-loss' mechanism.

D) Scarcity of public commodities:

- Making the food grains, fruits and vegetables and other essential items available to consumers, both in rural and urban areas, is the most vital challenge.
- Transportation of public distribution system PDS items to last-mile delivery agents, by both rail and road, has been severely impacted in the outset.

E) Restrictions on Sale:

- There were self-imposed restrictions on the inter- and inter State movements of farmers/labourers, as well as harvesting and related farm machines.

F) Disruptions in supply-chain:

- The absence of transport facilities clubbed with vigilant blocking roads has a defining effect on the movement of migratory harvest labour and Agri-machinery. Also, trucks and tractors are not inclusive of 'farm machinery' by definition.

G) Lockdown induced debt and Cash Flow Constraints:

- The most important issue that farmers have to overcome is the problem of repaying their crop loans, gold loans and other informal debts.
- Crop loans are repaid between April and May and a fresh loan is given at the onset of a new season.
- Any failure to do so will mean that they will be pressured to borrow money from the informal sector at high rates of interest for the new seasonal.

Theoretical and research underpinnings:

Many development theories have concentrated on the issue of employment and technology in the agriculture sector. The marginal productivity of laborers in agriculture was considered to be close to zero. Hence, the strategy was to identify this disguised labour force and make it more developed, most modern, and the transfer of this surplus labour force away from agriculture was believed to leave the agricultural output unaffected.

The dual economy models of economists like Ragnar Nurkse, Arthur Lewis, John C.H. Fei and Gustav Ranis largely took this line. Step by step, the commercialization of the agricultural sector would see rising competition between agricultural and industrial sectors because these sectors compete with each other due to rise in wages. In the Fei-Ranis model, the duo visualized technology in the agricultural sector as a means to improve productivity.

The structuralist school of thought, which included such notable economists as Raul Prebisch and Hans Singer, also argued for larger investments in the industrial sector

due to the worsening terms of trade for agriculture. The terms of trade were measured as a proportion of the export price received to import price paid, and in a free trade regime they argued it would worsen.

Another economist of this school of thought, Albert Hirschman, highlighted the weak linkages of the sector. The Marxist school also believed that the smallholder peasant agriculture would not gainfully absorb labour as labour productivity is already down. This could warrant institutional changes in the way farms are organized, primarily through the collectivization of small farms. Gunnar Myrdal looked into regional development matters and according migration and regional inequalities critical roles.

2. Review of Literature

Dr. U. Arumugam | Dr. G. Kanagavalli & M. Mania (2020) in their paper Covid-19: Impact of Agriculture in India stated that the progressing wellbeing emergency around Covid-19 has influenced varying society. Governments have swung into activities since the Corona virus assault made an extraordinary condition. The powerful spread of the rules and usage on the undercoat will be urged, as ranchers gather the rabbi yield and start arrangements for the Kharif season. Moving ahead, one can predict numerous difficulties as ranchers and homestead workers set out to modify their lives and jobs. This has contributed to a fall in the world economy, especially in developing countries like India. India with its suitable control has, however tried its best to combat this crisis with a country wide lockdown to prevent the health implications. But agriculture being the linchpin of the country and the GDP has been impacted in a negative way with enormous disruption in the provide series and cropping decisions for imminent agricultural seasons. All these possess a negative implication on the farming group of people that is and will be undergoing serious inimical and mind losses.

S. Mahendra Dev and Rajeswari Sengupta, (2020) in their paper entitled "Covid-19: Impact on the Indian Economy" On the health risk in rural countries, it is true to currently the problem is much more solemn in inner-city areas since of high compactness. Simply it can spread to 70% of the India's inhabitants who live in rustic areas. Some migrant workers have already started back to rural areas. Thither is a risk of Covid-19 dispersion to the grower, agricultural laborers, workers and others working throughout the food supply chains. The wrap up material used for agricultural merchandise can also convey the virus. The cultivation and rural inhabitants have to be sheltered as societal aloofness will be experienced comparatively less in rural regions.

Prangya Paramita Sahoo & Suvangi Rath (2020) in their paper Potential Impact of CoronaVirus on Agriculture Sector stated that Nonetheless, it very well may be fought with the coordinated of the focal and state governments alongside the examination establishments and augmentation administrations. To stay away from the antagonistic effect of Covid-19 flare-up and to go on the agribusiness section unaffected the legislature should give specific rules for horticulture activity the value structure ought to be thought

about and changed such that the ranchers are not under any sort of monetary misfortunes, the cultivating network alongside the workers ought to be shielded from Corona infection by keeping up social separating alongside help with managing the frenzy and mental misfortunes during this time and obviously giving the ranchers a stage for direct advertising to fulfil the need of the shoppers by home conveyance of the farming create and evade any sort of wastages in the reaped items.

Mr. M. Manida & Dr. G. Nedumaran (2020) in his article Agriculture in India: Information About Indian Agriculture & Its Importance said that Over a long time since agribusiness started to be created, famous everywhere have exposed the food belief of wild foliage and creatures, and household and reared them. Natural products, vegetables, and olives are likewise significant nourishments for individuals. Feed grains for creatures incorporate soybeans, field corn, and sorghum. Rural pay is additionally gotten from non-food harvests, for example, elastic, fibre plants, tobacco, and oil seeds used in fake substance mixes, just as normal world raised for pelts. The reason for the investigation is to comprehend the status of the Indian farming area, different kinds of agribusiness, and the significance of the horticulture in India, agro industry and governments for the advancement in agribusiness in basic wild conditions, likewise to know different Government activities, ventures, strategies for the improvement of farming and the job of farming in Indian economy.

Objectives

- 1) To study on Challenges of the agriculture in Covid-19.
- 2) To analyse the impact of Covid-19 on Indian agriculture.
- 3) To highlight the Response of the Government of India.

3. Methodology

This research is mostly descriptive in nature. Secondary sources of data have been used for this Secondary data has been collected from different published sources like books, journals, newspapers and magazines, and web sites.

Immediate Challenges on Agriculture sector

- In spite of all these we have been raised regarding negative implications of COVID-19 pandemic on the farm economy. This is the peak of rabi season in India and crops like wheat, gram, lentil, mustard, etc. (Including paddy in irrigated tracts) are at harvestable stage or almost reaching maturity.
- This is also the time when the farm harvests reach the market yards for assuring procurement operations by designated government agencies. Moreover, any severe disruption to the supply of perishable fruits and vegetables, dairy products, fish, and so on Having mobilized to fulfil the increasing demand from a bulging middle class as well as urban and rural consumers, may create irreparable damage to all actors in the supply chain.
- The migration of workers from fewer parts to their native places has also triggered panic buttons, as they are of the essence for both harvesting operations and post-harvest handling of produce in storage and marketing centres.

- The Union Home Ministry, in a real significant move, has notified to exclude movement of farmers, farm laborers and harvesting and sowing-related machines from the purview of lockdown.
- Making the food grains, fruits and veggies and other essential items available to consumers, both in rural and urban areas, is the most critical challenge for Government machinery during the lockdown period.
- Smooth functioning of the supply chain, with adequate safety measures for the people involved, is of paramount importance. Transportation of public distribution system (PDS) items to last mile delivery agents, by both rail and road, has to be ensured by several Government agencies. The distribution of the commodities of a vulnerable population, while maintaining prescribed guidelines and protocol, particularly of social distancing, must be effectively supervised.
- As the ongoing lockdown coincides with the Rabi harvesting season, farmers across the country look up to the Government to ensure uninterrupted harvesting of the crops as well as smooth procurement operations.
- The Union Home Ministry's circular waiving restrictions on the inter- and intra-State movements of farmers/laborers, as well as harvesting and related farm machines, is indeed a step-in the right direction. While ensuring availability of laborers for critical farm operations, their safety (from any COVID infection) and wellbeing must be prioritized by the Government systems. The sale of dairy products; fish; poultry, etc. Has also been hit during the lockdown period as the uptake by the organized industry players has been affected due to shortage of work force and transport issues. As the weather has been very erratic over the past few months in many parts, harvested produce must also be protected from such hazards.

Mitigation Measures

- The poorest sections of society are always the hardest strike in any disaster or pandemic situation. With around 85 percent of Indian farm households being small and marginal farmers, and a significant part of the population being landless farm laborers, welfare measures to contain any damage from COVID are definitely going to help them with sincere implementation.
- The focus of the Government therefore has to be to protect the spirits of every citizen. Nevertheless, people living on agriculture and allied activities, mostly those losing their income from informal employment in this lockdown period, have to be provided with alternative avenues till the economy bounces back. To keep up the demand for agricultural commodities, investments in key logistics must be enhanced.
- Moreover, e-commerce and delivery companies and start-up need to be encouraged with suitable policies and incentives. The small and medium enterprises, running with raw materials from the husbandry and allied sector or otherwise, also need special attention so that the rural economy doesn't collapse.
- To obviate the immediate concerns of scarcity of farm labour, policies must facilitate easy availability of machinery through state entities, Farmer Producer Organizations (FPOs) or custom hiring centres (CHCs)

with suitable incentives. It is as well suggested to explore leveraging NREGS funds to pay part of the farm labour to lessen the monetary burden on the farmer, while ensuring wage employment to the landless laborers and workers.

Response of the Government of India

The response of the Indian government in agriculture has involved three policy measures.

- 1) It has declared that most agricultural activities will be in the essential list. It has exempted farm workers in the fields, farming operations by farmers, agencies engaged in the procurement of agriculture products including MSPs, Mondays notified by the State Governments, inter- and intrastate movement of harvesting and sowing related machines and fabrication, Packaging units of plant foods, pesticides, and seeds among others.
- 2) It has announced that the first instalment of the PM-Kisan payment to farmers, i.e., Rs 2000, will be paid up front to farmers. It has also foretold that the wages under MGNREGS will be raised from Rs 182 to Rs 202 per day.
- 3) The Reserve Bank of India (RBI) has declared a moratorium on agricultural term loans (including crop loans) for a period of three months. If we look at the responses of governments across the world, these interventions appear insignificant. In fact, the upfront payment to farmers from the PM-Kisan scheme is not even worth naming a package, as this money was anyway going to be paid to the farmers between April and June.

4. Suggestion

- Reverse migration due to COVID-19 provides an opportunity for the hinterland administration to engage the returned laborers in gainful employment, and the sole short-term option is to leverage the potential of farming.
- The labour has to substitute for the probably reduced input application in agriculture to help sustain the production level, resulting in an increased factor share of labour in the agricultural sector.
- Intra-household food insecurity is better addressed by generating awareness and targeting women and minors who are out of anganwadis now. Income transfer measures could also be really helpful in reviving rural demand. Actions under the Mahatma Gandhi National Rural Employment Guarantee Act should be promoted in this context.
- Long-term strategies should be qualitatively different, focusing more on other sectors. Nonetheless, Agra-based activities and enterprises would be a central element. Improving the labour and land productivity would be a vital strategy.

5. Conclusion

It can be concluded that, the county level in India, the further process of agriculture will be disrupted because of the kharif season. India requires to have 250 lakh Quintiles of seed for this season, but with various barriers coming out, this has not been procured till now. This is not merely the

end of the impact. It is the starting point. The government needs to step in at the right time so that the biggest sector of the economy does not fail lost during these tough times. The food supply chain has been hit the strongest by the pandemic, which also results in a shortage of food security amongst the most vulnerable segment of the population. Apart from that, if we run deeper, we will observe that the migrant labour or crisis directly affects the agricultural sector employment. Various laborers have been rendered unemployed and due to this; the demand of food will also go down from their terminal. With no money to feed themselves, they would hold up on cheaper sources of food. The end of the lockdown will not end the problems. On the contrary, they are probable to be compounded at the onset of the new agricultural sowing season. There is a greater demand for government support in the form of support for other agricultural inputs. Lack of any relief will only cause the agricultural crisis worse. The need of the hour is to maximize possibilities of agriculture, which has established its utility and resilience in trying times.

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