

Impact of Covid-19 on the Agricultural Sectors of India with Special Reference to Dantan – I Block: Paschim Medinipur, West Bengal

Nityalal Sen

Department of Commerce, Bidhan Chandra College, Rishra, West Bengal, India

Corresponding Author's Email: nityasen9432@gmail.com

ABSTRACT

Agriculture has always been the backbone of the Indian economy and, despite the concentrated efforts on industrialisation in the last six decades, it still continues to be so. At present, it provides employment to a massive chunk of the total workforce in the country. The COVID-19 pandemic has resulted in an unprecedented health and economic crisis worldwide. Agriculture and allied sectors have been severely affected after the lockdown was declared by the government of India on March 25, 2020. In this paper, an attempt has been made to find out the impact on the agricultural sector in India due to the three-and-a-half-month lockdown period as declared by the Central Government. The current study also highlights the measures taken by the Indian government to tackle the critical situation in the agricultural sector along with a number of suggestive measures to improve and to save the small, marginal and landless farmers of the country from hunger and destitution.

Keywords: *COVID-19 Pandemic; Government of India; Small and Marginal Farmers; Minimum Support Price (MSP); Agricultural Product Market Committee (APMC)*

INTRODUCTION

A majority of Indian farmers are marginal and small farmers with less than 2 hectares of land or landless labourers and were severely affected. They contribute significantly to the nation's food security and productivity. The share of the agricultural sector in the Indian economy is 17%, which is higher than the manufacturing sector. If markets are kept intact and prices of agricultural products are prevented from crashing, agriculture alone will contribute more than 0.52% to the growth rate of the Indian economy. Agriculture is the only sector to register a positive growth rate of 3.4% (The Economic Times, 2020).

LITERATURE REVIEW

Mahajan and Tomar (2020): "Here Today, Gone Tomorrow: Covid-19 and Supply Chain Disruption" – The paper looks at the disruption of food supply chains due to the COVID-19-induced economic shutdown in India. From the novel dataset, the author points out that long distance food supply chains have been hit the hardest during the current pandemic, with welfare consequences for urban consumers and farmers.

Mishra and Rampal (2020): "The COVID-19 pandemic and food insecurity: A viewpoint of India" The paper highlighted the damages caused by COVID-19 and hunger, with implications for food insecurity, nutritional status, productivity, education, and wage earnings.

Reardon, Bellmare, and Zilberman (2020): "How COVID 19 may disrupt the food supply chain in developing countries" The paper highlights that small and medium-sized enterprises in urban areas will face significant problems. The government will have to frame policies to respond to these varied impacts to avoid supply chain disruption, higher food prices, and severe economic fallout.

Objective of the study:

- 1) Analyse the factors that have adversely affected the Rabi crop harvesting in the Lockdown

- 2) To present an analytical account of the Rabi crops derived from survey results of Dantan-I block
- 3) To highlight the measures taken by the Government of India to alleviate the plight of farmers till now
- 4) To suggest some measures to improve the condition of marginal and landless farmers

METHODOLOGY

The study is both theoretical and analytical in nature, based on primary as well as secondary data respectively. The secondary data has been collected from various related research articles, papers, and websites. The primary data has been collected from a field survey through a structured questionnaire. The survey has been conducted through telephonic interviews with respondents due to the pandemic and lockdown situation. 60 respondents from seven villages (Angua, Nekurseni, Manoharpur, Jamua, Malpara, Gholai, Tararui) situated in Dantan-I block, Paschim Medinipur, West Bengal. The study period was from 15/04/2020 to 28/07/2020. Small marginal farmers and landless farmers have been selected as samples for the study through a convenience non-probabilistic sampling technique to fill up the questionnaire.

Impacts of Covid-19 on the Agriculture:

- Crisis in Harvesting Rabi crops: When the lockdown was announced, the regions endowed with irrigation facilities had standing crops of wheat, paddy, vegetables, oilseeds, and pulses that were ready to be harvested. The regional variation of cropping patterns contributes to the movements of migrant workers in search of employment. The northern states of Punjab and Haryana depend during the harvesting on a large number of migrant labourers from the eastern states of Bihar and Jharkhand for the field operations and harvesting, which has not been possible this year. There has been a shortage of agricultural labourers in these states. It is estimated that during the Rabi season, Punjab and Haryana attract around 1.6 million migrant workers. Thus, harvesting was adversely affected and the cost of harvesting skyrocketed.
- Reduction in agricultural wage rate: The major supply of migrant labourers came from the states, where there was a major reduction in the daily wage rate of agricultural labourers due to the law of demand and supply. A disrupted agricultural labour market saw 45% of migrant labourers return home (Imbert, 2020).
- Complete disruption in supply chain: During the lockdown, major highways and entry points into the state were locked. Major numbers of vehicles are yet to receive their permits for transporting agricultural goods. Therefore, the pile of trucks has stopped, and the supply chain has been disrupted (Barrett, 2020; Carberry & Padhee, 2020). The supply chain has been completely disrupted across the country and the harvesting of Rabi crops is in crisis (Cariappa *et al.*, 2020).
- Crisis in marketing of agricultural crops: Due to a) disruption in the procurement of crops by the Government agencies b) blockade in the movement of transports c) limited operation or closure of APMC Mandies d) shutdown of retail agricultural markets e) shortage of migrant agricultural workers engaged in loading and unloading purpose the marketing has been severely hit.

Especially crops with low shelf life like sugarcane growers in Meerut and Saharanpur in Uttar Pradesh, banana cultivation in Trichi, pumpkin farmers of West Bengal and Odissa have been the most severely hit.

- Impact of the poor condition of hospitality industry: Shutdown of hotels, restaurants and allied sectors has resulted in further reduction in demand. According to a report published by the Indian Railways Ministry; freight loading has dipped from 10000 cargo rakes per day to 3000-4000 cargo rakes per day.
- Negative effect from MSMEs: MSME Sector is a large user of agricultural products as a raw

material. Due to lockdown the MSME sector has been one of the worst hit and thus has been also an additional factor in demand reduction of agricultural products.

- Forced reduction in price level: As a result of all these cumulative factors, farmers have been forced to sell their agricultural commodities to local traders at a much lower price to recover as much as possible cost of the perishable items and sustain themselves in these difficult times.
- Reduction in export of agricultural commodities: India has been the major exporter of agricultural crops like rice, milk products, tea, honey, horticultural products etc. According to APDA India's exports in agricultural products in 2018-19 were \$685 Billion USD. All the ports have come to a standstill during the lockdown and resulted in huge unsold stockpiles. Therefore, it is impossible now to achieve the target export in 2019-20.
- Delay in commencement of Kharif crop cultivation: Due to unavailability of seeds, tractors ancillary support and pesticides etc, cultivation of the Kharif crops have been delayed.
- Impact on floriculture : In India flowers are mainly produced for weddings and pilgrimages both of which are shut down due to the Lockdown .Therefore flower farmers and production companies were massively hit as flower is an extremely short lived commodity .Rose export to the Gulf States were also drastically reduced .
- Food security of the agricultural and returned migrant labourers is a great concern and challenge to the state. The presence of an additional member in household without income could worsen the nutritional security of the household. The solution is largely between the State and the Community. Skyrocketing prices may lead to social unrest. (Bellemare, 2015)

Also, it is the general practice in large sections of rural India to take food after the whole of the family has been fed. this would result in an added undernourishment of women under such circumstances.

RESULTS AND DISCUSSION

Dantan-I block has one Panchayat Samity , 9 Gram Panchayat ,124 Gram Parishad and 188 villages in total .According to 2011 census, the population was 1,72,107 of which 1,65,921 were rural and 6,186 were urban. Scheduled Cast population was 29,235 (16.99%) and Scheduled Tribe population was 28,183 (16.38%). 48.81% people lived below the poverty line. Agriculture is the main source of livelihood and revenue. Among the farmers distribution according to land owned¹ were as follows:

Bargadar-4.96%

Patta holder-24.7%

Small farmers (1-2 hector landowners) -3.04%

Marginal farmers (owning up to 1 hector land)-31.58%

Landless labourers-35.71%

There are 8 commercial banks and 2 Grameen Banks serving the total population here

(Government of West Bengal, 2014).

From the above data it is clear that marginal and landless farmers make up the bulk of farmer population (67%). A large chunk of population depends on agriculture and allied activities.

From the survey the actual cost of production of current Rabi crops (paddy has been considered here as it is the chief Rabi crop in this area) per acre on an average is as follows:

Table 1: Statement of total cost and profit to cultivate Paddy in 1 acre of land

Particulars	Amount (Rupees)
Water (mainly from private pumps and shallow wells)	5000
Land preparation (by using tractors and power tillers)	2500
Seeds (from private traders)	1500
Plantations (using plantation machines on a hire basis)	2500
Pesticides	2300
Fertiliser	4918
Labour charges (used mainly for application of fertiliser and pesticides)	2400
Harvesting (mechanical operation-on a hire basis)	10000
Transport cost (from land to trader)	1200
Total Cost	32318
Profit	3082
Sales (30 Quintal*Rs 1180)	35400

*An average paddy production of 30 Quintal per acre of cultivated land has been used for calculations.

Observations:

- 1) The minimum support price (MSP) for paddy was fixed at Rs 1815 per Quintal for the session 2019-20 (increased by 3.7% as compared to the MSP of Rs 1750 during the 2018-19 session) by the Government of West Bengal and to be procured from the farmers registered under the Krishak Bandhu Scheme .West Bengal Government procured 22% of the targeted paddy acquirement only .Farmers were forced to sell their products to the small traders (Goladars) at a much lower rate of Rs 1180 per Quintal because a) only 10% of the survey population has a capacity of long term storage of harvested crop and b) most of the farmers had to repay their loans to private moneylenders and banks .
- 2) Thus, amount lost due to non-received MSP is $\{(1815-1180) * 30\} = \text{Rs } 19,050$ per acre of land straightaway.
- 3) Another important issue is cost of water during the Rabi season is born solely by the farmers themselves due to non availability of any irrigation infrastructure. Private facilities are provided at Rs 5000 per acre and the Government charge of the same is Rs 1000 per acre .But Government supplies have been largely unavailable due to lack of infrastructure required to support such a huge farmer population adding to the burden of the cost of production.
- 4) Seeds had to be procured from the private dealers at a rate of Rs 25 per Kg which is supposed to be provided by the Government at much lower rates. E-commerce suppliers, which could have been a boon to these underserved villages, are also unavailable.
- 5) Rabi crops are harvested by using mechanical help from Harvester machines .According to the respondents, the manpower needed to operate the machines are unavailable and the operators come from Punjab after their own Wheat harvesting is complete .But this year due to lockdown ,movements were restricted and operators could not arrive from Punjab .This resulted in much higher rates of operating the machines or manual harvesting .The cost of harvesting increased as much as 100% from the previous year (Rs 10000 per acre this year as compared to Rs 5000 previous year) adding to loses of farmers .
- 6) Due to restricted movement of transports, the cost of transport also increased 100% from the last year (Rs 1200 per Tractor load this year as opposed to Rs 600 per Tractor load previous year).

Cumulating all these points, a cost analysis can be made as follows:

Table 2: Comparative cost analysis

Particulars	Present cost (Rs)	Ideal Cost (Rs)	Extra incurred cost (Rs)	Remarks
Water	5000	1000	4000	If provided by Government pump services
Seeds	1500	1000	500	If provided at government rates
Harvesting	10000	5000	5000	Due to lockdown
Transport	1200	600	600	Due to lockdown
Fertiliser and Pesticides	7218	5000	2218	If provided by lower e-commerce rates or Government rates
Total	24918	12600	12318	

7) Thus, total amount lost is

Rs 19500(due to revenue lost due to not getting MSP) + Rs 12318(due to Lockdown and lack of Government initiatives as shown) = Rs 31818 per acre of land

8) Added to the observations is that only 40% of the study population cultivating their own land the others being landless. Therefore, they are also required to pay an amount of Rs 7000 per acre land to the landowner. This cost was not included in Table No. 1. If this is taken into account, the landless farmers will be actually incurring a loss of

Rs 7000 – Rs 3082(profit as obtained from Table 1) = Rs 3918.

Measures taken by the Government of India:

The Central Government is expecting that agricultural sector could be the silver lining of Indian Economy, as it is estimated that the growth rate would be 3% for the year 2020-21. According to NITI AYOOG Member, Ramesh Chand (2019), the current rate of growth in Indian agriculture is 60% which is more than the non-agricultural sector, a rare phenomenon. NITI AYOOG estimated the growth rate in agricultural sector in the normal monsoon this year is 40-60%, higher than the last year .In order to achieve the growth rate 3% and to save the marginal and landless labourers in the country the GOI has taken the following measures:

- 1) Since 24th March 2020, under the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) Scheme, Rupees 17986 Crores has been disbursed.
- 2) GOI has also announced that the first instalment of the PM-KISAN payment to farmers, Rs 2000/- will be paid.
- 3) Wages of MGNREGS will be raised from Rs 182/- to Rs 202/- per day and that will benefit approximately 5 crore families across the country.
- 4) The RBI has announced a moratorium of agricultural farm loan including crop loans for a period of 3 months.
- 5) The Government via the National Food Security Act and public distribution system has assured additional food grains, which will benefit around 800 million poor people across the country.
- 6) The GOI has announced that the agricultural activities and farming operations are in the essential list. Agencies engaged in the agricultural products including MPS, Mandies notified by the State Government, inter and intrastate movement of harvesting and sowing related machines and manufacturing packaging units of fertilisers, pesticides, seeds etc are also exempted during the lockdown period.

- 7) E-NAM, KISANRATH app and the All India Agritransport Call Centre has been launched for the benefit of the farmers. E-NAM is online trading platform for agricultural commodities. KISANRATH app helps to facilitate transportation of agricultural product across the country. All India Agritransport Call Centre was launched to facilitate interstate movement of perishable commodities during the period of lockdown.
- 8) The GOI has allotted Rs 2000 Crores for the computerisation of Primary Agricultural Credit Society (PACS) to ensure co-operatives are benefitted through digital technologies.
- 9) With an aim to boost up innovation and entrepreneurship in agriculture, GOI has introduced a new AGRI UDYAN Program to mentor start ups and to enable them to connect with potential investors.
- 10) The GOI has launched the Pradhan Mantri Krishi Sinchani Yojna (PM-KSY) with an investment of Rs 50000 Crore to support the irrigation sources for providing permanent solution during the Rabi season and draught so that the farmers can be protected from drought.
- 11) The GOI has allowed 100% FDI in marketing of food products and e-commerce under automatic route.
- 12) The GOI has also committed to invest Rs 600 Crore for mega food parks in the country as a part of the Scheme for Agro marine Processing and Development of Agroprocessing Clusters (SAMPADA).
- 13) The informal unemployed workers need a cash income support. The GOI has provided Rs 500 /- per month to the bank account of 200 million women through Jandhan Financial Inclusion Program, although it is not sufficient to feed their families.
- 14) The new agricultural export policy has been announced to increase Indian agricultural export to US \$60 Billion by 2020 and US\$100 Billion in the next few years.
- 15) Soil Health Card has been introduced to enhance the productivity of specific crops in sustainable manner and shall be issued to 14 crore holdings.
- 16) Price stabilisation fund with a corpus of Rs 500 crores has been established to support the price control of perishable commodities. This will regulate and mitigate price volatility.
- 17) Farm credit has been raised to Rs 8.5 Lakh crores ensuring convenient access to loans at concessional rates.
- 18) The Hon'ble Finance Minister has recently announced Rs 1 lakh crores Agri Infrastructure Fund for impetus development of farm gate and aggregation point affordable and financially viable post harvest management infrastructure.
- 19) Rs 10000 crore fund for formalisation of Micro Food Enterprises (MFE). This scheme promoting vision of PM "Vocal for Local" with global outreach will be launched to help 2 lakh MFE's who need technical upgradation to attain fssai standards .He focus will be on women and SC-ST owned units in aspirational districts and a cluster based approach e.g. mango in UP ,tomato in Karnataka ,chilli in Andhra Pradesh and orange in Maharashtra .

Suggestions and Recommendations:

The poor sector of the society is always the hardest hit in any disaster like Amphan or Covid-19 Pandemic situation. As 85% of the Indian farmers are small and marginal ones and a significant number of them are landless labourers, the central and state governments should take some initiatives to protect those people from hunger and destitution. Definitely the sincere implementation of the programs by the government is also essential. The following measures are recommended to save this section of people:

- 1) People engaged in agriculture and allied activities have to be provided sufficient amount

(minimum Rs 10000/- per month) cash transfer per family till the economy bounces back.

- 2) Investment in key logistics should be enhanced to sustain the demand for agricultural activity.
- 3) In order to make strong the delivery channels of agricultural products e-commerce and delivery companies and start ups need to be encouraged.
- 4) In order to sustain the agricultural and rural economy the MSME sectors should be given special attention both by the Central and State Governments, because most the MSME sectors are running with raw materials from agricultural and allied activities.
- 5) Institutional crop loans should be expanded and facilitated to the farmers. There should be sufficient and smooth flow of credit to the farmers and agricultural product investors, as the Kharif (rainy) crops are knocking at the door.
- 6) Agricultural inputs like seeds, fertilisers, pesticides etc has to prepositioned for easy availability to the farmers. In that case the government and private sectors should play vital role with suitable program and policies.
- 7) Government can opt for a staggered procurement and pricing strategy which accounts for the threshold level in the cost of storage (Ramasundaram *et al.*, 2020).
- 8) There should be relaxation of the norms by the Agricultural Produce Market Committee (APMC) allowing the farmers to sell their product beyond the designated mandies so as to fetch good market price for their products.
- 9) Case Studies show that respective State Government must gear up their machineries for smooth procurement of marketable surplus from the farmers at Minimum Support Price (MSP) or through other support schemes as this has been a complete failure by the State Government .Marginal and landless farmers are adversely affected as they are not getting the MSP and they are forced sell their product to small traders and brokers .As a result they are losing huge amount of profit and sometimes they incur huge loss leading to non repayment of their loans to the bank or private moneylenders , a significant factor in farmer suicides .
- 10) There should be focus on the agricultural sectors as a growth engine and to bring resilience in food and nutrition security.
- 11) Huge amounts should be invested in research and innovation in agricultural sectors to fight in the global market.
- 12) Post Covid situation offers unique opportunity to the existing food and agricultural policies for a healthier population. The Government and private sectors should develop a suitable model for the stronger nutrition of the agricultural workers and farmers.
- 13) India is the top producer in milk and second largest in wheat and rice in the world and India having a trade surplus of agricultural products like rice ,dairy products ,tea , honey and horticultural products. It is a matter of concern that restrictions on export of agricultural commodities are speculated or put in place by few countries . Suitable and stable agricultural policy should be undertaken by the GOI to explore the opportunity by exploring such products. It is important to mention here that India's agricultural exports valued at \$38 Billion in 2018-19 and it can increase further with suitable policies.
- 14) Development of export of the agricultural product would require export supportive infrastructure and logistics by the private sector also. Therefore, Government and private sectors should join hand to save the farmers and thereby the country in this critical juncture.
- 15) It is an opportunity and great challenge to engage the returned migrant labourers in a gainful employment, specially the labour intensive sectors like livestock, fisheries, food processing etc . They

can be engaged in the creation and revamp of the rural infrastructure like construction of new goodwons ,maintenance of existing goodowns and cold storages ,water management in dry areas e.g. in the districts of Purulia, Bankura ,Jhargram etc of West Bengal by digging new ponds for rainwater harvesting through MGNREGS .

16) Crop loans are repaid between April and May after harvesting and selling the Rabi crops and fresh loan is granted at the onset of new Kharif (monsoon) crop season. Recent crisis arises due to the fact that three and a half months of lockdown has prevented the farmers from harvesting their crops and higher costs involved in harvesting procedures. Therefore the cost of production has escalated. On the other hand lack of access to the market during lockdown period ,they have not been able to sell their products as the wholesale markets and mandies are also shut down .They are being forced to sell their products to the local traders at much lower prices . The Government is recommended to reschedule the loan where the existing short-term loan should be converted into long term loans.

17) The government should consider waiving the interests of all outstanding crop loans and ensure fresh flow of credit to the small and marginal farmers for the kharif season 2020 to prevent them from borrowing at much higher interest rates from local moneylenders.

18) If the crisis prolongs, the Government should take over the procurement and supply of essential food items from the private sector including transport, warehouse and establishments.

19) There should be immediate extension of Pradhan Mantri Fasal Bima Yojna (PMFBY) to ensure the payment of compensation to the affected farmers.

20) In this scenario, the e-commerce players can assume a big role to save the agricultural sector. The forecast of normal monsoon this year would increase the crop area and consumption of fertilisers, pesticides and other agricultural inputs. E-commerce can help in meeting these demands and doorstep delivery of the required commodities. The Government should provide active encouragement in the form of incentives and tax relief.

CONCLUSION

Growth rate of Indian Economy has been projected to be 3% , but due to the pandemic ,the projection has come down 0.4% .But it is expected that India will remain the fastest growing economy in the world .The consumption pattern of average Indian consumer will presumably change , They may cut down the consumption of discretionary items e.g. luxury brands ,posh restaurant and hotels etc and focus to spending over organic and fitness products . There is also expected to be an increased demand for animal proteins and other nutritionally fortified food from the organised sectors .The relief package and other measures taken by the Government and implemented correctly will give necessary supports to the farmers to get back on the track .The agricultural sector in India is expected to generate therefore better momentum in the next few years due to thus expanded market and increased investment in infrastructure .India is also expected to be self sufficient in pulses in the coming few years due concentrated effort from scientists to procure early maturity variety of seeds and increase in MSP .Climate forecasts predict a favourable monsoon in the year 2020 which is indeed a good news for the Indian agriculture . As Martin Luther King once said," We are caught in an inescapable network of mutuality, tied in a single garment destiny. Whatever affects one, directly affects all." The truth of this statement is more so in the context of Indian agricultural system and the greater population of India.

As is evident, all is not gloom and doom ahead. Although the disaster that struck was severe, Indian agriculture has the promise to come out of it and come out stronger than before. The unique opportunities and challenges posed require careful evaluation and strategies that can take India many steps ahead towards reaching APJ Abdul Kalam's vision of 2020.

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