

वर्किंग पेपर WORKING PAPER : 2020 - 1

कोविड COVID 19 :

लघु और सीमांत किसानों के जीवन पर प्रभाव IMPACT ON LIVELIHOOD OF SMALL AND MARGINAL FARMERS

(फोन सर्वेक्षण के प्रेक्षण)

(Observations from a Phone Survey)

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दृष्टि

ग्रामीण समृद्धि के लिए राष्ट्रीय विकास बैंक

ध्येय

सहभागिता, संधारणीयता और समानता पर आधारित वित्तीय और गैर-वित्तीय सहयोगों, नवोन्मेषों, प्रौद्योगिकी और संस्थागत विकास के माध्यम से समृद्धि लाने के लिए कृषि और ग्रामीण विकास का संवर्धन.

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यह पेपर बिहार, पश्चिम बंगाल, ओडिशा और उत्तर प्रदेश राज्यों में छोटे और सीमांत किसानों से फोन सर्वेक्षण के नमूने पर आधारित है. यहाँ व्यक्त विचार केवल लेखकों के हैं और उन्हें उस संगठन के रूप में व्याख्यायित नहीं किया जा सकता जिससे वे संबद्ध हैं. यह पेपर विभिन्न स्रोतों से फोन सर्वेक्षण और इसके साथ-साथ विभिन्न साहित्य से प्राप्त कर एकत्र की गई जानकारी के आधार पर प्रारंभिक परिणाम प्रस्तुत करता है अतः :
इसे सावधानीपूर्वक उद्धृत किया जाए.

This paper is based on a phone survey on a sample small and marginal farmers in the States of Bihar, West Bengal, Odisha and Uttar Pradesh. The views expressed here are of the authors only and may not be interpreted to be those of the organization they belong to. The paper presents preliminary results based on the information collected on phone survey along with secondary literature from different sources and hence to be quoted with caution..

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IMPACT ON LIVELIHOOD OF SMALL AND MARGINAL FARMERS

Observations from a Phone Survey

This paper is based on a phone survey on a sample small and marginal farmers in the States of ● Bihar ● West Bengal ● Odisha ● Uttar Pradesh.



उप प्रबंध निदेशक महोदय का संदेश

Message From Deputy Managing Director



नाबार्ड के 39 वें स्थापना दिवस के अवसर पर 12 जुलाई 2020 को बैंकर ग्रामीण विकास संस्थान (बर्ड), कोलकाता ने “कोविड 19: लघु एवं सीमांत किसानों पर प्रभाव: फोन सर्वे का प्रेक्षण” पर एक वर्किंग पेपर का प्रकाशन किया है. वैश्विक चुनौतिपूर्ण समय में कृषि एक मात्र ऐसा महत्वपूर्ण क्षेत्र है, जो अर्थव्यवस्था के आर्थिक क्षतिपूर्ति के उत्थान में संजीविनी का कार्य करेगी. ऐसी स्थिति में फोन सर्वे के माध्यम से ग्रामीण परिवेश की आवाज़ को सुनना सार्थकता का बोध कराती है.

मुझे आशा है कि कोविड -19 महामारी के समय में यह वर्किंग पेपर गरीबों, विशेष रूप से लघु और सीमांत किसानों की आजीविका पर महामारी के प्रभाव के बारे में मूल्यवान जानकारी प्रदान करेगी. यह पेपर गैर-समावेशी और प्रभावी विकास के लिए बैंकरों और विकास के लिए कार्य करने वालों को आधार स्तर पर आवश्यक सहयोग करने में आवश्यक मार्गदर्शन प्रदान करेगा.

पी वी एस सूर्यकुमार

On the occasion of the 39th Foundation Day of NABARD, on 12 July 2020, Bankers Institute of Rural Development (BIRD), Kolkata has brought out a Working Paper on “Covid-19: Impact on Livelihoods of Small and Marginal Farmers: Observations from a Phone Survey”. Even though, agriculture is the only bright spot and would play the role as “green shoots” for economic recovery, it is always good to listen the voices from the field through such micro surveys/studies.

I hope the working paper provides valuable insight on the impact of the pandemic on livelihoods of the poor, particularly small and marginal farmers, which would guide bankers and development practitioners to make necessary interventions at the grassroots level for effective inclusive and equitable growth of the unreached in times of Covid-19 pandemic.

P V S SURYAKUMAR

स्वीकृतियाँ

सहयोग प्रदान करने के लिए बर्ड कोलकाता की ओर से निम्नलिखित को धन्यवाद

- फोन नंबर और अन्य जानकारी साझा करने के लिए तथा चर्चा के लिए अपना बहुमूल्य समय देने के लिए ग्राहक संस्थान, विशेष रूप से गैर-सरकारी संगठन, सीएसओ, कृषक उत्पादक संगठन
- प्राथमिक उत्पादक (किसान), जिन्होंने फोन सर्वेक्षण में भाग लिया और लॉकडॉन अवधि के दौरान अपने आर्थिक और सामाजिक स्थिति पर 'कोविड -19' महामारी के प्रभाव पर सच्ची और मूल्यवान जानकारी प्रदान की.

बर्ड कोलकाता

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BIRD Kolkata gratefully acknowledges the support received from

- Client institutions, particularly NGOs, CSOs, Farmer Producer Organizations, for sharing the phone numbers and other information and sparing their valuable time for the discussion.
- Primary producers (farmers), who participated in the Phone survey and furnished honest and valuable information on impact of 'Covid-19' pandemic on their economic and social well being during the lockdown period.

BIRD Kolkata

Summary

Small and marginal farmers (SMFs) were in the receiving end during the lockdown period beginning from 25 March 2020 to 04 April 2020. A phone survey was carried out during lockdown 3.0 (04 May to 17 May) with a sample of 90 farmer households in the States of West Bengal, Bihar, Uttar Pradesh and Odisha with the objective of assessing the impact of lockdown on their livelihoods and physical and emotional perception.

Major Observations:

- Since the beginning of the 'Covid-19' pandemic and consequent lockdown, disruptions in the supply chain of food were experienced all over the world. Logistical challenges within supply chains, particularly cross-border and domestic restrictions of movement as well as labour issues, led to disruptions in food supply.
- The analysis revealed that labour intensive crop production like plantation and horticulture, agroprocessing and food supply chains were severely affected on account of labour shortage.

Objectives and Design:

- The report is prepared with the sole objective to assess the impact of the 'Covid-19' pandemic induced lockdown among the farmers, particularly small and marginal farmers (SMFs) and to suggest policy options for effective livelihood for small and marginal farmers in times of 'Covid-19'
- Total sample size for the phone survey was 90 farmers. Of these, 60 were small and marginal farmers (67%) and the rest 30 were other farmers (33%). The landholding size of the sample farmers was in the range of 1.0 to 8.0 acres with average size of 3.52 acres.
- *Rabi* crops were grown by farmers in the range of 0.5-3.8 acres, with average area of 1.97 acre. Farmers were growing *rabi* crops and vegetables like summer paddy/pulses (82%), wheat/oilseeds (12%). Farmers cultivated vegetables in the range of 0.5-2.0 acres, with average area of 1.25 acres.

a. Income, Employment and Savings

- A massive shock was reported to the livelihoods of marginal farmers and wage earners. Income earned reduced from a level of Rs.173/day before lockdown to only Rs.96/day after lockdown for SMFs, as against from Rs.1212/day before lockdown to only Rs.505/day after lockdown for other farmers.
- SMFs who were getting employment full seven days a week/56 hours before 24 March, remained without work during lockdown and could not earn any income from their main occupation, agriculture. Their employment during lockdown came down to three days a week/24 hours, as they started going to field and other

related works from lockdown 2.0 onwards. With no work and reduced income, depletion of savings was experienced more for SMFs (68%) as compared to OFs (56%).

b. Flow of Credit

- While before lockdown, 22 per cent sample farmers had availed credit from banks to the tune of Rs. 15.5 lakh for harvesting of *rabi* crops and cultivation of vegetables, during lockdown, 39 per cent farmers wanted to avail credit from banks, but didn't get, as banks were not keen to give credit.
- Majority of the SMFs required credit during lockdown for consumption purposes. As banks were not keen to offer credit, most of the sample farmers availed credit from SHGs. Out of 39 sample farmers wanted to avail bank credit, 13 farmers availed loan from SHGs to the tune of Rs.0.88 lakh for consumption purposes, averaging Rs.0.07 lakh per farmer household.

c. Input Use and Marketing

- With easing of norms during lockdown 2.0 for agricultural activities, only then farmers started visiting their fields sparingly to attend to crop related activities. Survey indicated that 83 per cent sample farmers intended using farm inputs during the lockdown, particularly after lockdown 1.0. However, the use of inputs, harvesting of *rabi* crops were seriously marred by labour shortage (51%). Use of less inputs (54%) and inferior quality of the input used (18%) were also reported.
- Perception on marketing of crops was collected. Ninety per cent sample farmers responded that they faced problems in marketing of their produced crops. While 58 per cent reported that there is distress sale due to lockdown, about 51 per cent observed that there was heavy loss due to price disadvantage in selling.
- The 'Covid-19' and consequent lockdown changed the modes of marketing of farm produce. While, before lockdown, farmers used to sell 52 per cent at market place, 40 per cent at farmgate and only seven per cent at household level, during and after lockdown, there was a shift in modes of marketing to farmgate (59%), followed by market place (26%) and household (15%). With markets, transport and communication closed due to lockdown, farmers adopted forced selling at farmgate and also sold to village households, friends and relatives at lower price.

d. Role of FPOs

- Sixty-four per cent sample farmers were the members of different FPOs. Most of the FPO members (60%) reported that they get the benefit of buying fertilizers, quality seeds and other inputs through their FPOs during the lockdown period. About 17 per cent of sample farmers benefitted from FPOs in terms of crop aggregation and selling.

- On access to inputs during lockdown period, about 67 per cent sample farmers met their input supplies through FPOs followed by 31 per cent through retailers and rest 12 per cent managed out of stock by farmers.
- Based on a few cases of FPOs, it was observed that
 - during lockdown, FPOs started building resilience strategies through measured approaches for ensuring business continuity for growth. Innovative initiatives were adopted for providing opportunities ensuring livelihood based on local eco system like along with undertaking door step delivery of fresh vegetables aggregated locally from members as well as other farmers.
 - FPOs adopted “*going digital*”, looked at ‘partnerships as a steppingstone to future growth’, streamlined their operations by linking with virtual markets, *e-commerce* websites, launching *app-based* services.

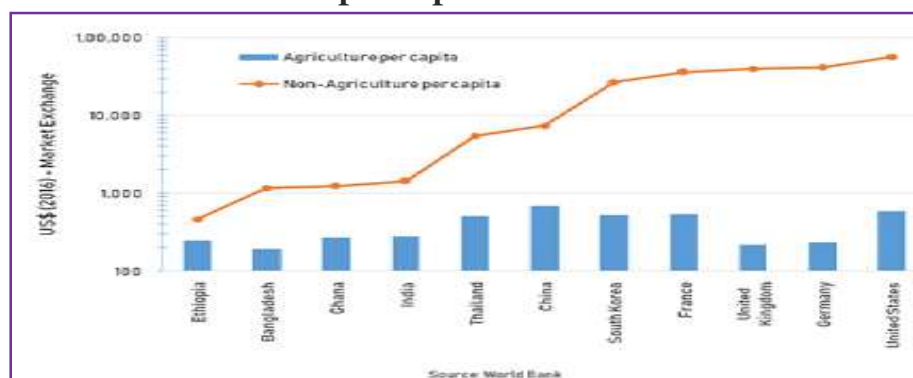
Section I Introduction and Background

1. The world has witnessed a huge economic shock due to the ‘Covid-19’ pandemic. Starting with China, many countries have adopted some version of a lockdown of all economic and social activities. In India, the lockdown started across the country on 24 March 2020 and is still ongoing with restrictions in one form or the other. The “Covid-19” pandemic stalled the Indian economy with complete closure imposed on enterprises across all sectors. Agriculture, a critical sector of the Indian economy, however, has done well, only bright spot and is likely to grow at 2.5 per cent during 2020-21 (Crisil Research 2020). Though agriculture employs almost four times the informal workers that construction does, it is likely to be less impacted because of the lockdown, as agriculture being an essential activity and after lockdown 1.0, it was permitted to move on keeping in view the harvesting of *Rabi* crops and keeping supply chains of horticultural crops, particularly fruits and vegetables remained functional seamlessly to feed the economy. Further, “the farm economy received support under the PM-Kisan Scheme” (Crisil Research 2020).

a. Agriculture: Mainstay of Indian Economy

2. Agriculture remains the mainstay of Indian economy and major source of livelihood of rural household, predominantly by small and marginal farmers and securing the food and nutritional security. Economists have also delineated agriculture’s major role in economic development, broadly in terms of contributions like products, markets, factors and foreign exchange. Agriculture has a role not only in supply of foods and but numerous raw materials for the industrial sector, while absorbing labour. This is the most critical contribution. The market drives demand for industrial products. Several factors such as labour and capital play important role for non-farm sector. The foreign exchange contribution of agriculture is in terms of exports of agricultural commodities.

Chart 1: GDP per capita of select economies



3. Though agriculture’s contribution to the overall GDP of the country has fallen substantially, a trend that is expected in the development process of any economy, it

continues to be critical for the development process. Consequently, per capita income from non-agriculture becomes higher as compared to agriculture (Chart 1). Performance of agriculture sector has a strong bearing on the growth of other sectors as supplier of raw materials, provider of wage goods as well as the creator of effective demand for the final products of these sectors. An average Indian still spends half of total expenditure on food, while roughly half of India's work force is still engaged in agriculture for its livelihood. Being a source of livelihood and food security for a vast majority of low income, poor and vulnerable sections of society, its performance assumes greater significance (Badatya, 2017)

4. Indian agriculture contributes to 8 per cent global agricultural GDP to support 18 per cent of world population with only 9 per cent of world's arable land and 2.3 per cent of geographical area (ICAR, 2011). India occupies number one or two slots in the world level on production of several crops (Table 1). In terms of composition, out of a total share of 14.6 per cent of the GDP for agriculture and allied sectors, agriculture accounted for 12.3 per cent followed by forestry and logging at 1.5 per cent and fisheries at 0.8 per cent. Within the economy, the growth of agriculture is considered a necessary condition for 'inclusive growth' and also acts as a resource base for a number of agro-based industries and agro-services.

Table 1: India as a Major Agriculture Producer

Product	Volume (Million Tones/ Heads)	World Level Rank	Product	Volume (Million Tones/ Heads/ Bales)	World Level Rank
Milk	122	1	Sugarcane	348	2
Livestock	482	1	Potatoes		3
Pulses		1	Cotton	34.09	2
Tea	0.97	1	Fruits & Vegetables	168	2
Wheat	82	2	Mango, Banana	NA	1
Rice	103	2	Other crops*	NA	1

*Coconut, , cashew nut, Ginger, Turmeric, Black pepper

b. Small and Marginal Farmers rule the roost

5. In India small and marginal holding farmers cultivate around 44 per cent of the area, and they produce around 60 per cent of the total food grain production (49% of rice, 40% of wheat, 29% of coarse cereals and 27% of pulses) and over half of the country's fruits and vegetables production (GoI, 2017). Small and marginal farmers are generally more efficient than the large farmers in terms of per ha. output and cropping intensity (Chand et al. 2011). Similarly, the contribution of marginal and

small farmers to the total output is higher as compared to share in the total land holdings (Gururaj et. al. 2017).

6. Of the total agricultural workforce in India, 45.1 percent are cultivators (farmers with land or self-employed in agriculture) and the rest, 54.9 percent, are agricultural labour or landless (GoI 2018). According to the agricultural census 2015-16, marginal and small farmers accounted for around 86 percent of the operational holding in India. Similarly, the number of marginal holding farmers was around 51 percent in 1970-71, which has been increased to 68 percent in 2015-16. India has over 146 million farm holdings, of which 99.8 million are marginal farm holdings, having land holding size of less than 1 ha. and 25.8 million were small farm holdings having land holding size of less than 2 ha. These marginal and small farm holdings together constitute about 86.0 percent of the total farm holdings during 2015-16². The average area per holding has decreased from 2.28 to 1.08 ha. during 1970-71 to 2015-16 (Table 2). All these facts indicate that the small holding farmers in Indian agriculture are much more prominent today than before.

Table 2: Trends in Number, Operated area and Average size of holdings in India

Year	No. of land holdings (million*)	Area operated (in mn ha.)	Average land holding size (in ha.)
1970-71	71.01	162.32	2.28
1976-77	81.60	163.34	2.00
1985-86	97.20	164.56	1.69
1995-96	115.60	163.36	1.41
2005-06	129.22	158.32	1.23
2010-11	138.35	159.59	1.15
2015-16	145.73	157.14	1.08
% variation during 1970-71 to 2015-16	69.55	-2.30	
Growth rate (Annual)	1.99	-0.07	

Source: GOI, *Agricultural Census Reports from 1976-77 to 2010-11*, All India Report on Number and Area of Operational Holdings, Agricultural Census Division, Department of Agricultural and Co-operation, Government of India, New Delhi

c. Collectivizing for Scale economies

7. In India, small and marginal farmers' average size of holdings is about 0.38 ha. when compared to 17.37 ha for large farmers, which cannot generate adequate employment and income from crop cultivation (Dev 2017). The average size of the landholding declined from 2.28 ha. in 1970-71 to 1.08 ha. in 2014--15 and absolute

²Government of India (2017), *Agriculture Census, 2015-16(Phase-I)*, All India Report on Number and Area of Operational Holdings, Agriculture Census Division, Department of Agriculture & Co-operation, Ministry of Agriculture, New Delhi.

number of operational holdings increased from about 71 million to 146 million. If this trend continues, the average size of holding would be mere 0.68 ha. in 2030, and would be further reduced to a low of 0.32 ha. in 2040 (ICAR 2011). This is a very complex and serious problem, when share of agriculture in GDP is declining, average size of landholding is contracting, and number of operational holdings is increasing.

8. Major problems which have disturbed the income of small and marginal farmers have been summarized by Hegde (2019).

- Erratic climate change and lack of suitable technologies to cope with changing environment, thereby affecting crop yields,
- Poor irrigation facilities due to inefficient distribution of available water resources and slower progress of new irrigation projects. Interrupted supply of electricity further posed a hindrance in use of the available water resources for irrigation,
- Rising cost of inputs, small and fragmented land holdings and increasing labour costs have resulted in high cost of production and lower crop yields,
- In the absence of decentralized storage and processing facilities, small and marginal farmers could neither hold their produce till the realization of higher price nor process for value addition,
- Poor agricultural extension and information services about selection of suitable crops, improved technologies, weather forecasts, types of pests and disease prevailing in the region, information on demand and price for various farm produce, etc. could not empower the farmers to take suitable corrective measures on time,
- Lack of required credit to procure various inputs well in time, high premium for crop insurance, and delay in settling the claims of farmers, created a cash crunch, beyond their ability to tide over the crisis, and
- Low productivity of livestock high cost of feeding due to shortage of feed and fodder, inability to dispose of old and unproductive cattle and lack of clarity about the economics of dairy husbandry, created uncertainty about the future.

9. Declining size of landholdings without any alternative income-augmenting opportunity is resulting in fall in farm income, causing agrarian distress. The collectivization/ aggregation initiatives for achieving 'scale' taken up through constitution of FPCs/FPOs have been giving significant positive outcomes. FPCs/FPOs can turn around the agricultural economy provided they promise farmers sustainable and better returns to farming and these ground level institutions (GLIs) would not garner adequate returns without farmers buying to self-sustained business model (Shah, 2016). The future is to see how this initiative is taken forward with FPOs bringing out a well thought out, planned, sustainable vision document containing self-sustained business models (Badatya, 2018).

10. With ‘*Covid-19*’ pandemic, even though agriculture came out as the bright spot, the impact of the pandemic was felt widely at the micro level putting strain on the harvesting of *Rabi* crops impacting smooth procurement operations, putting stress on local supply chains, marketing of fruits & vegetables, etc. Adequate labour availability and inability to access markets for produce due to issues in transportation as well operation of markets were reported. Agricultural producers are particularly hard hit with returns on produce varying from one-third the usual or a complete loss. In a number of districts, inter-state trade in commercial crops or proximity to urban areas providing market access and better prices received a nudge. Heartbreaking images of Indian farmers standing amidst swathes of rotting vegetables, fruits and grain have also been widely reported from different states during lockdown 1.0.

Section II

Objectives and Methodology

11. Several instances have come to light on the plight of poor, wage labourers and migrants due to the ongoing 'Covid-19' crisis. Agriculture as a sector is less impacted and the only bright spot has been proved as agriculture, being an essential activity and after lockdown 1.0, was permitted to move on keeping in view the harvesting of *rabi* crops and that the supply chain of horticultural crops, particularly fruits and vegetables remain undisturbed to feed the economy. However, small and marginal farmers were in the receiving end during the lockdown period beginning from 25 March to 04 April. This survey was carried out during the third phase of lockdown, lockdown 3.0 (04 May to 17 May) with a sample of 90 farmer households in the States of West Bengal, Bihar, Uttar Pradesh and Odisha with the objective of assessing the impact on their livelihoods and physical and emotional perception on the lockdown.

12. What has been the impact of the shutdown on the earnings and incomes of small and marginal farmers? Government had responded with various measures to mitigate economic hardships, such as PM-Kisan, food transfers, cash injections directly into bank accounts, how the farmer households suffered with their produce from the field in terms of input use, marketing, prices? However, with many farmers having mobile phones these days, relatively large-scale phone survey is one possible method for gauging the ground reality. But a phone survey that is representative, and hence reliable, is a challenge. So representativeness of the survey is always questionable.

13. This section presents the objective, survey design and the methodology for the phone survey.

a. Objectives and Survey Design

14. The phone survey report is based on the following two objectives.

- To assess the impact of the 'Covid-19' pandemic induced lockdown among the farmers, particularly small and marginal farmers (SMFs) in terms of its impact on income, employment, savings, marketing, credit, etc.
- To suggest policy options for effective livelihood for small and marginal farmers in times of 'Covid-19' induced disturbances.

15. Client institutions, who depute trainees to BIRD, Kolkata, mostly present in States like West Bengal, Bihar, Odisha, Jharkhand and Uttar Pradesh. So these States were purposively selected for the phone survey. Two to three districts were selected from each State from where the Institute gets maximum trainees. Accordingly, 12 districts were considered for survey. About 90 farmers were surveyed for the purpose of phone survey. A design of the phone survey is presented in Table 3.

b. Data Collection, Analysis and Presentation

16. The report is prepared based on the analysis of a schedule which was filled in with the survey of farmers through phone. Primary data /information was collected from farmers through phone with a structured questionnaire.

17. The primary data collected were subjected to analysis. The 'pre-post lockdown' was attempted to study the impact of 'Covid-19' pandemic. The primary data collected were subjected to tabular and graphical analysis. At the primary membership level, 'pre-post lockdown (pre - lockdown as before lockdown 1.0 and post - lockdown as period of after lockdown 2.0) was used to assess the impact on , income, employment, savings, marketing, availability of credit, etc.

Table 3: Sample Design for the Phone Survey

States	Districts Covered	Sample Farmers covered	Share (%)
WB	Birbhum, Bardhaman, Murshidabad	18	20.0
Bihar	Purula, Nalanda	20	22.2
Odisha	Anugul, Dhenkanal, Jharsuguda	27	30.0
Jharahand	Hazaribagh, Ranchi	11	12.2
UP	Sonbhadra, Mirzapur	14	15.6
Total	12 districts in 05 States	90	100.0

18. This report is presented on the following five sections:

- Section I covered introduction, background and provides how agriculture is critical to Indian economy and emphasizes on role of small and marginal farmers,
- Section II described the methodology adopted for the phone survey,
- Section III devoted to the socio-economic profile of sample FPC farmers.
- Section IV analyzed the primary data collected through phone survey for impact assessment of Covid 19 pandemic at farmer level and
- Section V presents a few cases of FPOs as to how these farmer collectives became resilient to the pandemic.
- Section V presented key issues, suggestions.

c. Limitations of the Phone Survey

19. The major limitation of the report is with respect to the fact that the observations are based on expressed opinion of the respondents on mobile phone. Hence the objectivity would be limited to the extent of the respondents' honest opinion.

Further, as mentioned earlier in this section, a phone survey that is representative and hence reliable, is a challenge. So representativeness of the survey is always questionable. It is also a fact that the results of the study may be apt only to the area where the respondent belongs to and needs caution while generalizing the results.

Section III

‘Covid-19’ and Impact on Agriculture Sector

20. Since the beginning of the ‘Covid-19’ pandemic and consequent lockdown, disruptions in the supply chain of food was experienced world over. Logistical challenges within supply chains, particularly cross-border and domestic restrictions of movement as well as labour issues, led to disruptions in food supply. Instances of high-value and especially perishable commodities, such as fresh fruit and vegetables, meat, fish, milk and flowers, were came to light with prolonged lockdowns. The section, based on secondary sources, presents an account of impact of the pandemic on agriculture both India and a few other economies world over.

a. International Scenario

21. The health crisis due to Covid-19, resulted in job destruction in sub-sectors such as floriculture in a number of countries. There has been reduction in job quality in the sector and job destruction, especially at the base of the supply chain. Women, youth, particularly migrated lot was to feel the impact more strongly, as they were particularly exposed to socioeconomic vulnerability. Restrictions on movement prevented farmers from accessing markets and resulted in food waste. In many countries, farmers were unable to sell their produce in local markets or to local government canteens, schools, restaurants, bars, hotels and other leisure establishments, which were temporarily closed during lockdown.

22. Instances of pandemic having its impact on labour intensive crop production like plantation and horticulture, agroprocessing due to labour shortages were reported. Europe’s agricultural sector faced labour shortages due to border closures preventing hundreds of thousands of seasonal workers from reaching farms that relied on their labour during the harvest period. The impact on the sector is expected to be a long term. A number of major European agricultural producers, including France, Germany, Italy, Spain and Poland, are particularly vulnerable.

23. The Italian Farmers Organization, Coldiretti observed that “over a quarter of the food produced in the country relies on approximately 3,70,000 regular seasonal migrant workers (WFO, 2020). Around 1,00,000 farm workers may not be able to come to Italy this year. In Germany, 2,86,000 seasonal migrant workers are engaged every year in fruit, vegetable and wine production, the Government is exploring different ways of mobilizing sufficient workers for the harvest, including running direct flights for farm workers and issuing temporary work permits”.

24. The Table 4 presents negative nudges experienced in agriculture sector in select countries.

Table 4: Covid -19 pandemic and Agriculture: Negative ‘nudges’	
Countries	Negative ‘nudges’
China	Strawberry, cherry tomato prices down 12-16%.
France	Strawberries, asparagus , other crops rotted in the field due to Covid-induced tight border restrictions. Shortage of 2,00,000 laborers.
Germany	Germany closed borders to cut farm growers off from their workers.
Italy	Condition of fruit and vegetable farmers became bad to worse. Along with restrictions due to Covid, farmers faced Asian brown marmorated stink bug.
USA	<ul style="list-style-type: none"> • Cropping pattern changed. Great Plains Growers went for fruit, vegetables instead of wheat, corn to cover up losses, • National/regional farmer associations called on USDA to facilitate buying perishables sitting stagnant in the field due to supply chain disturbances, • Immigrant farm workers considered illegal. More than 0.3 lakh civilians as ‘Land Army’ volunteer to pick fruit, vegetables. • Green Empire Farms, a 32-acre farm in New Yorkwith strawberries, tomatoes, cucumbers became a Covid hot spot distorting supply chains. • US, Florida farmers, particularly, fresh fruit and vegetable industry faced crop losses across the state exceeding \$522.5 million. • Dairy farmers dumped thousands of gallons of milk facing supply chain disruption.
Australia	Australia could lose billions of dollars because of Chinese boycott of agriculture.
Spain	Inadequate farm workers in Spain, the agricultural sector currently operating at 10% of its European-best capacity
Africa	UN Economic Commission for Africa predicted growth in Africa would drop from 3.2 per cent to 1.8 per cent. European Union (the largest export market for Africa’s fresh fruits and vegetables), demand dropped for popular produce such as Kenyan avocados, South African citrus and Moroccan vegetables.
Keynia	<ul style="list-style-type: none"> • The suspension of one of world’s largest tea auctions in Mombasa, put devastating effect on local, national and regional economies leading to closure of farms, factories, warehouse, transporters and forcing stoppage of production and laying off around 6,00,000 small-scale farmers/pluckers. • Recorded 8.5 per cent decline for tea exports to destinations like Iran, Pakistan and UAE.
Malawi	The tea sector, the second largest formal employer after the government, providing jobs to some 52,000 workers, suspended due to pandemic.

Source:<https://www.growingproduce.com/farm-management/how-coronavirus-is-impacting-the-specialty-agriculture-world-so-far/>

25. On 02 April 2020, “the European Commission issued practical guidance for member States to facilitate cross-border travel for seasonal workers in critical occupations, like food sector workers, while putting in place all necessary measures to avoid further spread of the pandemic” (Carrera & Luk, 2020).

26. The pandemic has a significant negative impact on the livelihoods of millions of plantation workers engaged in export-oriented, labour-intensive agricultural production in developing countries. The suspension of one of the world’s largest tea auctions in Mombasa, Kenya, where tea from many Eastern African countries is traded, had a devastating effect on local, national and regional economies. The impact is felt in various nodes of the chain, including factories, warehouses and transporters, as well as farms, which forced to stop production and lay off pluckers, who were often among the most disadvantaged workers and highly vulnerable to economic reversal. In Kenya alone, tea provides livelihoods to some 6,00,000 small-scale farmers and wage workers; whereas in Malawi, the sector is the second largest formal employer after the government, providing jobs to some 52,000 workers (*The Exchange*, 25 March 2020).

i. Country Specific Measures

27. Country-specific packages, both credit and measures have been introduced for the benefit of farm producers (ILO 2020).

- USA: USA announced the Covid Food Assistance Program. The new \$19 billion USDA program is designed to take several actions to assist farmers.
- China: The Peoples Bank of China introduced a 500 billion Chinese yuan (RMB) expansion of re-lending and re-discounting facilities at low interest rates to support MSME’s. The re-lending rate for rural areas, agriculture, farmers and smaller businesses was lowered to 2.5 per cent. In order to promote food security, the Ministry of Agriculture and Rural Affairs released several measures to support the resumption of operation in feed, slaughtering and field management of crops and other measures to eliminate labour shortages.
- Canada: The Farm Credit Canada’s lending capacity increased by Canadian dollars (CAD) 5 billion for national, regional and local organizations to support food security across the country.
- Egypt: The moratorium on the tax law on agricultural land has been extended for two years. The Ministry of Social Solidarity also planned to include another 1,00,000 families in existing social assistance programmes and to increase benefits for women and leaders in rural areas. A one-time payment of EGP 500 is planned for registered informal workers.
- El Salvador: US\$ 80 million was allocated through the Emergency Fund to support the agricultural sector and ensure food security. A cash transfer of US\$ 300 has also been made to 1.5 million households working in the informal economy.

- Fiji: An agricultural response package as new farm support to support the production of short-term crops through the distribution of materials and seed. The 'Covid-19' Response Budget provided for a one-time relief payment of US\$ 150 for those working in the informal sector.
- Germany: The Government temporarily extended the "70-day rule" for seasonal farm workers, who may now work up to 115 days until the end of October 2020 without paying social security contributions. It raised additional income limits for temporary work compensation and for farmers' pensions.
- Italy: Unemployment benefit for agricultural workers eased and a onetime payment of EUR 600 provided for vulnerable, including agricultural workers. Workers earning less than EUR 40,000 a year who have to be present in the workplace are entitled to a tax-exempt one-time benefit of EUR 100.
- Namibia: The Economic Stimulus and Relief Package of Namibian dollars (NAD) 200 million of guarantees for low-interest loans for farmers and agricultural businesses, including cash flow-constrained farmers and agricultural SMEs introduced.
- The Philippines: A fiscal package of Philippine peso (PHP) 27.1 billion for social protection for the most vulnerable workers and to support tourism and agriculture. Under the Emergency Subsidy Programme, 18 million low-income households in the informal economy to be provided with PHP 5,000 to 8,000 a month for two months.
- IFAD-Africa: The International Fund for Agricultural Development (IFAD) launched a multi-donor fund-rural area, and that is where the development community now needs to focus. Covid-19 Rural Poor Stimulus Facility (RPSF) to address the immediate fallout of Covid-19 for rural people in Africa and elsewhere. Among other goals, the new facility would provide small-scale farmers and fishers with basic inputs, and help them access markets and maintain cash flow. IFAD committed US\$40 million to the new fund, but aims to raise at least \$200 million more from UN Member States, foundations and the private sector (Obasanjo & Boshe, 2020). Around 63 per cent of the world's poorest people work in agriculture, the overwhelming majority on small farms. Most of the poorest, hungriest and most marginalized people live in
- Zambia: High poverty levels among rural farmers prompted government to introduce the Farmer Input Support Programme (FISP), subsidized the growth of Zambia's staple food in order to improve food security. Not only is the state of rural farmers costly for the government, but the FISP measures have also been ineffective in addressing high poverty levels in rural Zambia (Mulozi, 2020).

b. Indian Scenario

28. The Covid-19 induced lockdown in India was a huge economic shock. It started across the country on 24 March 2020 and is still ongoing with restrictions in one

form or other. It stalled the economy with complete closure imposed on enterprises across all sectors. The Covid-19 induced lockdown in India led to displacement of millions of migrants, job losses, and many rating agencies, including IMF predicting economy hitting the rock-bottom level. Many cases came up on the plight of thousands of migrant workers walking back to their native places from major cities. However, on the positive front, the lockdown encouraged India to be '*atmanirbhar*', self-reliant. Government of India, various state governments, NGOs, many corporate houses and individuals rose to the occasion to help the destitute.

i. The Plight of Migrants:

29. The plight of migrants was pitiable. While the case of the tragedy of a train running over 16 migrant workers shocked the whole economy, in another case, a migrant family consisting of two brothers, the wife of the elder one and children, was on its way pulling a cart to their native place at Pathar Mundla near Indore from Mhow. It reminded the economy of the old hindi-language drama film “Do Bigha Zamin”1953 (‘Two bighas of land’) in which cruel ‘*zamindars*’ forced landless farmers to pull carts to till the fields.

30. More than 67.18 lakh migrants returned to 116 districts in six states from urban centers (GoI 2020). Of these, about 44 lakh (65.7%), two-thirds returned to 53 districts. Bihar topped the six states with 23.6 lakh (35%) returning to 32 districts, followed by UP with 17.48 (26%) lakh to 31 districts (Table 5).

Table 5 : Status of Migrants returned to six States

No	States	Districts	Nos migrated (lakhs)	Share of States
1	Bihar	32	23.60	35.13
2	UP	31	17.48	26.02
3	Rajasthan	22	12.09	18.00
4	MP	24	10.72	15.96
5	Odisha	4	2.19	3.26
6	Jharkhand	3	1.10	1.64
	Total	116	67.18	100.00

Source : Ministry of Skill Development, Govt of India

31. These are the key pointers from preliminary data compiled by the Union Skill Development Ministry on the return of migrant workers since the Covid-19 lockdown was imposed on March 24. The data, meanwhile, shows a further concentration of returning migrants in 15 districts, including eight from Bihar, of the 53 that recorded over a lakh each. The other 38 districts reported the return of 50,000-100,000

migrants during the lockdown. The total number of returning migrants, even under a preliminary assessment, is significant since the 2011 Census had recorded 2.19 crore people as new inter-state migrants across a decade since 2001.

ii. The Plight of Farmers

32. The nationwide lockdown came as a big shock to farmers, as it was the harvest season for the *rabi* (winter) crop. The lockdown created both a shortage of labor and equipment affecting harvesting of crops, like, paddy, wheat, pulses and oilseeds. Instances of abandonment due to damage to crops due for harvesting have surfaced in several places. Some places, crops were abandoned, while in others the harvest came after late by more than a month, with limited and more expensive labor, thus inflating the cost of cultivation of crops.

33. Although India had about 71 million tones of buffer stock of food grains to meet the eventualities, more than three times the minimum operational buffer in stock, long supply chains were severely affected with markets eventually running out of supplies, while food rotted in transit or never reached the point of sale when transport system came to a complete halt. The availability and access to farm inputs, like seeds, fertilizers, pesticides as important input requirements for the next crop season got disrupted. Post the *rabi* harvest, farmers were to prepare land for the *khari*f season in May. Covid-19 induced disruptions reduced production capacity for farm inputs and have also led to an increase in price, making these resources inaccessible to smallholder and marginal farmers in the country. While large landholding farmers and their farming businesses may be able to weather away these shocks, Covid-19 induced lockdown put enormous pressure on small and marginal land holders who work with limited resources and income. Resuming farming operations is key to ensuring harvest security to the small and marginal farmers.

iii. Measures by Government of India

34. As the lockdown 1.0 brought agriculture to a complete halt, keeping in view, harvesting operation of rabi crops, procurement of wheat and oilseeds, and distorted supply chain of perishables, etc. during lockdown 2.0, a slew of measures towards relaxing agriculture were announced.

- The supply chain, exclusively for milk/milk products, poultry, tea, rubber plantation, etc.
- The normal functioning of agriculture and agricultural operations.
- Functional activities like, horticulture, agro- procurement, mandis, repair shops, farm machinery, and Custom Hiring Centres to operate.
- MSP operations including the food grain procurement to be functional.
- Operation of MNREGA projects abiding the rules of lockdown and social distancing.

- PM Kisan scheme, PM- CARES, RBI relief measures, like moratorium for borrowers to safeguard the farmers and other vulnerable sections.

35. The economic package announced mostly dealt with the following aspects.

- Rs. 1.7 trillion package, to protect the vulnerables (including farmers) from any adverse impacts of the Covid 19 pandemic was announced. The announcement, among a slew of benefits, contained advance release of Rs. 2,000 to bank accounts of farmers as income support under PM-KISAN scheme.
- The Government raised the wage rate for workers engaged under the NREGS, scheme.
- Under the special scheme, *Pradhan Mantri Garib Kalyan Yojana* (Prime Minister's scheme for welfare of the poor), has been announced to take care of the vulnerable population. Additional grain allotments to registered beneficiaries were also announced for the next three months.
- Under the Deen Dayal National Rural Livelihood Scheme, women SHGs can get loans of up to Rs.20 lakh now, instead of Rs.10 lakh earlier.
- Cash and food assistance to persons engaged in the informal sector, mostly migrant laborers, a separate PM-CARES (Prime Minister Citizen Assistance and Relief in Emergency Situations) fund has been created.
- The ICAR issued state-wise guidelines for farmers. The advisory mentioned 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 RBI announced specific measures to address the "*burden of debt servicing*". Agricultural term and crop loans are granted a moratorium of three months by banking institutions with 3 percent concession on the interest rate of crop loans up to Rs. 3.0 lakh for borrowers with good repayment behavior.

36. With these slew of measures, particularly, cash transfers under PM-Kisan, cash transfer and foodgrain allotment under *Pradhan Mantri Garib Kalyan Yojana*, wage increase under MGNREGA, agriculture has now emerged as the bright spot and work as the green shoots for economic recovery.

Section IV Analysis & Observations

I. General: Rural Setting

a. Socio-eco Profile

37. Total sample size for the phone survey was 90 farmers. While the age profile of farmers was in the range of 31 to 55, the mean age was reported at 44 years. While the family size was in the range of 3-6 members, mean family size was 5 members. Of these 90 sample farmers, 60 were small and marginal farmers (67%) and 30 other farmers (33%). The landholding size of the sample farmers was in the range of 1.0 to 8.0 acres with average size of 3.52 acres (Table 6).

Table 6 : Socio-eco Profile of Sample Farmers

No	Parameters	Range	Average
1	Age (Years)	31-55	44
2	Family Size (No.)	3-6	5
3	Land Holding Size (acres)	1.0-8.0	3.52
4	Area under cultivation (GCA in acres)	1.4-7.0	4.91
5	Rabi crops grown	0.5-3.8	1.97
6	Vegetables grown	0.5-2.0	1.25
Occupational status (%)			
	Occupational status	Main	Subsidiary
7	Agriculture	81	19
8	Daily wage labour	12	42
9	Other occupations	7	39
	Total	100	100

b. Occupation Status:

38. The sample farmers have owned land of 341.1 acres, of which SMFs owned 183 acres and other farmers 158.4 acres. Farmers were growing both *Rabi* crops and vegetables. Among *Rabi* crops, summer paddy, pulses and wheat were prominent. Among vegetables, tamato, brinjal, ladies finger, sweet corn, were important. *Rabi* crops were grown by farmers in lands in the range of 0.5-3.8 acres, in an average are of 1.97 acre. Vegetables were cultivated in areas in the range of 0.5-2.0 acres, with an average area of 1.25 acres. Agriculture is the main occupation for 81 per cent of sample followed by wage labour (12%) and other occupations (7%). Other occupations are mostly small business like, kirana store, other off farm activities, etc.

II. Perception on 'Covid-19' induced lockdown

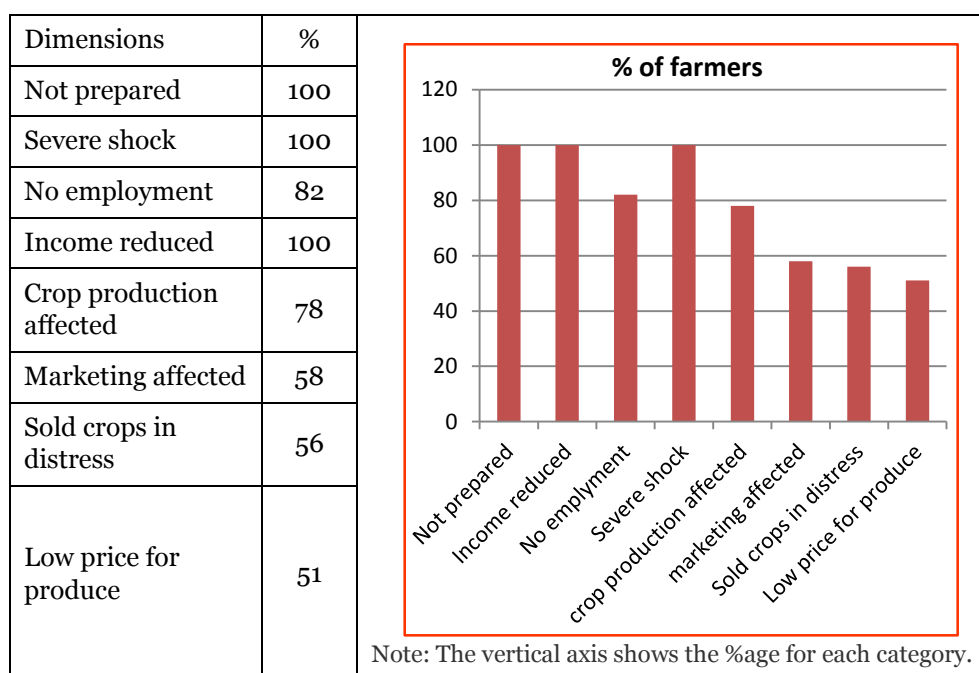
a. Perception on lockdown

39. The poor and marginals are always the hardest hit in any disaster or pandemic situation. The same is the case of 'Covid-19' pandemic. With about 86 percent of farm households being small and marginal farmers, and a significant part of the

population being landless farm laborers and the timing of the Covid-19 was the peak of *Rabi* season. Further, crops like wheat, gram, lentil, mustard, etc., were at harvestable stage faced hardest hit. This was also the time when the farm harvests were to reach mandis for assured procurement operations by government agencies. Moreover, sporadic disruption to the supply of perishable fruits and vegetables, dairy products, fish, etc. to meet the increasing requirement of urban and rural consumers created irreparable damages with disrupted supply chains. The migration of workers also put another hurdle, as they were crucial for both harvesting operations and post-harvest handling of produce in storage and marketing centres.

40. The perceptive phone survey of sample farmers came out somewhat similar (Table 7/Chart 2). On a question on how they considered the lockdown, all reported that they were not prepared and it was a severe shock to them. The survey indicated a massive shock to the livelihoods and earnings of these farming families (82%). As expected, all farmers reported reduction in their income, as a result of no work. About 78 percent farmers conveyed that their crop production affected due to movement restrictions. Complete stoppage of transport resulted in improper marketing (58%), which resulted in selling of crops in distress (56%) and at low price (51%).

Table 7/Chart 2: Perception on Lockdown



III. Impact of 'Covid-19' induced lockdown

a. Income and Employment

41. Farmers were particularly hard hit with returns on produce varying from one-third the usual or a complete loss. In a few districts, inter-state trade in commercial

crops or proximity to urban areas provided market access and better prices. These were often due to initiatives of individual farmers. “The rise in labour costs and lack of access made farmers incur losses and instances were reported farmers allowing crops to rot in the fields, a better ‘stop-loss’ mechanism” (Ananth, 2020).

42. Phone survey observed that the livelihoods of small marginal farmers, wage earners were badly affected. Income earned reduced from a level of Rs.173/day before lockdown to a mere Rs.96/day for SMFs after lockdown as against from Rs.1212/day before lockdown to Rs.505/day after lockdown for other farmers (Table 8).

Table 8: Impact on Income and employment

No.	Dimensions	Before lockdown 1.0		During lockdown 1.0-2.0		Difference		% Increase	
		SMFs	OFs	SMFs	OFs	SMFs	OFs	SMFs	OFs
1.	Income (Rs./day)	173.32	1211.86	96.28	504.57	77.04	707.29	72.8	58.4
2.	Employment (hours/ week)	56	56	24	32	32	24	57.1	42.9
3.	Savings (Rs.)	3512	17409	1523	6777	-1989	-10632	-67.6	-56.1

43. As expected, the vast majority of the farmers in the areas under survey completely remained unemployed. Those SMFs who were getting employed full seven days a week/56 hours before 24 March, remained without work and did not earn any income during lockdown from their main occupation, agriculture. Their employment during lockdown came down to three days a week/24 hours, as they started going to field and other related works from lockdown 2.0 onwards. With no work and reduced income, depletion of savings was experienced. The depletion of savings was more for SMFs (68%) as compared to OFs (56%).

b. Credit Flow: SHGs showed the Way

44. Easy access of credit mainly from institutional sources is a major policy objective for Govt. of India, RBI and NABARD. All policy actions are aimed at strengthening credit widening (expanding the clientele base) and credit deepening (enhancing quantum of loan per borrowers). The “Covid-19” pandemic affected the flow of credit to agricultural activities as there was movement restrictions and consequent shock faced by farm producers.

45. It is observed from the phone survey that 22 per cent sample farmers had availed credit from banks to the tune of Rs. 15.5 lakh before the lockdown for harvesting *rabi* crops and cultivation of vegetables. During the lockdown, about 35 farmers (39%), mainly small and marginal farmers, wanted to avail bank loan for consumption purposes. However, banks showed little interest. However, SHGs came forward and

lend a hand. Out of 35 sample farmers, 13 farmers availed loan from SHGs to an amount of Rs.0.88 lakh for consumption purposes, averaging Rs.0.07 lakh per farmer (Table 9).

Table 9: Impact on flow of credit farmers

No.	Dimensions	Before lockdown 1.0		During lockdown 3.0		Difference		% Increase	
		SMFs	OFs	SMFs	OFs	SMFs	OFs	SMFs	OFs
1	Sample Farmers	15 (23.1)	5 (20.0)	0 (0.0)	0 (0.0)	--	--	-100	-100
2	Total Amount (Rs.lakh)	7.35	8.15	0.88*	0	-6.47	0	-88.0	-100
3	Avg Amt. (Rs. Lakh)	0.49	1.63	0.07	0	-0.42	0	-85.7	-100
*loan availed from SHGs									
Details of Credit Flow by Sample Farmers									
No.				Total Sample	SMFs	OFs			
1	Bank Loan Availed before lockdown			20 (22.2)	15 (25.0)	5 (16.7)			
2.a	Purpose of Bank Loan			Rabi harvesting and Vegetables					
3	Opted for a loan during lockdown but bank was not keen			35 (38.9)	32 (53.3)	3 (10.0)			
3.a	Loan arranged from SHG			13	13	0			
3.b	Purpose of SHG Loan			Consumption Loan					
5	Didn't opt loan during lockdown			55 (61.1)	28 (46.7)	27 (90.0)			
6	Total Sample			90 (100)	60 (100)	30 (100)			

c. Input use

46. The crisis arising from 'Covid-19' pandemic had a ripple effect on requirement of farm inputs like fertilisers, pesticides, farm machinery, etc. With *rabi* wheat, pulses summer paddy in the field and on agricultural output as *Rabi* harvest was approaching along with procurement by Govt agencies. Most importantly, as the *khariif* season is also approaching, good quality seeds, fertilisers and other inputs must be available in plenty based on demand. With reduced income and low savings,

it would affect demand for inputs like fertilisers, pesticides, farm machinery, etc. Further, demand for other industrial and consumer goods would be affected as well, with implications for industrial growth. During lockdown 1.0, farm producers could not do any activity, including maintenance of the field crops and application of inputs in the field, etc. With easing of lockdown norms in lockdown 2.0 for agricultural activities, farmers started maintaining crops with all related activities. Phone survey observed that 86 per cent sample farmers used farm inputs during lockdown, particularly after lockdown 1.0. However, the use of inputs like fertilizer, pesticides, harvesting of *rabi* crops were seriously marred by labour shortage (51%). Use of less inputs and inferior quality were reported by 54 per cent and 18 per cent farmers (Table 10).

Table 10/Chart 3: Perception on Input Use

No	Perception on Input use	% of farmers
1	Use of less inputs	54.4
2	No labour availability	51.1
3	Inferior quality	17.8

47. A few ‘sayings’ as “direct from the Mouth”, from three farm producers is presented below in Table 11.

Table 11: “Direct from the Mouth”

Farm Producer	I am staying away from my land. It is difficult to reach field due to the movement restriction. I am ready to sow but due to labour, communication problem, I am not able to complete the work. <i>Srikant Kar, Bardhaman, WB</i>
Dairy Farmer	Due to lock down, I could not sell the produced milk. All the markets are closed. I used to supply to local tea stalls, sweet shops. But now they are closed, because of which I am facing heavy losses. <i>Chandramani Kumaaaaaar, Nalanda, Bihar</i>
Broiler Farmer	Chicks are highly affected due to ‘Covid-19’ pandemic. My SHG sells chickens through local traders. But, now due to lockdown local traders are not lifting our chickens. It is a small and new SHG. So loaning system not yet operational. <i>Aruna Jana, Nabdiganta SHG, WB</i>

d. Harvesting and Marketing

48. India's agricultural sector depends on migrant labourers for several operations. An estimated 50 million migrant labourers (of India's 140 million) have returned to their native places following the nationwide lockdown from 25 March. The migration of workers to their native places affected agriculture, as they are crucial for both harvesting operations and post-harvest handling of produce in storage and marketing centres. They account for about 11 per cent of the non-self-employed labour force. Many migrant labourers, mainly from Eastern states, are working in agricultural fields in the country's west and north, particularly in Punjab, Haryana. They are also significantly employed in post-harvest activities, managing livestock, marketing and creation of agricultural infrastructure.

49. It was reported "the migrants' return was having a negative impact on agriculturally developed regions like Punjab, with the proximate cause being the harvest of important *rabi* crops like wheat and mustard, resulting in a higher production cost. Unless compensated for the loss of labour force, many marine fishing and fish processing activities will also be impacted". In such a situation, Govt of India, in a very significant move, has notified to exclude movement of farmers, farm labourers and harvesting and sowing-related machines from the purview of lockdown. While the government has exempted many agricultural operations from harvesting to movement of produce to mandis from lockdown rules, the ICAR has also facilitated the government taking further action like, issuing crop-specific advisories to farmers, asking them to take general precautions and safety measures during harvesting, post-harvest operations, storage and marketing of *rabi* crops.

50. As regards to marketing of produce, The lockdown was imposed just when the *rabi* harvest was beginning. This led to agricultural markets being shut down completely. A survey in April to examine arrival and price trends in 1,331 APMCs mandis across 20 states for seven commodities, wheat, mustard, *chana* (chickpea), and four major vegetables, revealed that during 15 March–14 April, most of the mandis were not operational. Compared with the average numbers in the same period in the previous three years (2017, 2018, and 2019), in MP only 17 per cent of the mandis were operational, in Gujarat, 30 per cent and in Rajasthan 43 per cent (Singh, 2020). As against only five per cent of the mandis being non-functional in 2019, as many as 38 per cent of the mandis were non-functional this year during the period of the survey (Rawal and Verma, 2020).

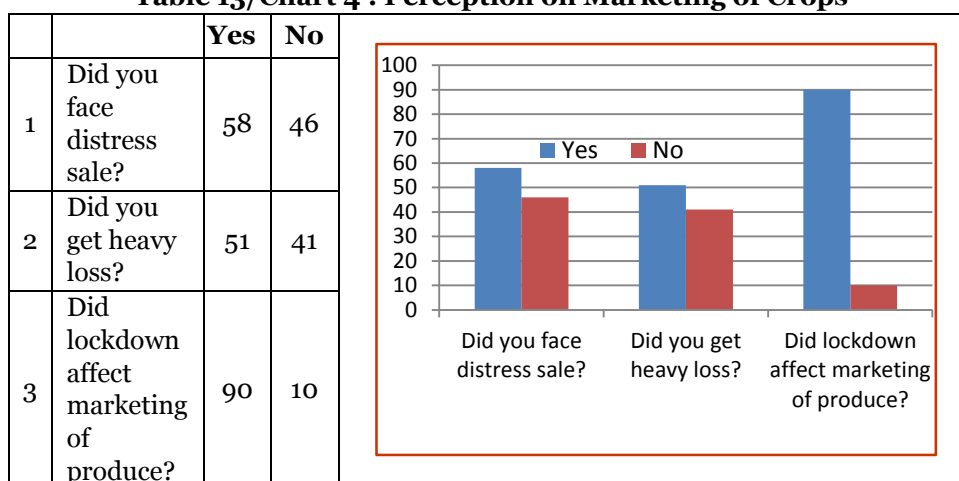
51. A few '*sayings*' as "direct from the Mouth", from three farm producers on harvesting and production is presented below in Table 12.

Table 12: “Direct from the Mouth”

Paddy Farmer	Due to lock down, I was not able maintain my paddy field. It is ready to harvest now but no labour available. I used to get 50-60 quintals from 2.0 acre. But, this year yield would fall due to the labour, pesticide and communication problems. <i>Debasis Das, Birbhum, WB</i>
Fruit Farmer	I grow paddy, banana and sunflower. Due to lock down, I was not able to go the field, nor able maintain banana and sunflower crops. My summer paddy is ready for harvesting now. But I apprehend problems due to labour shortage and lockdown restrictions. <i>Rajatkanti Goswami, Bardhaman, WB</i>

52. Table 13 and Chart 4 presents the perceptions of farmers on marketing of crops. Ninety per cent respondents observed that lockdown affected the marketing of crops. While 58% reported that there is distress sale due to lockdown, about 51 per cent told that there is heavy loss due to price disadvantage in selling.

Table 13/Chart 4 : Perception on Marketing of Crops



53. The phone survey observed that the ‘Covid-19’ and consequent lockdown changed the modes of marketing of farm produce. Before lockdown or the normal practice is that farm producers used to sell 52 per cent of their produce at market place followed by 40 per cent at farm gate and a mere seven per cent at household level (Table 14/Chart 5). However, during and after lockdown, there was a shift in modes of marketing to farmgate (59%), followed by market place (26%) and household (15%). With complete closure of markets, transport and communication due to lockdown, farmers adopted forced selling at farmgate and supplying to village households, friends and relatives at lower price.

Table14/Chart 5: Modes of Marketing of Crops

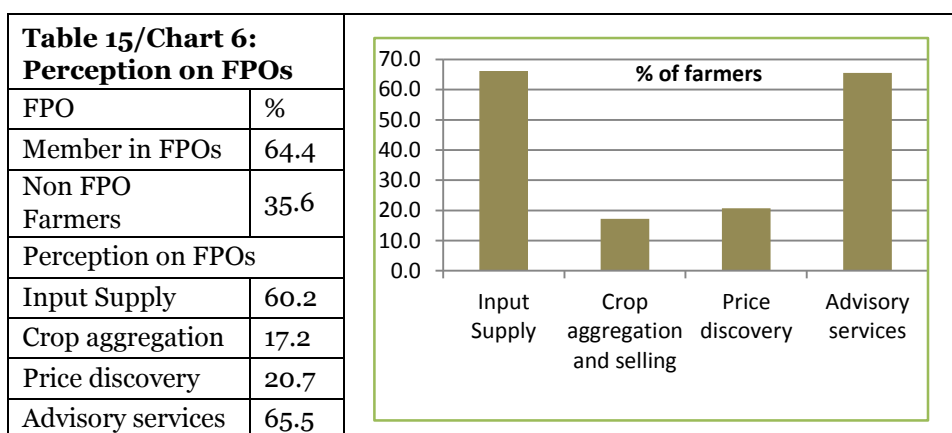
Marketing of Crops			Before Lockdown	During Lockdown
Marketing Modes (%)	Before Lockdown	After Lockdown		
At Farmgate	40.4	58.9	<p>■ At farmgate ■ At village market ■ HHs/Friends/Relatives</p>	<p>■ At farmgate ■ At village market ■ HHs/Friends/Relatives</p>
At market place	52.3	25.7		
HHs/ Friends/ Relatives	7.3	15.4		

Section V

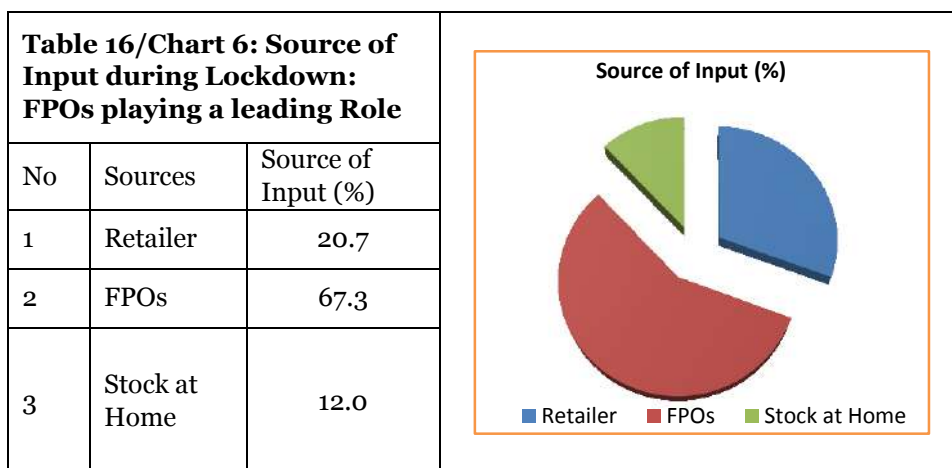
Resilience of FPOs to Covid-19: A few Cases

54. FPOs undertake activities in the supply chain of the produce right from procurement of raw material to delivery of the final product at the ultimate consumers' doorstep. They undertake activities, most importantly, (i) procurement of inputs, (ii) aggregation and storage of produce, (iii) facilitate in price discovery and advisory services.

55. It is observed from the survey that 64 per cent sample farmers are members in one or other FPOs. Amongst the sample farmers, majority availed the services of FPOs for their requirement of inputs (60%) during the lockdown period. About 17 per cent of sample farmers benefitted from FPOs in terms of crop aggregation and selling (Table 15/Chart 6).



56. Survey collected information on sources of supply of farm inputs during lockdown. About 67 per cent sample farmers met their input requirements through FPOs followed by 31 per cent through retailers and rest 12 per cent managed out of stock by farmers (Table 16/ Chart 6).



I. FPOs: Resilience today to growth tomorrow-A few Cases

57. In such a Covid-19 crisis scenario, use of robust network of FPOs for ensuring aggregation of output, easy availability of farm inputs including farm machinery through FPO-managed custom hiring centers was strongly warranted (CRISAT, 2020). During lockdown, FPOs started building resilience strategies through measured approaches for ensuring business continuity on one hand and extending support to the local authorities by organizing awareness campaigns for checking the community spread of the virus.

58. Government of India, after lockdown 1.0, made concerted efforts to facilitate farmers in direct marketing through FPOs & Coops. It issued advisory to the States to promote direct marketing without insisting for licensing procedures and facilitate the farmers in timely marketing of farm produce. In order to decongest wholesale markets & to boost the supply chain, two modules under e-NAM were introduced. (i) FPO Module: FPOs can directly trade with e-NAM portal. They can upload produce details from collection centers with picture / quality parameter and avail the bidding facility without physically reaching to the mandis.

(ii) Warehouse Based Trading Module: Farmers can sell their produce from WDRA registered warehouses notified as deemed market, and do not physically bring the produce to the nearest mandis

Box-1

Direct Marketing: State Level Measures

- **Karnataka:** exempted Cooperative Institutions, FPOs for engaging in wholesale trade of agricultural produce outside the market yards;
- **Tamil Nadu:** exempted market fee on all notified agricultural produce;
- **UP:** allowed trading in e-NAM platform from farmgate, promoted issuance of unified licence to processors for direct purchase from farmers, allowed FPOs to undertake procurement operations of wheat; relaxed rules for declaring warehouses / cold storages as market-yards.
- **Rajasthan:** allowed direct marketing by traders, processors, FPO, PACS/ LAMPS declared as deemed markets.
- **MP:** allowed to set up private purchase centres outside the market yard by Individuals, firms, processors to purchase directly from farmers with an application fee of Rs. 500/-.
- **HP, Uttarakhand and Gujarat:** allowed direct marketing without requirement of any licence.
- **Uttarakhand:** declared Warehouse/Cold storage and processing plants as sub-mandis.

Impact (i) **Rajasthan:** issued more than 1,100 direct marketing licences to processors during lockdown and farmers started selling directly to the processors. Out of more than 550 PACS declared as market-yards, 150 PACS have become functional for direct marketing and village traders are performing trade transactions successfully. (ii) **Tamil Nadu:** Due to market fee waiver, traders preferred to buy the produce from farmers from their farm gate/ villages. (iii) **UP:** direct linkages established by FPOs with farmers and traders thereby supplying produce to consumers in cities, saving wastages and directly benefitted farmers, facilitated linkages with FPOs and Zomato Food Delivery App thereby ensuring smooth distribution of veggies to consumers.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1618270>

(GoI, 2020). Based on the advisory, States undertook different measures towards direct marketing (Box-1).

II. FPOs in UP and Bihar: Turning Crisis into Opportunity

59. States like, Bihar with high population density, but low resource base, have been at the receiving end, as far as the impact of Covid-19 is concerned. FPOs, in these States with grass root level networking came up with mitigation measures and became resilient with varied initiatives.

a) Social: Creating Awareness

60. FPOs took upon themselves the task of making the general populace aware of using masks, following basic hygiene and adopting social distancing norms. Awareness campaigns, village road shows, Nukkad Nataks, etc., were the popular platforms that created a connect to the local communities. FPOs along with other CBOs took upon the task of distribution of masks, sanitizers to the resource poor target groups. FPOs in places like Sonbhadra (UP) ensured that the migrants arriving to the villages were comforted with food and ration.

i. Economic: Injecting Livelihoods: alliance for value chains

61. Innovative initiatives were adopted for providing opportunities to the migrants, ensuring that local livelihood eco system embeds aspirations of the migrants and matches their expectation to a certain extent. The skewed scenario with demand and supply mismatch of labour due to migrants was tackled through engagement in NABARD's various flagship project areas viz. "Wadi" and "Watershed" in twin districts of Mirzapur & Sonbhadra by setting up of common service centres for linking to larger markets in order to ensure timely and just returns to the groups. FPOs, like Mritika FPC (Renukoot,UP) went ahead and ensured that livelihood options with business continuity mode need to continue with ushering in skilling on a large scale and started making masks for the district administration. A few FPOs, (Kamla FPC, Ghanshyampur, Bihar, Vindhya FPC, Mirzapur, Divyabhumi FPC, Agra) undertook door step delivery of fresh vegetables aggregated locally from their members as well as other farmers.

ii. Easing operations: Going Digital

62. FPOs moved ahead adopting "going digital", looked at 'partnerships as a steppingstone to future growth', streamlined their operations by linking with virtual markets, e-commerce websites, launching app-based services. These initiatives resulted in streamlining FPO's operations with enabling new normal digital ecosystem leading to creation of appreciable "brand wealth" for these first generation community based organisations.

III. Successful Interventions: Case of Three FPOs

63. Amongst many such initiatives and outreach strategy described above, out of the box acts of three FPOs are illustrated in following paragraphs.

a. Divyabhumi Agricrop FPC, Agra

64. Divyabhumi FPC, established under NABARD's PRODUCE Fund, operates from Agra in UP. Farmers from potato producing areas joined the FPO for ensuring better prices to the farmers by an organization called Mehraj Global Educational Society (MGES), Agra. The FPO waged a strong battle much before the onset of the pandemic when they took on the district administration and the state machinery for a parallel mandi for the FPO. The district administration foiled the maiden bid of the FPO, citing provisions of APMC Act, However, with Covid-19 pandemic and consequent efforts by Government for direct marketing initiatives, Divyabhumi Agro FPC members realized that their efforts and struggle have finally been rewarded. Divyabhumi FPO comprising nearly 500 farmers from 20 villages could aggregate farm produce to provide an open platform with the help of village wise coordinators who formed clubs and streamlined the produce of the farmers making it assessable to the buyer as well as the producer.

65. *Fresh tray – Direct marketing initiative:* Agra district experienced the brunt of Covid-19 positive cases and it was very tough for the farmers. One of the resilience initiative of the FPO “Fresh Tray” as direct marketing model has picked up pace. As per the sales figures reported by the CEO of Divyabhumi Agri FPC, Fresh tray is grossing approximately Rs 2.50 lakh to Rs 3.00 lakh per month with marginally low profits. Members say the low margins are adequately compensated by increased farmers outreach and valuable urban market connect. The FPO looks forward to setting up of FPO owned sub market along with bulk milk coolers and milk processing (cottage cheese unit).

b. Mritika FPC, Renukut, Sonbhadra

66. The Mritika FPC, located in Renukut, Sonbhadra district in UP, was constituted to provide a much needed platform to the farmers belonging to a “Wadi” project under TDF of NABARD. The FPC was also extended support under the PRODUCE Fund. Over the formative years, the FPC was able to give voice to the aspirations of tribal farmers in terms of realizing the fact that what they grow is also marketable. Mritika FPC, in collaboration with Central Sub Tropical Horticulture (CISH), Lucknow and Indian institute of Vegetable Research (IIVR), Varanasi, quickly adapted to various innovative technologies and advisories from these national level specialized institution for the tribal farmers.

67. In times of Covid-19, the FPC witnessed huge inflow of migrants. The Board of Directors resolved to work closely with the administrative authorities. As a livelihood initiative, a skill training module was run during the lockdown period to add value to abundantly growing bamboo in the area by converting bamboo into utility items like bamboo furniture. The activity became an instant hit amongst the tribals, more so with the returnees (returning migrants) from other states.

68. The challenge for the FPC was to provide a market for ensuring continuity of the activity. The FPC decided to target local households and advocated replacement of

bamboo items (For one plastic chair is available from Rs 500 to Rs 1000 and the bamboo alternative was available in the range of Rs 350-400). The FPC came out with a rough demand of 50,000 pieces in the local vicinity. The FPC along with the promoting institution planned to reduce the wastage by gainfully using the bamboo dust and other left-overs for making small decorative/utility items and vermicompost. The FPC realized the potential of bamboo value chain and is actively working on it. The CEO of the Mritika FPC says more than 500 migrant have been approached for skill training. The Deendayal Hastshilp Kendra established at Varanasi has been tapped for design development and diversification. The FPC is also roping in app developers for launching of a suitable app for linking customers with the Wadi Farmers.

c. Kamla FPC, Ghanshyampur, Darbhanga, Bihar

69. Kamla FPC with 2,534 women shareholders engaged in goat farming for livelihood. The vast experience in goat rearing allowed the FPO to earn modest profits over the years (Table 17). In the Covid-19 pandemic, the FPC managed to organize and develop 500 women JLGs for establishing goat rearing as a livelihood model. NABARD has been approached for support as well as coordinating with the banks for provision of adequate bank loans to the JLG members.

Table 17: Turnover and profits earned by Kamla Farmers Producers Company

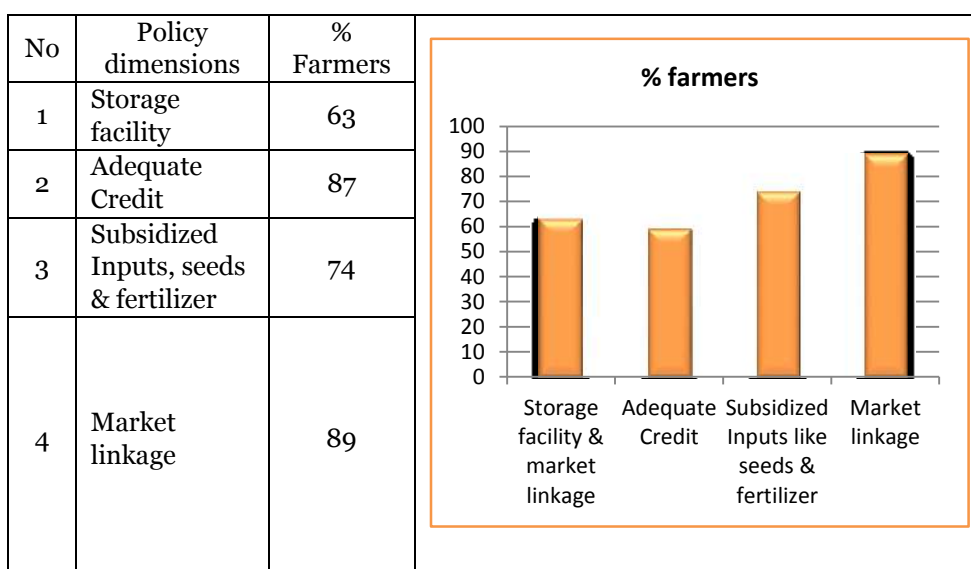
Year	Goat		Seed		Cereals		Total	
	Turnover	Profit	Turnover	Profit	Turnover	Profit	Turnover	Profit
2016-17	5.79	0.031	0.00	0.00	0.00	0.00	5.79	0.31
2017-18	13.18	0.14	0.00	0.00	0.94	0.14	14.,12	14.,08
2018-19	13.,59	0.39	3.28	0.10	3.39	0.51	20.,26	0.54
2019-20	27.59	0.82	13.62	60.60	6.,56	0.98	47.77	1.52
	60.25	1.37	16.90	0.70	10.89	0.16	87.94	2.24

Source : Annual report of the Kamla FPC, Ghanshyampur, Darbhanga

Section VI Policy Suggestions

70. Sample farm producers responded to a question on suggestion on their perception on policy action by Government. Four major areas of policy actions from Government, i.e., (a) Adequate storage facility for our produce (63%). (b) Subsidized good quality seeds and fertilizer (74%), (c) Market linkage to the produce (89%) and (d) Adequate and timely credit (87%) (Table 18/Chart 7) came out strongly. Even though Government and NABARD have been actively pursuing all these aspects, their reach or access to the SMFs need to be further emphasized.

Table 18/Chart 7 : Perceptive suggestion on policy actions



I. Covid-19: Gate to Agricultural Reforms

71. Covid-19 opened the gate for agricultural reforms. During lockdown 2.0, as Rabi crops, due for harvesting and those already harvested, Govt of India, in a very significant move, notified to exclude movement of farmers, farm labourers and harvesting and sowing-related machines from the purview of lockdown. While the government has exempted many agricultural operations from harvesting to movement of produce to mandis from lockdown rules, the ICAR has also facilitated the government taking further action like, issuing crop-specific advisories to farmers, asking them to take general precautions and safety measures during harvesting, post-harvest operations, storage, marketing of *Rabi* crops, etc.

72. In order to facilitate in marketing and procurement, Govt. of India issued an advisory to the States to promote direct marketing without insisting for licensing procedures and facilitate the farmers in timely marketing of farm produce. In order to decongest wholesale markets & to boost the supply chain, following two modules

under National Agriculture Market (e-NAM) have been introduced. (i) FPO Module: FPOs can directly trade with e-NAM portal. They can upload produce details from collection centers with picture/quality parameter and avail the bidding facility without physically reaching to the mandis. (ii) Warehouse Based Trading Module : Farmers can sell their produce from Warehousing Development and Regulatory Authority (WDRA) registered warehouses notified as deemed market, and do not physically bring the produce to the nearest mandis (GoI, 2020). Based on the advisory, various States undertook different measures towards direct marketing and impact was felt in States like, Tamil Nadu, Rajasthan & UP (Box-1).

73. Government has looked at all possibilities towards agricultural reforms those had been pending for years. It recently introduced major agricultural market reforms through three ordinances:

(a) The Essential Commodities (Amendment) Ordinance 2020.

(b) The Farming Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020, and

(c) The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020.

II. Policy Suggestions:

74. Growth in agriculture is two to three times more effective at reducing poverty and food insecurity than growth in other sectors (WB, 2008). Investments in small-scale agriculture can help

Box-1

State Level Reform Initiatives towards Direct Marketing during lockdown

- **Karnataka:** exempted Cooperative Institutions, FPOs for engaging in wholesale trade of agricultural produce outside the market yards;
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Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1618270>

revive food production and create jobs following a crisis and enable rural communities to recover better (IFAD 2020). As discussed earlier, even though agriculture is the only sector that is booted, it is worthwhile to revisit the role of agriculture in our economic development to throw light into the drastic reform measures / policies the sector will need to adopt to recover better and a play the role as '*green shoots*' and facilitate economic recovery.

75. Much of productivity of agricrops, depends on quality seeds, fertilizers, pesticides, which need to be delivered to farmers by both public and private sectors. Action on this front is warranted that farm inputs reach farmer doorstep in time. At the present moment, the issue of availability of suitable seed varieties is of utmost important.

76. Agri advisory services in India have gone digital during Covid-19 situation when it is difficult for farmers to visit their farm extension service centres. Over 2.15 lakh 'panchayats' across the country have been equipped to do so while working as "*agri clinics*". Prof. Swaminathan (2020) strongly suggested "National Horticultural Board need to be supported to play a proactive role similar to the NDDB. We have the advantage of excellent information and communication technology, which needs to be put to full use to reach the unreached with appropriate and timely information. MSSRF has close to 100 farmers joined a '*plant clinic*' run by, online for the first time".

77. To obviate the concerns arising from scarcity of farm labor, policies must facilitate easy availability of machinery through state entities. Government has issued advisories for FPOs. Custom hiring centers (CHCs) with suitable incentives to FPOs need to be stepped up immediately for requirements of all sorts of agricultural machineries.

78. The lockdown has disproportionately hurt marginalized communities due to loss of livelihood. The casual laborer is the most impacted and is the most vulnerable during the lockdown and thus requires to be looked after. Behavioral insights approach may work for dealing with Covid-19 pandemic. There needs to be clear messaging about behavioral changes aimed at the poor, particularly migrants, small and marginal farmers and agrilabourers.

79. Innovative supply chain models for perishables and other commodities have emerged. Their competitiveness, inclusivity, scalability and sustainability may be ensured. Supply chains which are able to connect farmers to consumers in the absence of several intermediaries during the pandemic need to be robust enough and may be supported to scale up. "Government may think to temporarily suspend the APMC and engage civil society organizations, NGOs, farmer collectives, corporate, companies, welfare associations, religious organizations and PRIs to engage lifting produce directly from farmers" (ICRISAT 2020).

80. Government has set the foodgrains production target at a record 298.3 million tonnes, comprising 149.9 million tonnes during kharif (summer) season and 148.4

million tonnes during rabi (winter) season (GoI 2020). Government may ensure that all foodgrains that farmers want to sell in the market is procured. With more production and more workforce in agriculture, we requires proper food management so that livelihood can be ensured.

81. All the states were also issued advisories for implementation of the market intervention scheme (MIS) for procuring perishable horticultural produce, to protect growers from making distress sale, a welcome step indeed. However, for procurement of perishable horticultural commodities not covered under the PSS, there need to be stringent policy on such MIS, with a view to protect the growers of these commodities from making distress sale during the peak harvesting periods when the prices tend to fall below the economic cost of production with acceptance to all States.

82. Governments must activate MGNREGA proactively and use it in development of agriculture sector for creating rural and agricultural micro infrastructure. The labour may also be used for agriculture operations. For improving livelihood, there is ample scope for using the labour under the programme for agriculture operation especially in states where labour availability for agricultural operations is limited.

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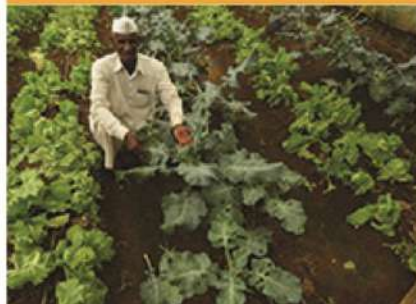
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