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COVID-19: Crisis-hit Rural India Needs Effective Farm Policy Implementation

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Photo Caption: Workers plant paddy saplings during sunset, amid the ongoing COVID-19 nationwide lockdown, on the outskirts of Amritsar. Due to labour scarcity, the State government has encouraged farmers to switch over to direct seeding of rice (DSR) instead of the traditional transplantation of paddy this year. **File Photo**: PTI

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ABSTRACT

India's farm sector, which is still the country's largest employment provider, suffered heavy losses in the aftermath of the COVID-19 pandemic. The sector, which is socio-economically both diverse and complex, has always faced institutional constraints ranging from debt-dependency to exploitative marketing intermediaries and left the Indian farmer vulnerable to both monsoon and markets. When COVID-19 struck, the Government of India was quick to exempt agriculture from the restrictive lockdown. It also announced sector-specific relief packages and proclaimed three ordinances to reform the agricultural sector.

In this Policy Watch, ***Sangeeta Shroff, Professor, Gokhale Institute of Politics and Economics, Pune***, writes on the impact of COVID-19 on the farm sector, specifically horticulture and floriculture, which were directly affected as the lockdown coincided with their harvest season. Issues that have long-afflicted the Indian agricultural sector—transport bottlenecks, inadequate storage and cold chain facilities, poor marketing networks, economies of scale, and the absence of efficient linkage mechanisms, to name a few—aggravated the adverse fallout of the lockdown. She concludes with a discussion of government policies, relief packages for farmers during COVID-19 and the possible trajectory of these reforms.

Shroff advocates the use of technology as a game changer for Indian agriculture. She concludes on a note that the real answer, however, lies in strengthening rural infrastructure in the form of roads, electricity, schools, sanitation, healthcare, and telecommunications to generate employment, prevent distress migration and ensure that the benefits of growth are not concentrated only in urban centres but are also reaped by rural India.

Keyword: *COVID-19, Agriculture in India, Horticulture, Floriculture, Agricultural Marketing, Essential Commodities Act*, *Agriculture ordinances*, *Impact of lockdown on agriculture.*

I. IMPACT OF THE LOCKDOWN

On March 11, the World Health Organization (WHO) declared COVID-19 as a pandemic. The disease was first reported from China's Wuhan Province on December 31, 2019. As of August 2, 2020, it had spread to 216 countries.[1] Nations scrambled to put together containment plans, and by the end of March, "over 100 countries had instituted either a full or partial lockdown, affecting billions of people."[2] This chapter will look at how India's agricultural sector was affected directly by two pandemic containment policy measures: lockdowns and physical distancing norms. It will specifically discuss the problems faced by farmers in horticulture and floriculture as the harvest season for these crops coincided with the lockdown. It will also look at the trajectory that has been set for the agriculture sector after the Union Government's policy announcements during COVID-19.

India imposed the first nation-wide lockdown on March 24, 2020.[3] This was followed by further lockdowns with certain relaxations from time-to-time depending upon the intensity of the situation in different areas. In addition to the national lockdowns, States imposed their variations depending on local conditions.

However, from the first national lockdown itself, several activities that were considered as 'essential services' were exempt. Consequently, there were no restrictions on farming activities, functioning of agricultural markets and movement of farm produce[4] [5]. Supply of inputs and other activities, including procurement of the crop at Minimum Support Price (MSP), were also

[1] **World Health Organization. 2020**. Coronavirus disease (COVID-19) pandemic: Numbers at a Glance. [https://www.who.int/emergencies/diseases/novel-coronavirus-2019].
[2] **BBC. 2020.** Coronavirus: The World in Lockdown in Maps and Charts, April 7. [https://www.bbc.com/news/world-52103747]
[3] **Ministry of Home Affairs. 2020**. Government of India issues Orders prescribing lockdown for containment of COVID-19 Epidemic in the country, *Press Information Bureau*, *Government of India*, March 24. [https://www.thehinducentre.com/resources/article31174425.ece/binary/PIB1607997.pdf].
[4] **Ministry of Agriculture & Farmers Welfare. 2020**. Agriculture-Farming and allied activities exempted from Lockdown, *Press Information Bureau*, *and Government of India*. March 28. [https://www.thehinducentre.com/resources/article31191467.ece/binary/Press%20Information%20Bureau-28-3-2020-1.44.pdf].
[5] **Ministry of Home Affairs. 2020**. Additional essential Goods and Services relating to Agricultural Operations included in the Exempt List, *Press Information Bureau*, *Government of India*, March 27. [https://www.thehinducentre.com/resources/article31189335.ece/binary/PIB1608644.pdf].

permitted. Nonetheless, the sector took a huge hit, especially for crops that were being harvested in March and April 2020.

Farmers reportedly lost an estimated Rs 20,000 crores in the early period of lockdown.[6] Inputs from trade sources and farmer communities revealed that *mandi* arrivals were down by half until April 10. However, arrivals of fruits and vegetables picked up from April 15, after several *mandis* were opened and the government swung into action to ease movement of trucks and facilitate inter-State commerce, which narrowed down the drop in *mandi* arrivals to about one-third[7].

Immediate impact of lockdown on the agricultural sector

The pan-India lockdown in March coincided with the harvest season for several crops—mainly horticulture and floriculture. Many of these crops are highly perishable in nature and normally sold soon after harvest as farmers are constrained by limited storage or agro-processing facilities. In addition to this chronic incapacity, the lockdown, which was imposed immediately after the harvest season, triggered a major collapse in supply chains. As a result, the agricultural sector was severely affected.

Horticulture and other non-traditional high-value crops hold the potential for accelerated income growth in rural areas and greater commercialisation of small holders. Over the past decades, there has been a shift in consumption pattern away from cereals to high-value agriculture due to rising incomes, urbanisation, change in dietary preferences, and socio-demographic factors. Further, during the 2000s, the growth rate in the value of exports of rice, sugar, marine products, and tea declined while high value exports such as fruits and vegetables, floriculture, meat, and processed fruit juices grew by about 18 per cent annually.[8] Farmers responded to these changing market signals and gradually switched over to high-value crops.

The gross cropped area under fruits and vegetables cultivation, which was 10.2 million hectares in 2001-02, gradually increased to 16.6 million hectares in 2013-14.[9] The corresponding share of

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[6] **Mishra, P. 2020**. Farmers lose Rs 20,000 crore as fruits and veggies perish, *Financial Express*, May 11. [https://www.financial express.com/economy/farmers-lose-rs20000-crore-as-fruits-and-veggies-perish/195449/].

[7] Some of the inputs for this Policy Watch were drawn from telephone interviews with traders of horticultural produce and representatives of Farmer Producer Companies.

[8] **Sharma, Vijay Paul and Jain, Dinesh. 2011**. High Value Agriculture in India : Past Trends and Future Prospects, IIM A Working Papers, WP 2011-07-02, Indian Institute of Management, Ahmedabad, Research and Publication Department, *IDEAS*. [https://ideas.repec.org/p/iim/iimawp/10671.html].

[9] **Ministry of Agriculture and Farmers' Welfare. 2017**. Horticultural Statistics at a glance 2017, *Government of India, Department of Agriculture, Cooperation & Farmers Welfare, Horticulture Statistics Division*.

cereals was 99.8 million hectares[10]. Although fruits and vegetables constituted a mere 8.3 per cent of gross cropped area, they contributed 23.1 per cent of gross value of output. In contrast, cereals, which constituted 49.7 per cent of gross cropped area, contributed only 27.4 per cent of value of output.[11]

Quick and handsome returns make horticulture an attractive choice for farmers. However, the nationwide lockdown in March 2020, resulted in severe labour shortage, transport impediments and reduced market access, and sent thousands of farmers into distress. When the time was ripe to harvest several horticultural crops, these farmers either left their produce to rot or sold them at much less than market price.

For instance, a farmer from a small town in Karnataka reported that he could not harvest most of the coconuts as workers had returned to their villages. His loss was about Rs 30,000, making it impossible to repay his loan. The other hurdle faced by farmers was that their produce could not reach the markets as entry and exit points of several locations had been sealed to contain the transmission of the virus.[12] Therefore, the produce was either left unharvested or just ploughed back into the fields to add fertility to the soil.

The summer fruits that were badly affected were water melon and musk melon as the harvest coincided with the announcement of the first lockdown. Traders did not come to the fields to purchase the crop, thereby cutting off the supply chain. In addition, fear among consumers that consuming certain fruits could show 'COVID-19 positive symptoms' because of their supposedly 'cooling effect' on the human body, resulted in lower demand. This also had a direct bearing on returns for the farmer.

Rough estimates indicate that although a farmer normally earns at least Rs 3,00,000 per hectare from water melons, in 2020, it fell to a mere Rs 50,000 per hectare entirely because of the impact of COVID-19. As the area under this horticultural crop is about one lakh hectares, the loss to the water melon economy was approximately Rs 2,500 crores. Similarly, the musk melon economy

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[http://nhb.gov.in/statistics/Publication/Horticulture%20At%20a%20Glance%202017%20for%20net%20uplod%20(2).pdf].

[10] **Ministry of Agriculture and Farmers' Welfare. 2019**. Agricultural Statistics at a Glance 2018, *Government of India*. [http://agricoop.gov.in/sites/default/files/agristatglance2018.pdf].

[11] Calculation by author based on official data.

[12] **Balaji, R. 2020.** Farm to market: Indian farmers struggle to mend losses amid coronavirus lockdown, May 8. [https://yourstory.com/socialstory/2020/05/farmers-india-agriculture-struggle-losses-coronavirus].

which has an area of 54,000 hectares, suffered a loss of Rs 1,500 crores. It is, however, important to note that several farmers did not harvest the crop and, in several cases, the contractors did not turn up to collect the harvested produce. The apple industry in Kashmir also suffered a setback as demand for the stored produce slumped. The logistics involved in storing apples entails considerable costs to retain its colour and texture. It is estimated that only 30 per cent of the fruit in cold storage was sold and the remaining one lakh tonnes could just rot away.[13]

As the harvest of grapes normally commences in January in Maharashtra—a major grape growing State—this was largely completed by March 2020. However, when the lockdown was announced, about 30 per cent of the crop was still on the fields. Here, too, demand fell as contractors who normally take delivery of the produce from fields did not do so and farm gate prices crashed. The prices plummeted to such low levels that farmers preferred to use the produce for raisin production rather than sell it. Moreover, some of the export consignments could not be completed and, hence, even this crop suffered losses due to lockdown.

Strawberry is largely cultivated in the western belt of Maharashtra. This is a soft crop as it is highly susceptible to bruising and post-harvest decay, and, hence, very perishable. When the lockdown was announced, strawberries could not be transported to major markets and prices crashed by about 40 per cent. The local buyers, who were also processors, had already purchased to their full capacity and dealers from other areas, even if willing, could not travel to the farms to lift the produce. In addition, cultivators of this crop enjoy the benefit of huge value addition, which was not possible due to the restrictions imposed to contain the spread of COVID-19, thereby aggravating losses.

Litchi is another soft crop, cultivated mainly in Bihar, and normally sold in the months of May and June. This cash crop has been providing succour to the State's rural economy for decades and is cultivated by about 45,000 farmers. However, the 2020 season was a big jolt and growers were of the view that due to lockdown it may be possible to sell only 25 per cent of the produce.[14]

Mango is a major horticultural crop and occupies 35 per cent of the area under fruit crops. The entire harvest of this crop was during the lockdown period and it initially suffered due to fall in

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[13] **Yousuf, M, et. al. 2020**. Kashmir: Lockdown Forces Apple industry to Face More Challenges, *The Wire*, May 12.

[14] **Rani, L. 2020**. Covid-19Bihar farmers sell fruits, vegetables at throwaway prices as lock down restricts movements, *Gulf News*, May 17. [https://gulfnews.com/world/asia/india/covid-19-bihar-farmers-sell-fruits-vegetables-at-throwaway-prices-as-lockdown-restricts-movements-1.71541015].

prices. However, Marketing Boards and various aggregators in States like Maharashtra made aggressive attempts to make the supply chain agile. Bulk orders were placed by housing societies in urban areas and delivered to them by farmers. The second-grade variety of the fruit, however, suffered from wastage as processing factories were not always functioning. In addition, even exports suffered as mango is exported to the U.S. and Europe, but international borders were closed to check spread of the virus.

Floriculture: a long time to re-bloom

Although floriculture occupies a negligible share in gross cropped area (less than even one per cent), the sector contributes about Rs 18,000 crores of output value from agriculture (which is about 1.4 per cent). Farmers earn substantial incomes from just an acre of land under floriculture in both domestic and export markets. The yield from an acre can fetch anywhere between Rs 4 lakhs and Rs 5 lakhs for an investment of Rs 2 lakhs over a month. This year, however, this was not to be. Celebratory events were either cancelled or kept at a low-key and five-star hotels were shut. Consequently, this sector suffered from a huge demand shock after the lockdown was announced.

The South India Floriculture Association revealed that more than 1,000 floriculturists had shut shop and were not looking to returning to the business.[15] Floriculture is an important industry in Maharashtra as well. According to the State's Cooperative and Marketing Department, in normal times a few major markets in Mumbai, Navi Mumbai and Pune do business anywhere between Rs 300 crores and Rs 350 crores during summer months which, unfortunately, coincided with this year's lockdown.[16]

A flower distributor with country-wide operations estimated his firm's loss at Rs 10 lakh per day due to the lockdown.[17] Considering the losses made by floriculturists, it appears that survival of the industry would be a challenge and it may take considerable time for this business to revive.

[15] **Fathima, I. 2020**. Lockdown blues: Flower business in Karnataka wilts, Rs 360 crore loss, *The New Indian Express*, June 2. [https://www.newindianexpress.com/cities/bengaluru/2020/jun/02/lockdown-blues-flower-business-in-karnataka-wilts-rs-360-crore-loss-hits-sector-2150992.html].

[16] **Tirodkar, A. 2020**. Maharashtra's blooming flower industry succumbs to covid chills, *Newsclick*, April 29. [https://www.newsclick.in/COVID-19-Maharashtra-Flower-Industry-Suffers].

[17] **PTI. 2020**. Millions of flowers destroyed by farmers across India for lack of demand, *AhmedabadMirror*, March 31. [https://ahmedabadmirror.indiatimes.com/news/india/millions-of-flowers-destroyed-by-farmers-across-india-for-lack-of-demand/articleshow/74915578.cms].

The allied sector, the poultry segment in particular, took a big hit even before the lockdown was announced. From February 2020, there were rumours that poultry birds were vectors of the SARS-COV-2 Virus (the causative agent for COVID-19). This resulted in a near collapse in demand for chicken.[18] During the lockdown and even before that, chicken prices hit rock bottom at Rs 10 – Rs 15 per kg, against the cost of production of Rs 75 per kg. Prices of eggs also dropped to Rs 1.50 per egg, down to half of its cost of production of Rs 3 per egg.

Although deficits in supply resulted in demand reviving by 15 – 20 per cent (Rs 175 – Rs 200 per kg) in June; losses to the sector were estimated to be Rs 30,000 crores for the few preceding months. During this period, many poultry farmers had either abandoned their birds or culled them as it was unsustainable to maintain their farms. It is mainly the large farmers who have survived as those running small and medium operations were unable to withstand major losses and abandoned their businesses. The eggs available in the market were mainly sourced from cold storage facilities that are beyond the reach of small farmers.

The crippling of the poultry sector had its impact on the price of maize, the main ingredient for chicken feed. The price of maize fell below the MSP by about 35 - 45 per cent which caused maize farmers to incur a loss of Rs 20,000 per acre[19]. The demand for poultry feed fell by 30 per cent since the lockdown. This sector, in which many units are Small and Medium Enterprises, is operating at 50 per cent capacity. Several units are likely to face closure that will affect both the feed-manufacturer and the poultry sector.[20]

Overall, it appears that even though this sector is witnessing some revival since June 2020, the demand may not be robust as the hospitality and catering sector is unlikely to show signs of resilience any time soon. Further, India's poultry markets are predominantly wet markets, and hence consumers may be reluctant to visit them for fear of contacting the virus. These factors will continue to add to the woes of the poultry sector.

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[18] **Pandey, S. 2020**. How coronavirus, bird flu and rumours to stay off non-veg hit poultry industry hard in India, *The Print*, March 20. [https://theprint.in/economy/how-coronavirus-bird-flu-and-rumours-to-stay-off-non-veg-hit-poultry-industry-hard-in-india/384316/].

[19] **Pandey, S. 2020**. Poultry revival begins but industry faces doom with Rs 30,000 crore loss, *The Print*, June 19. [https://theprint.in/economy/poultry-revival-begins-but-industry-faces-doom-with-rs-30000-crore-loss-this-year/444120/].

[20] **Kumar, J. 2020**. Covid: Indian poultry feed manufacturers incurring losses, *All About Feed*, June 8. [https://www.allaboutfeed.net/Compound-Feed/Articles/2020/6/Covid-Indian-poultry-feed-manufacturers-incurring-losses-594664E/].

The lockdown also negatively impacted the marine fishery sector inflicting a daily loss of Rs 224 crore as reported by Central Institute of Fisheries Technology. Other value chains that also suffered were fish processing and exports.[21]

Export of buffalo meat, too, faced constraints. The dairy sector, however, proved to be more resilient despite a collapse in the supply chain of milk during the early days of the lockdown. There was considerable reduction in demand for milk as bulk purchasers such as hotels and tea stalls were shut down. There was a decline in daily liquid milk sales by dairy cooperatives by about 15 per cent. Gradually, the procurement of milk increased and millions of small holders sold their surplus milk to village collection centres, which was then sent for processing and finally dispatched to consumers. The Union and State governments aided the recovery process through appropriate interventions such as providing low-cost working capital to convert milk into Skimmed Milk Powder that can be used for further consumption.[22]

Wheat, a notable exception

Although horticulture and allied activities suffered huge losses due to lockdown, the harvest and procurement of wheat touched record levels of 107 million tonnes and 38 million tonnes, respectively. The Government of Punjab took considerable efforts to ensure that all protocols were adhered to during procurement.

Efforts were also being made to ensure that farmers have access to inputs for the kharif season. Paddy is a major labour-intensive kharif crop and, to combat the labour shortage, mechanical operations are being used for sowing the crop.

[21] **Kumar, V. S. 2020**. Covid-19 inflicts a daily loss of ₹224 crore to India's fishery sector, *The Hindu BusinessLine*, April 20. [https://www.thehindubusinessline.com/economy/agri-business/covid-19-causes-a-daily-loss-of-224-crore-to-indias-fishery-sector/article31388582.ece].

[22] **Rath, D. 2020**. A new White Revolution: How COVID-19 could benefit the dairy industry, *Financial Express*, April 29. [https://www.financialexpress.com/opinion/a-new-white-revolution-how-covid-19-could-benefit-the-dairy-industry/1942634/].

II. LESSONS FROM THE FARM GATE

Inadequate storage facilities, shortage of cold chains, and poor logistics are chronic deficiencies in Indian agriculture. These aggravated the fallout of the lockdown, with the near collapse of supply chains resulting in crashing farm gate prices. Many in the primary sector, including those operating in the formal economy, have had their businesses ruined. This chapter will look at the key takeaways from the lockdown for the agricultural sector. It highlights—with an example of a successful Farmer Producer Company (FPC)—how organisations with economies of scale, marketing networks, and forward and backward linkages could weather the lockdown. It also argues the case for self-sufficiency, especially in major crops.

Unlocking the potential of Producer Companies

A 2002-amendment to the Companies Act, 1956 created the space for farmers to operate as companies. A new corporate entity, Producer Company, was created based on the recommendations by the High Powered Committee for Formation and Conversion of Cooperative Businesses into Companies, also known as the Y.K. Alagh Committee.[23] The Committee, which spelt out the rationale to create Producer Companies, observed:

> "The Government of India has recognised that, in a market economy, rural producers are at a potential disadvantage given their generally limited assets, resources, education, and access to advanced technology. In the present competitive scenario, if cooperative enterprises are to continue to serve rural producers, they require an alternative to the institutional forms presently available under law. The best way of achieving the same, in our view, is to adopt the provisions contained in the draft Bill for the creation of specially-devised Companies called "Producer Companies". These Companies would blend many of the features of a limited company with the principles and practices of mutual assistance, or cooperation."[24]

Although a recent addition, FPCs have been gaining popularity only over the past decade or so, partly driven by various government schemes and incentives. They have great potential to emerge as a strong support system for farmers and will enable them to not only survive but also augment

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[23] **Ministry of Law, Justice & Company Affairs. 2000.** Report of the High Powered Committee for Formation and Conversion of Business into Companies, *Department of Company Affairs, Government of India,* March. [http://reports.mca.gov.in/Reports/26-Alagh%20committee%20report%20of%20high%20powered%20committee%20for%20formation%20and%20covering%20of%20corporative%20business%20into%20Companies,%202000.pdf].

[24] **Ibid.** p11.

their incomes in a competitive environment. Though Indian agriculture is getting commercialised, the holdings are fragmented and dominated by marginal farmers. This creates both supply and demand-side problems.

On the supply side, the farmers are starved of resources to invest and, hence, have only small lots of produce to offer for sale. They are also unable to comply with the quality standards that are required to fetch higher prices. This may serve as a constraint on them to enter high value urban markets or even global markets. On the demand side, there are several large players, such as supermarkets, corporate buyers, and several others in the retail chain.

Hence, in order to meet these challenges, FPCs and Farmer Producer Organisations (FPOs) have come up as new generation entities, with farmer-producers as members to achieve the benefit of aggregation and economies of scale. Conceived by the government as a hybrid variant of the cooperative and corporate systems, they hold the potential to create a network of farmers that can collectively respond to market demand. This enhances the bargaining power of farmers as the FPCs/FPOs can successfully collaborate with major players in the market, such as retail and processing industries. They are also able to put in place backward linkages, such as providing technical inputs and knowhow to their members.

Even when the lockdown was in force, concerted efforts by aggregators, FPOs, and FPCs, eased the supply chain networks and bridged the gap between rural producers and urban consumers. Despite agricultural marketing being exempt from the lockdown,[25] wholesale markets were not functioning regularly.

Wherever they were operational, chaos prevailed due to huge crowds and mandatory safety norms thrown to the winds. This created panic for the administration, which feared further spread of the pandemic. Given this combination of factors—suppressed demand, restricted supply chains, and difficulties in marketing—organisations such as FPCs emerged as the most appropriate institutional mechanism available to solve the problems of procurement, marketing, and distribution, thereby addressing the difficulties faced by all stakeholders.

[25] **Ministry of Home Affairs. 2020**. 2nd Addendum to Guidelines annexed to the Ministry of Home Affairs Order No 40-3/2020=DM-I (A) dated 12.03.2020, *Press Information Bureau, Government of India*, March 27. [https://www.thehinducentre.com/resources/article32091256.ece/binary/2nd_Addendum_to_Guidelines.pdf].

In this context, a prominent example of a successful FPC during lockdown conditions is that of Sahyadri Farmer Producer Company Ltd (commonly known as Sahyadri Farms*)* based in Nashik district of Maharashtra. The membership of this FPC comprises more than 8,000 farmers, mainly those who are resource-poor and marginal.

Established in 2011, it has state-of-the art infrastructure in the form of cold storage, pre-cooling as well as ripening chambers, and pack houses. It is also equipped to process fruits and vegetables. In addition, there is a backward linkage through which advisory services and inputs are provided to farmers. A robust supply chain ensures delivery of farm produce to consumers that is traceable, hygienic and affordable.

The lockdown was an opportunity for Sahyadri Farms to handle the crisis of agricultural marketing through appropriate planning. It assessed the availability of fruits and vegetables with its member-farmers. This was relatively easy, as all farmers had the required information. E-commerce platforms, social media, mobile applications and websites provided the link between the farmer and the urban consumer. There was continuous coordination between availability of supplies from farmers, the system in the pack houses and the demand from customers in urban markets, who could place their orders from the mobile application. Deliveries were completed with minimum human contact and online payments were made to the FPC. As this FPC operates on a large scale with no intermediaries, it was able to reap the benefits of economies of scale and reduced transaction costs. Thus, the lockdown provided an opportunity for such FPCs to swing into action and create a network of farmers and consumers.

Despite the creation of legal space for their operations in 2002, FPCs started growing in numbers only from 2012-13. As of March 31, 2019, a total of 7,374 were registered in the country, one-third of which are concentrated in Maharashtra and Uttar Pradesh, while others are spread more or less evenly across major States. However, most of FPCs/FPOs have very limited operations. Companies with substantial paid-up capital are very few and many of them operate with meagre amounts of paid-up capital. This skew is evident from data that just about 1.4 per cent of companies account for 68 per cent of the total paid up capital of all registered FPCs/FPOs. As significant funds are required to trade in agricultural commodities, low paid-up capital is a serious limitation for an overwhelming majority of the FPCs.[26]

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[26] **Neti, A. and Govil, R. 2019.** How Many Farmer Producer Companies Are There in India?, *The Wire,* October 22. [URL: https://thewire.in/economy/nobody-knows-how-many-farmer-producer-companies-there-are-in-india]

Discussions with stakeholders reveal that only FPCs with market linkages, a diversified basket of produce, appropriate logistics, and processing facilities succeed. More precisely, backward and forward linkages are very essential for an FPC to be dynamic in its functioning. The FPCs that depend entirely on retail operations may not always be able to survive, especially if there is a demand shock. Moreover, several FPCs are undercapitalised, lack technical handholding support and infrastructure facilities that are required to leverage themselves in the total supply chain. However, the government is not complacent of this situation, but is aware of the important role that these organisations can play, not only in agricultural marketing but also in the production process. This has led to announcements made by the government to allocate budgets for the formation of such institutions that will induce market-driven agriculture for primary producers.

Need for Self Sufficiency

The pandemic also exposed India's vulnerability to globalisation and brought out the importance of self-sufficiency in major crops. India is not self-sufficient in the production of oilseeds and about 60 per cent of its demand for edible oils is met through imports. Domestic demand for pulses is also increasing, and the Index Number of wholesale prices of pulses, which was 121.7 in 2014-15 (2011-12 prices), sharply increased to 192.8 in 2016-17.[27]

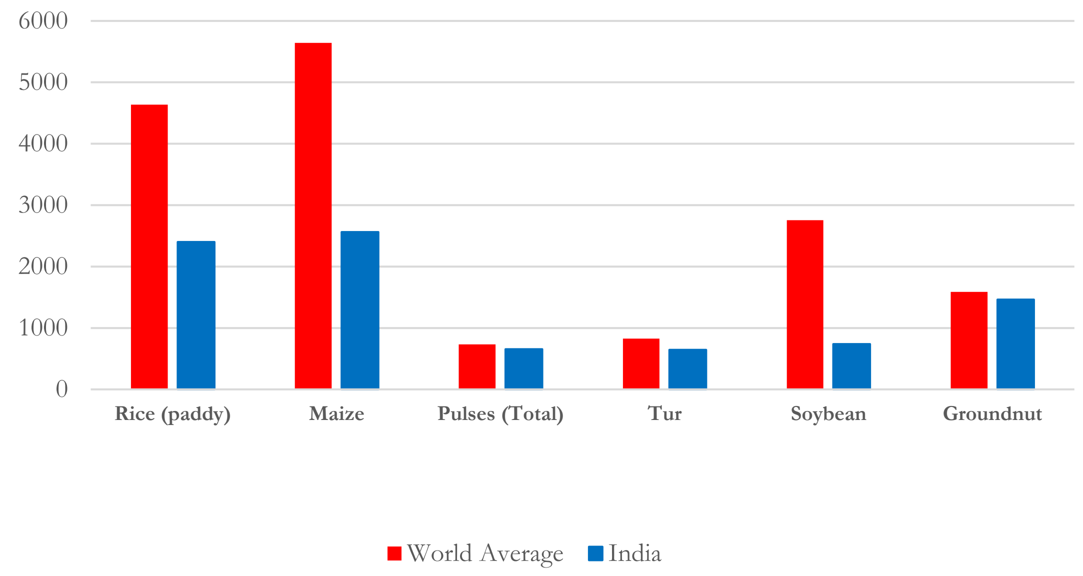
This rise in prices brought about an increase in the area under cultivation for pulses from 23.5 million hectares in 2014-15 to about 29.5 million hectares in 2016-17, which yielded an increase in production of pulses by about 35 per cent.[28] Despite this, productivity nudged up only by a bare seven per cent during this period, indicating that increase in area rather than the other factors of production contributed largely to increase in production. The real solution, therefore, lies in increasing productivity through improving irrigation facilities and infusion of technology. Productivity levels in India are far lower than in other countries. Moreover, wide variations exist in inter-State yield levels, (Table1 and Graphs 1 to 3). It is important to step up production by increasing productivity levels rather than area, as land is a scarce resource. This will enable the country to attain self-sufficiency for major crops like edible oils and pulses and bring about price stability as well. Increase in productivity will also facilitate release of land for other uses.

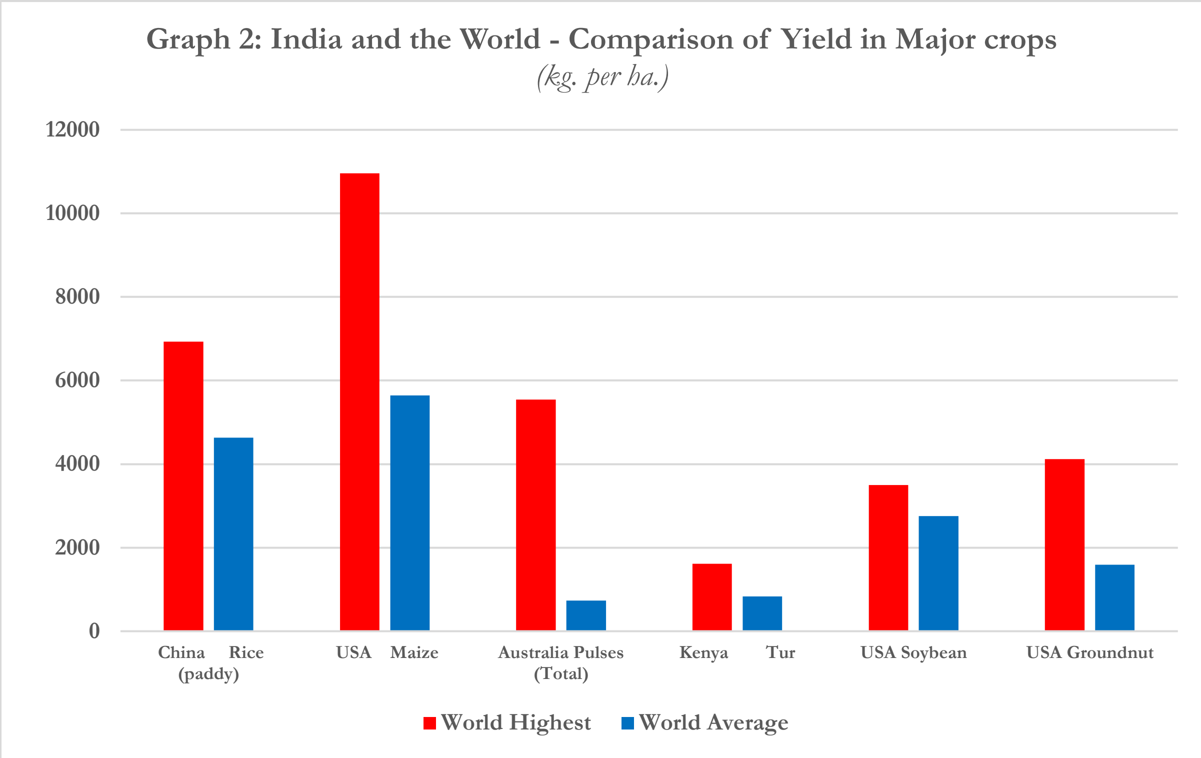
[27] **Ministry of Agriculture and Farmers' Welfare. 2019**. Agricultural Statistics at a Glance 2018, *Government of India*. [http://agricoop.gov.in/sites/default/files/agristatglance2018.pdf].

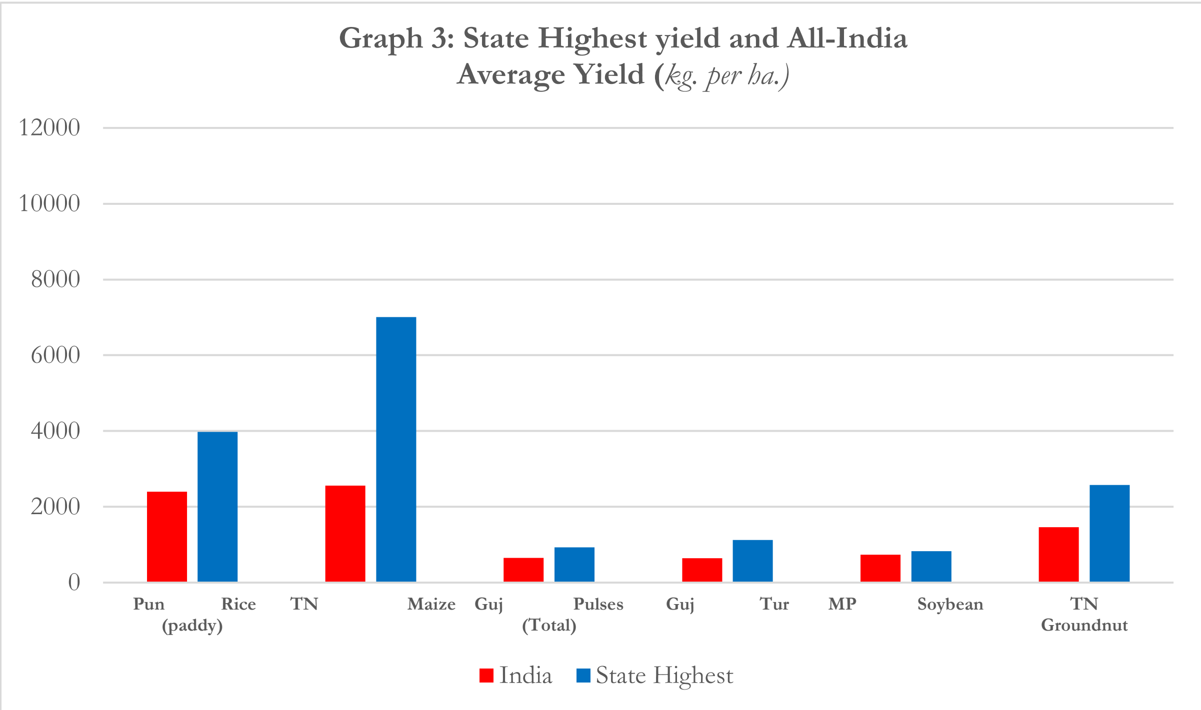
[28] **Ibid**.

Table 1: India and the World - Comparison of Yield in Major Crops *(Kg. per ha.)*				
Crop	World Average	World Highest	All-India Average	State Highest
Rice (paddy)	4,636	6,932 (China)	2,400	3,974 (Punjab)
Maize	5,640	10,960 (U.S.)	2,562	7,010 (Tamil Nadu)
Pulses (Total)	731	5,540 (Australia)	656	931 (Gujarat)
Tur	829	1,612 (Kenya)	646	1,124 (Gujarat)
Soybean	2,755	3,500 (U.S.)	738	831 (Madhya Pradesh)
Groundnut	1590	4118 (USA)	1464	2574 (Tamil Nadu)

Graph 1: India and the World - Comparison of Yield in Major Crops
(kg. per ha.)







(Pun - Punjab; TN - Tamil Nadu; Guj – Gujarat; MP - Madhya Pradesh)

Source: Ministry of Agriculture & Farmers; Welfare. *Agricultural Statistics at a Glance 2017*. GoI.

Improved irrigation facilities play an important role in raising productivity levels. The variations in irrigated area among States often explain inter-State differences in yield. Till date, agriculture remains largely dependent on monsoons. The gross irrigated area as percentage of gross cropped area is 48.63 per cent. This national average is perhaps pulled up because States like Punjab have their entire cropped area irrigated, while in States like Maharashtra the irrigated area is merely 18 per cent. Hence, despite technological advances, agriculture continues to remain at the mercy of the rains. The year 2015-16 was a drought year in Maharashtra and the yield of soya bean was just 557 kg per hectare. However, in the following year when the rainfall was favourable, the yield doubled to 1,194 kg per hectare. The All India Index number of yield for soya bean, which was 92.4 in 2008-09 (TE 2007-08=100), declined sharply to 65.5 in 2015-16, i.e a decline of 30 per cent.[29] This clearly indicates the crying need for protective irrigation. Therefore, watershed strategies and irrigation projects must be given the highest priority. Equally important is the use of certified seeds, appropriate dosage of fertilisers, and other suitable practises. When both technology and irrigation are in place, not only will yield increase but there will also be a decline in year-to-year variability.

[29] **Ministry of Agriculture and Farmers' Welfare. 2019**. Agricultural Statistics at a Glance 2018, *Government of India*. [http://agricoop.gov.in/sites/default/files/agristatglance2018.pdf].

III. GOVERNMENT INTERVENTION AND POLICY

The agricultural sector in India consists of 146 million holdings[30] of which 86 per cent are marginal and small. The number of agricultural labourers is equally large, numbering 144.3 million, (about 50 per cent of the country's workforce).[31] The sector has always been distressed. Even before the pandemic—in fact since independence—the government has been in the process of reforming it. The Union and State governments have, over the past decades, implemented several schemes aimed to improve the performance of the agricultural sector. This chapter will look at the support interventions by the Union Government after the lockdown under three categories.

(i) Income support

(ii) Credit support[32] and,

(iii) Reforms in the agricultural sector[33]

Income and Credit Support

For income support, a direct cash transfer scheme, the Pradhan Mantri Kisan Samman Nidhi (PM-Kisan)", was launched on December 1, 2018 to augment the income of Small and Medium Farmers. Under this scheme, eligible small and marginal farmers with landholding up to two hectares [1 hectare=2.4711 acres] are provided income support of Rs. 6,000 per year, payable directly to the beneficiary's bank account[34]. The Government of India released data on the disbursements made under this scheme[35].

[30] **Ministry of Agriculture & Farmers Welfare, Department of Agriculture Co-Operation & Farmers Welfare, Agriculture Census Division. 2019**. Agriculture Census 2015-16 (Phase-I), *Government of India*. [http://agcensus.nic.in/document/agcen1516/T1_ac_2015_16.pdf].

[31] **Ministry of Agriculture and Farmers' Welfare. 2019**. Agricultural Statistics at a Glance 2018, *Government of India*. [http://agricoop.gov.in/sites/default/files/agristatglance2018.pdf].

[32] **Ministry of Finance. 2020**. Finance Minister announces short term and long term measures for supporting the poor, including migrants, farmers, tiny businesses and street vendors, *Press Information Bureau, Government of India*, May 14. [https://www.thehinducentre.com/resources/article31584169.ece/binary/PIB1623862.pdf].

[33] **Ministry of Agriculture & Farmers' Welfare. 2020**. PM chairs Cabinet Meeting to give historic boost to Rural India, *Press Information Bureau. Government of India*. June 3. [https://pib.gov.in/PressReleseDetail.aspx?PRID=1629034].

[34] **Ministry of Agriculture & Farmers' Welfare. [n.d.]** PM-Kisan Samman Nidhi. *Government of India*. [https://pmkisan.gov.in/].

[35] **Ministry of Agriculture & Farmers' Welfare. 2020**. Under PM-KISAN Scheme Rs. 17,793 crores released for 8.89 crore farmer families during the lockdown, *Press Information Bureau, Government of India,* April 20. [https://pib.gov.in/PressReleseDetail.aspx?PRID=1616501].

This scheme was launched even before the outbreak of the virus, but the instalment of Rs 2,000 to beneficiary farmers who were 8.7 crores in number, which was paid in April 2020, was considered to be a part of the Pradhan Mantri Garib Kalyan Yojana (PMGKY) relief package announced in March 2020. Hence, it appears that a part of the PM Kisan budget was repackaged in the PMGKY. The Rs 1.7-lakh-crore package under the PMGKY was announced mainly for vulnerable sections, including farmers, to enable them to withstand the economic disruption due to the lockdown. The main highlights of the scheme were that 80 crore persons would receive free ration of 5 kg of wheat/rice and 1 kg pulses in the form of *channa* every month till November 2020. This entitlement will be over and above the quantity distributed to ration card holders under the National Food Security Act. In addition, the scheme included small income support for poor women and widows, insurance cover for health workers and free distribution of gas cylinders to lower ranks of the population.

The lockdown conditions also led to huge unemployment and the problem has been aggravated by the return of migrant workers to the hinterlands. Hence, instruments such as creation of public works to stimulate the economy were also included in PMGKY. Accordingly, budget allocations for schemes such as Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) were increased by about 65 per cent. In 2019-20, while 2.3 crore persons, on an average, demanded MNREGA work every month, this figure shot up to 3.9 crores in May 2020, which is an increase of 72 per cent. This clearly reveals the distress in the rural sector. A drive is also being undertaken to encourage returned migrants to enrol under the scheme. The wages to be paid per day were increased by 11 per cent. These measures, some of which are fiscal in nature, aim at giving some minimum purchasing power to weaker sections. Other than distribution of foodgrains and cash transfers which benefit the poor, a large number of whom are concentrated in the agricultural sector, several measures are being implemented for farmers to ease the repayment of loans and also provide access to credit.

Firstly, a three-months loan moratorium, and further extended by another three months, has been given to farmers amounting to Rs 4.2 lakh crores, which will benefit three crore farmers. This indicates that 20.5 per cent of farmers in the country will benefit from this measure and the average loan per farmer was Rs 1.4 lakh. Additional refinance of Rs 30,000 crores as emergency working capital is to be extended by NABARD over and above the Rs 90,000 crores already provided for, to meet crop loan requirements of Rural Cooperative Banks and Regional Rural Banks. This is likely to benefit three crore small and marginal farmers.

A credit boost of Rs two lakh crores will be given to farmers under Kisan Credit Card. A special drive to provide concessional credit to PM-Kisan beneficiaries as well as fishermen and animal husbandry farmers through Kisan Credit Cards is to be undertaken. About 2.5 crore farmers are likely to benefit from institutional concessional credit. This indicates that each farmer on an average is entitled to Rs 80,000 loan which is likely to inject liquidity in the economy.

About 63 lakh loans, which amounted to Rs 86,600 crores, was approved in March and April 2020, which indicates that the average loan taken was Rs 1.37 lakh /per farmer. Further, an interest subvention of two per cent on prompt payment of loans will be given. A new scheme to provide interest subvention of two per cent per annum is to be given to dairy cooperatives that are playing a major role in milk procurement. In addition, Rs 15,000 crores was allocated for animal husbandry infrastructure.

In order to provide a boost to the fisheries sector, an amount of Rs 20,000 crores was allocated to promote marine, inland, and aquaculture and develop fishing harbours and cold chains. Rs. 500 crores was allocated to Activities such as bee-keeping were also to further encourage activities such as bee-keeping and strengthen supply chains for fruits and vegetables.[36]

Reforms through ordinances

In addition to these existing schemes, a number of agricultural sector reforms have been announced, such as a package for strengthening infrastructure logistics, capacity building, and promoting Micro Food Enterprises. NABARD will facilitate Rs 1,00,000 crores to fund agriculture infrastructure projects at the farm gate and aggregation points. Another measure allocates Rs 10,000 crores for technical upgradation of two lakh Micro Food Enterprises to enable them to attain standards, build brands for major crops and strengthen the supply chain.

Three ordinances were promulgated—perhaps due to the lockdown—to ease marketing of agricultural produce.[37] The first ordinance amended the Essential Commodity Act, 1955,[38] so that

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[36] **Government of India. 2020.** **Building Atmanirbhar Bharat and Overcoming COVID-19, Phase III. Part-3: Agriculture**, May 15.
[https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/05/2020051736.pdf].

[37] **Mohan, V. 2020**. President promulgates agri Ordinances, gives legal status to reforms, *The Times of India*, June 5.
[https://timesofindia.indiatimes.com/india/president-promulgates-agri-ordinances-gives-legal-status-to-reforms/articleshow/76222213.cms].

[38] **Department of Consumer Affairs, Ministry of Consumer Affairs, Food & Public Distribution, Government of India. 2020**. The Essential Commodities (Amendment) Ordinance, 2020, *The Gazette of India,* June 5. [https://consumeraffairs.nic.in/sites/default/files/file-uploads/essential-commodities-order/EC_Ordinance.pdf]

major crops are free from excessive regulations on stock limits and regulation on stocking capacity can take place only in times of extreme emergency.

Another ordinance did away with the monopoly enjoyed by the Agricultural Produce Market Committees (APMCs) to the buy produce of the farmers. The APMC Acts, which were passed by each State in the early 1950s, gave no option to farmers to sell their produce except through regulated markets. In these markets, sale was through auctions, as this was thought to result in competitive prices. In reality, the functioning of APMC markets revealed collusion among traders and rent-seeking.

As the issue of farmers receiving unduly low prices for their produce was becoming serious, the need for alternative markets was felt. Accordingly, since early-2000, States were being asked to reform their respective agricultural marketing Acts to include private markets, farmer-consumer markets, direct marketing, contract farming, and other similar measures to free the marketing process. Although the process was on, it was not uniform across States and this, perhaps, led to the promulgation of the Farmers' Produce Trade and Commerce (Promotion and Facilitation Ordinance), 2020.[39] According to this ordinance, any place outside the boundaries of a market yard managed by APMCs can be a market for agricultural produce without any market fee. In contrast, when farmers sell to APMCs, they end up incurring considerable marketing costs. Through this ordinance, adequate choice is given to farmers to sell their produce at remunerative prices through access to several markets, including barrier-free inter-State trade.

[39] **Ministry of Law & Justice. 2020**. Farmers' Produce Trade and Commerce (Promotion and Facilitation Ordinance) 2020. *The Gazette of India*, June 5. [http://164.100.117.97/WriteReadData/userfiles/The%20Farmers%E2%80%99%20Produce%20Trade%20and%20Commerce%20(Promotion%20&%20Facilitation)%20Ordinance%202020.pdf].

The third ordinance, The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services, was promulgated to facilitate contract farming[40]. Contract farming is also a risk mitigating measure for a farmer because in several contracts, inputs and advisories are provided by the company which finally buys back the produce after harvest at a pre-determined price. This ordinance will provide a framework that will enable farmers to engage with processors, aggregators, large retailers and exporters in a fair and transparent manner.

Overall, it can be observed that various measures—direct cash transfers, credit incentives, ease of marketing, strengthening of infrastructure—have been put in place to revive agriculture, not only to overcome the crisis created by COVID-19 outbreak but also to strengthen the sector and make it a catalyst for overall economic growth and development.

[40] **Ministry of Law and Justice. 2020. The Famers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020**, *The Gazette of India,* June 5. [http://agricoop.nic.in/sites/default/files/219750.pdf].

IV. THE WAY FORWARD

Although agricultural operations were exempted from lockdown conditions, the sector has suffered immense losses. Notably, horticulture, floriculture, and allied sector suffered severe losses due to the highly perishable nature of the commodities and an already weak supply chain that could not operate at full capacity. Gradually, attempts were made to salvage the situation with aggregators and Marketing Boards adopting aggressive measures to bridge the gap between the rural producers and urban consumers. The government also initiated measures in the rabi season itself, to ensure smooth procurement of wheat and further avoid bottlenecks in the sale of inputs for the kharif 2020 season.

Impact of COVID-19 policy interventions

Interventions by the government have also been in the form of direct cash transfers that could meet the urgent requirements of the small and marginal farmers as well as other vulnerable sections. Although the amount distributed under various schemes may be considered to be quite small given the large number of distressed households, the government has perhaps limited fiscal space to increase the amount.

Moreover, it is not only the agricultural sector that is facing distress because of the lockdown, but also major segments of the secondary and tertiary economy. The unemployment rate is reaching alarming proportions and, hence, the government will have to address these issues. Further complexities may arise, especially in certain States, if there is a return of the diaspora, as other countries too are facing similar conditions. Not only will remittances decline but so will economic opportunities, thus causing a strain on government resources. Managing the fiscal deficit will, therefore, definitely remain a huge challenge for the government.

With respect to the announcement of a moratorium on loans for a few months, it is imperative to note that the farming community would find it difficult to repay its loans soon. The farmers make considerable investments in horticultural crops with the hope of making good returns. However, due to the pan-India lockdowns, several crops suffered demand shock and price crash, while some farmers did not even harvest the crop. Under such circumstances, when even the cost of cultivation was not recovered, the possibility for the farmer to repay a loan will certainly be distant.

In fact, the situation is so grave that revival of certain sectors, such as floriculture and poultry, is expected to be long drawn and many players in the business may be completely wiped out.

The lockdown conditions also made the migrant workers anxious, and millions of labourers returned to their villages. This reverse migration has greatly increased the demand for public works and, hence, schemes such as MNREGA should be stepped up to meet this challenge. The state machinery has to expedite the works to be carried out so that job seekers are assigned work; it also has to ensure timely payment of wages. It is unfortunate that wages to be paid for public works are often delayed, again causing tremendous hardships for these labourers who have very high marginal utility for money.

Time to address the chronic problems

It has been obvious for a long time that the agricultural sector is starved of infrastructure in the form of warehouses, cold storage, and other such logistics. The potential of the agro-processing industry is not fully exploited as well. Indian consumers appear to have limited demand for processed food. The lockdown has brought out the importance of agro-processing that creates value addition to the product and increases its shelf-life. However, the benefits of the reforms announced by the government to strengthen agricultural infrastructure and create micro enterprises cannot be reaped immediately as they have a fairly long gestation period.

The same applies to the ordinances that aim to expand markets and provide barrier-free trade. Clearly, provisions in the Essential Commodity Act, 1955, which was amended by the first of the three ordinances passed during the lockdown, were archaic and had long outlived their purpose. It is hoped that the amendment to this Act will lead to increase in warehouse facilities and storage of the crops for lean season without excessive rise in price. Electronic trading, which is a flagship programme of the government and aims at real price discovery, suffers from several teething problems such as assaying of the produce as well as reluctance of stakeholders to use digital technology. However, the number of participants registered for electronic trading showed some increase during lockdown, as this method can take care of the social distancing protocol. While the merits of this form of trading that bring about transparency is important, it also faces tremendous challenges, which may take a long time to get addressed.

India's agricultural sector suffers from both supply glut and crop failure. In the event of bumper harvest of any crop, the price crashes even below MSP making it inevitable for state agencies to enter the market and purchase the crop. However, while these purchases at MSP are satisfactory with respect to wheat and rice, mainly to meet the requirements of Public Distribution System (PDS), the machinery is not always efficient when it comes to procurement of other crops that sometimes require support.

The huge fiscal burden of PDS has often been criticised but during COVID-19, the huge stocks in the Food Corporation of India godowns[41] have been a great relief, since the government had to provide additional foodgrains to vulnerable sections. With respect to other major crops where food security is not the concern, a robust futures market can serve as a guiding force for selecting an appropriate cropping pattern. Futures trading can lead to better price discovery and also help the farmer to hedge against market price risk.

Another point that may merit attention is that in the event of crop failure, especially of sensitive commodities, imports are undertaken to bridge the gap between demand and supply. However, by the time the imports reach the domestic markets, the next season's crop already arrives, and this creates excess supply. Also, imports can have a dampening impact on prices and farmers who have suffered crop failure may hardly be compensated by any price rise. The government should try and maintain a balancing act between the producer and consumer that often adversely impacts the agricultural sector.

Overall, it appears that several policy issues should be addressed to revitalise Indian agriculture. The process has already begun, with several archaic laws being diluted and the pandemic has probably expedited the reforms. In the short run, the lockdown has paralysed the economy with stagnant or lack of demand conditions. In this situation, there is no doubt that doles to the lower rung of the population can be the best measure to meet their basic and emergency requirements. This, in turn, would provide some stimulus to the economy. PM-Kisan and other cash transfers are a step in this direction. Even though agriculture has been out of the ambit of lockdown and efforts are now being made to unlock several economic activities, the recovery will be slow.

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[41] **Dash, K.D. and Sidhartha, 2020.** FCI's 'excess stock' comes in handy for govt in Covid battle, *The Times of India,* April 15. [https://timesofindia.indiatimes.com/india/fcis-excess-stock-comes-in-handy-for-govt-in-covid-battle/articleshow/75150021.cms].

It is possible that demand for several agricultural products will be badly hit due to significant contraction of incomes experienced by the workforce. As hotels, restaurants, and others in the food products consumption chain should maintain safety protocols to prevent the spread of the pandemic, their turnover is likely to reduce. This, in turn, will reduce their demand for several agricultural commodities. Exports, too, may face several constraints. Therefore, it is possible that the sector will suffer from a considerable demand shock in the 2020-21 agricultural season as well, which may again cause prices to move downwards.

Perhaps some lessons were learnt in the total lockdown period and the government, too, has the time to gear up its machinery to avoid any panic situation. In the long run, it is hoped that even after the COVID-19 crisis ends, reforms will be effectively implemented so that the outlays will lead to positive outcomes and the agricultural sector will finally witness a revival. Use of technology for farm solutions will certainly be a game changer for Indian agriculture.

The real answer, in addition to toning up the agricultural sector, lies in strengthening rural infrastructure, including roads, electricity, schools, sanitation, healthcare, and telecommunications, which will generate employment and prevent distress migration to urban areas. Only this will ensure that the benefits of growth are not concentrated in urban centres but are also reaped by rural India.

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