

# Agro-Economic Policy Briefs

*Aiding the Future of India's Farmers and Agriculture*

## On Critical Policy Issues in India's Agricultural Economy

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Focus: COVID-19

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For kind attention of:

The Hon'ble Prime Minister's Office,  
the Ministry of Agriculture and Farmers' Welfare,  
and all others interested

# Impact of COVID-19 on Indian Agriculture

Parmod Kumar

## Introduction

- The Indian government has imposed the largest lockdown in history under the circumstances of COVID-19. Lockdown imposed starting from the third week of March 2020 until the middle of May 2020 has left production and supply of goods and services near to a close down (Dev 2020). As a result of shut down, people in the informal sector, including agriculture and allied activities, have lost working days and wages and earning opportunities.
- Lockdown also means a halt in the purchase of various goods and services. Among agricultural products, the most affected are the perishables like fruits, vegetables and dairy & fishery products. An extraordinary challenge for the country's COVID-19 response is about the poor sections of population, as it disproportionately affects the daily wage earners, and marginalized sections of the society. However, India's social safety net is extensive. An elaborate array of programs has been put in place to assist the poor, including the world's largest food-based social program, the Public Distribution System (PDS), covering 800 million people (Roy, Boss, and Pradhan 2020). To respond quickly, India is utilizing these existing schemes and reshaping them to address the unique challenges from COVID-19.
- The response of Indian government for agricultural sector amidst the lockdown has involved the following measures: It has announced that most agricultural activities will be in the essential list; exempting farm workers in the fields, farming operations by farmers, agencies engaged in procurement of agricultural products, *mandis* notified by the state governments, inter- and intra-state movement of harvesting and sowing related machines and manufacturing, and packaging units of fertilizers, pesticides, and seeds. The supply chain normalcy is being brought for milk, milk products, poultry, tea and rubber plantations. MGNREGA resumption, PM Kisan scheme, PM-CARES fund, RBI relief measures, and borrower's moratorium are a few measures to safeguard the farmers and other vulnerable sections in the rural areas (Deininger and Liu 2013).

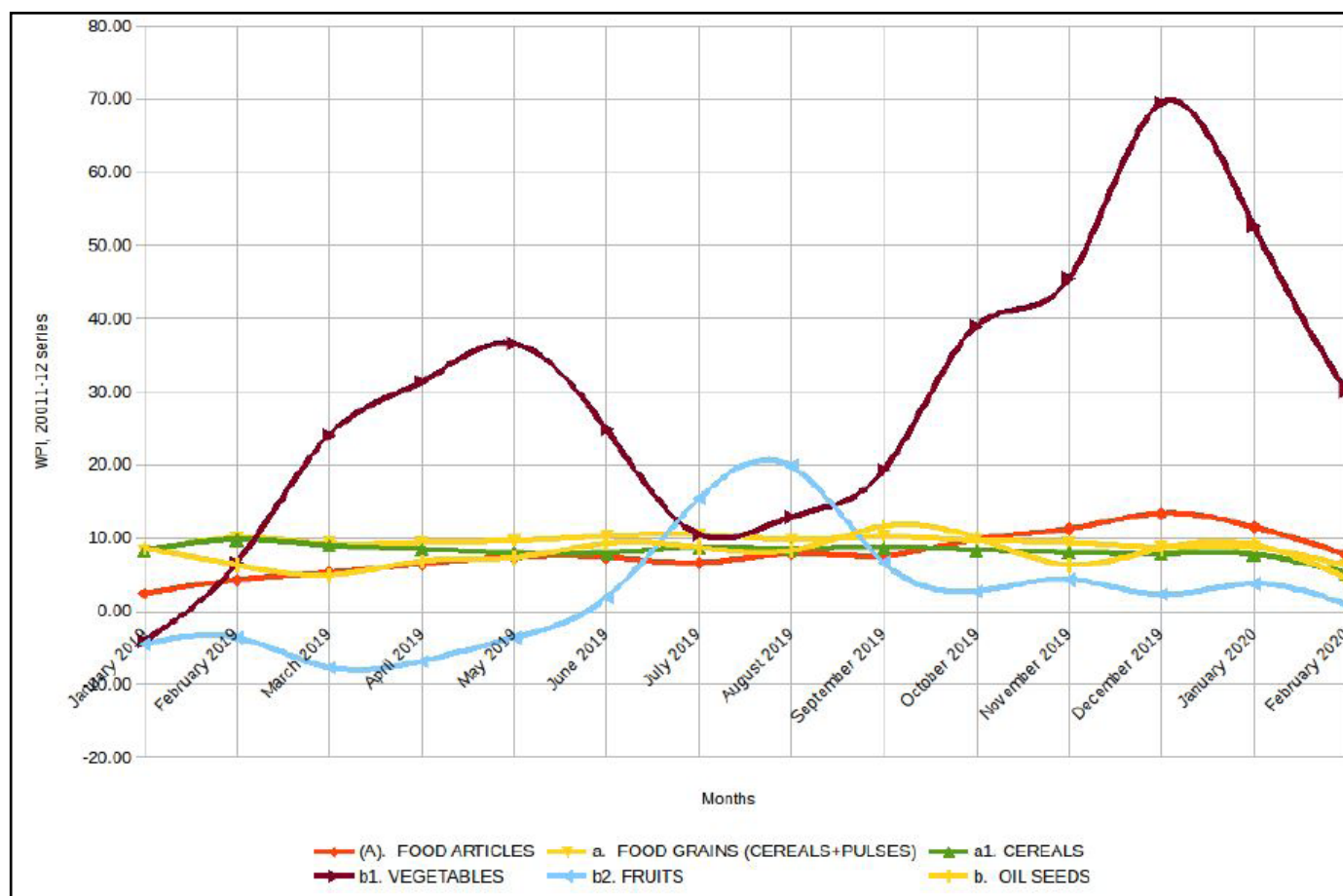
## Findings

- Amidst lockdown, India is expecting record foodgrain production at almost 300 million tonnes (149.92 MT kharif + 148.4 MT rabi), which is nearly 2% higher than the estimated output in 2019-20. The government now has to ensure that all foodgrains that farmers want to sell in the market are picked up. The government has set a target to buy 40.7 million tonnes of wheat directly from the farmers at MSP of Rs 1925 per quintal in the ongoing rabi marketing season for the central pool. Besides, the central government has fixed a target of 11.29 million tonnes procurement of rice grown during the rabi season of this year. Wheat procurement is going on in Punjab, Haryana, Madhya Pradesh, Uttar Pradesh and other wheat-producing states. The government intends to procure around 35% of the wheat production. The procurement in Punjab and Haryana exceeds 70-75% of the production but it remains barely around 5 to 10% in most of the other states.
- If the entire amount of wheat and other rabi crops produced is procured, it will revive private consumption demand, which was one of the factors originally responsible for the economic slowdown in India in the pre-Corona period.
- According to Niti Aayog, the farm sector will grow by 3 per cent this year despite adverse conditions, and it would add at least 0.5 per cent to India's GDP growth in 2020-21. This 0.5 per cent additional contribution by agriculture may prevent the Indian economy from contracting this fiscal. In the non-foodgrain category, the Ministry has set a higher goal of producing oilseeds, cotton, sugarcane and other commercial crops. This year the prices of major commodities and vegetables were higher in *mandis* than last year and when prices are favourable with better terms of trade, farmers tend to invest more. This positive outlook in agriculture is also supported by the expectation of normal monsoon by the meteorological forecasts as the El-Nino weather phenomenon, that disrupts rainfall in India, is not evident.

- However, these positive sentiments on production do not reflect better prices and improved income for the farmers, especially in the lockdown period of post-February 2020 scenario. Data on the wholesale price indices (WPI) for selected crop groups show that while WPI for food articles has been rising from beginning of 2019 onwards, the rise was driven by the increase in the prices of vegetables and fruits. Within vegetables, the price of onions, followed by potato and tomato, drove the WPI up (Figure 1). While onion prices, as well as fruit prices have come down, vegetable prices remained high even in February 2020. The situation changed drastically during the period of COVID-19 lockdown as seen in Table 1 and Figure 2.
- The wholesale prices data collected by Market

Intelligence Unit, Directorate of Economics & Statistics is summarised in Table 1 for the most recent period. The data was available for three points of time, i.e., as on 28<sup>th</sup> February, 17<sup>th</sup> April and 24<sup>th</sup> April. The price series on 28<sup>th</sup> February reflects the period before the lockdown while the two other price series are during the imposition of lock down, first at the end of first phase and the second during the middle of second phase of lockdown. The date of reporting of data was as recent as 5<sup>th</sup> May. The comparison presents a very interesting picture on the impact of lockdown on commodities mostly produced at the farm level. Overall, prices of almost all farm commodities declined during the second phase of lockdown while the situation may be even worse by the end of the third phase of lockdown.

**Figure 1: Percentage change in WPI of agricultural commodities, (Year on Year growth rate)**



**Source:** Drawn based on data from Ministry of Statistics and Programme Implementation (MOSPI)

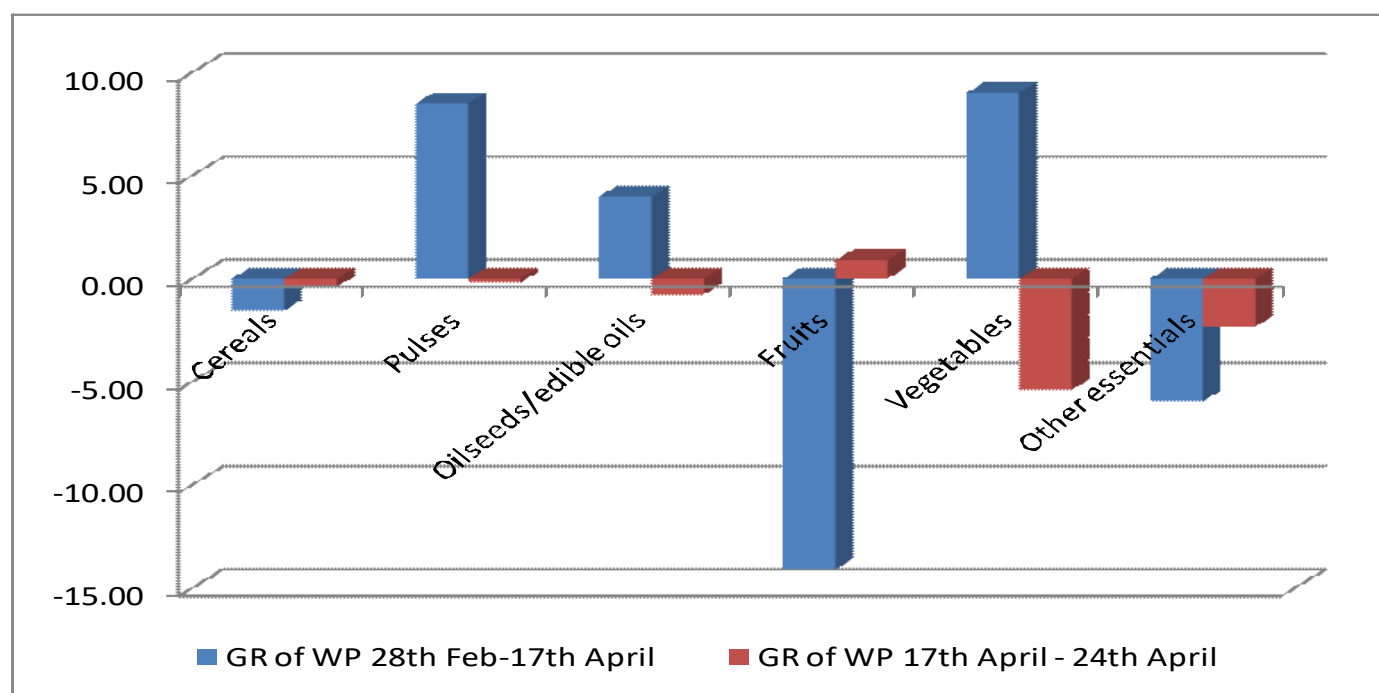
**Table 1: Wholesale prices of agricultural commodities during lockdown period (Rs per quintal)**

Item group	Commodity	28th Feb 2020	17th April 2020	24th April 2020	GR 28 <sup>th</sup> Feb to 17 April	GR 17 <sup>th</sup> April to 24 <sup>th</sup> April
Cereals	Paddy	1756	1895	1817	7.88	-4.11
	Wheat	2167	2138	2101	-1.36	-1.71
	Bajra	2160	2175	2035	0.68	-6.44
	Jowar	2744	2745	2568	0.02	-6.45
	Maize	1856	1630	1778	-12.15	9.07
	Barley	2059	1900	1910	-7.73	0.53
	Average of all cereals					-1.56
Pulses	Moong	7729	10267	10300	32.84	0.32
	Gram	4476	4622	4708	3.26	1.86
	Urad	7419	7667	7800	3.34	1.74
	Arhar	5381	4911	4850	-8.73	-1.24
	Masur	5540	6106	6056	10.21	-0.82
	Average of all pulses					8.49
Oilseeds/ edible oils	Groundnut	4848	6281	6126	29.56	-2.47
	Linseed	5244	5180	5243	-1.22	1.21
	Mustard Seed	4394	4701	4591	6.99	-2.33
	Nigerseed	4700	4650	4650	-1.06	0.00
	Soyabean	3804	4050	3759	6.48	-7.19
	Copra	9428	8846	9517	-6.18	7.59
	Average of all oilseeds and oils					3.98
Fruits	Mangoes	12540	9300	8625	-25.84	-7.26
	Apples	7762	9225	8885	18.85	-3.69
	Banana	420	318	352	-24.48	10.76
	Grapes	4621	3338	3038	-27.78	-8.99
	Mosambi	3439	3110	3375	-9.56	8.52
	Papaya	2111	1000	1000	-52.63	0.00
	Pineapple	3260	2247	2188	-31.08	-2.61
	Pomegranate	5581	5936	6120	6.35	3.10
	Sapota	2950	2780	2620	-5.76	-5.76
	Average of all fruits					-14.10

Item group	Commodity	28th Feb 2020	17th April 2020	24th April 2020	GR 28 <sup>th</sup> Feb to 17 April	GR 17 <sup>th</sup> April to 24 <sup>th</sup> April
Vegetables	Onion	2164	1524	1337	-29.58	-12.28
	Peas Green	4592	7340	6963	59.85	-5.14
	Pointed Gourd	5517	4000	3250	-27.49	-18.75
	Potato	1441	2021	1899	40.18	-6.00
	Pumpkin	1156	1500	1250	29.73	-16.67
	Beans	2914	3850	3500	32.12	-9.09
	Bitter Gourd	3100	1973	1860	-36.34	-5.74
	Cucumber	1640	1800	1867	9.76	3.70
	Bottle Gourd	1313	1800	1617	37.14	-10.19
	Brinjal	1809	1600	1450	-11.53	-9.38
	Carrot	2094	1667	1933	-20.40	16.00
	Cauliflower	1093	1365	1240	24.90	-9.16
	Chilies	13964	11648	11438	-16.58	-1.80
	Ginger	10118	10688	11565	5.63	8.21
	Ladyfinger	4058	2218	1863	-45.36	-16.01
	Lemon	2400	3500	3800	45.83	8.57
	Radish	783	1500	1450	91.49	-3.33
	Tamarind	10410	8000	6950	-23.15	-13.13
	Tomato	1211	1312	1210	8.30	-7.75
	Drumstick	3854	2327	2013	-39.63	-13.47
Average of all vegetables					9.01	-5.40
Other essentials	Milk	4407	4250	4150	-3.55	-2.35
	Eggs	4264	3083	2883	-27.68	-6.49
	Sugar	3521	3655	3642	3.81	-0.36
	Jute Raw	4689	4375	4350	-6.69	-0.57
	Cuminseed	16117	12060	11853	-25.17	-1.72
	Gowar	4042	3415	3277	-15.50	-4.05
	Black Pepper	38114	36554	32840	-4.09	-10.16
	Walnuts	47600	48750	46125	2.42	-5.38
	Average of the above essentials					-5.95

Source: Market Intelligence Unit, Directorate of Economics & Statistics. (accessed on 5th May, 2020)

**Figure 2: Growth rate in wholesale prices of agricultural commodities**



**Source:** Market Intelligence Unit, Directorate of Economics & Statistics. (accessed on 5th May, 2020)

- Looking at individual commodities, all cereals except maize, observed decline in wholesale prices during second phase of lockdown. Similarly, pulses and oilseeds observed positive increase in prices from February to first phase of lockdown but there was negative growth in the second phase. The oscillations in prices were observed much higher in the case of fruits, vegetables, milk, eggs and meat as compared to food grains, oilseeds and other essentials. Overall, there was hardly any commodity which observed continuous increase in wholesale prices during the period from February until April end (Figure 2). It is important to note that the data represents the time period when mostly the rabi harvesting was yet to start, and it was only fruits, vegetables and animal products which were part of the supply chain which got completely halted due to lockdown conditions having maximum impact on prices of these commodities.
- Nevertheless, the month of May-June is the peak of *rabi* season in India and crops like wheat, gram, lentil, mustard, (and rabi paddy in eastern and southern India) are being harvested. As the ongoing lockdown coincides with the *rabi* harvesting season, farmers across the country look up to the government to ensure uninterrupted harvesting of the crops as well as smooth procurement operations.

### Conclusion and Recommendations

- Waiving restrictions on the inter and intra-State movements of farmers/labourers, as well as harvesting and related farm machines is indeed a step-in the right direction. The sale of fruits, vegetables, dairy products, fish, poultry, and allied sectors have also been hit during the lockdown period as the uptake by the urban consumer and organized industry players has been affected due to shortage of workforce, transport issues and difficulty in approaching markets and shops by the urban consumer. As a result, the cultivators and related professionals have lost their income while some face the rage of unemployment (Bindhu 2020). Accordingly, small and marginal farmers, landless farm labourers, and SMEs dependent on raw materials from agriculture are faced with extreme challenges.
- Presently, the farm harvests reach the *mandis* for assured procurement operations by designated government agencies. Any severe disruption in such operations will create irreparable damage to all actors in the supply chain. The out-migration of workers to their native places has also triggered panic buttons, as they are crucial for both harvesting operations and post-harvest handling of produce in storage and marketing centres.

- Making the food grains, fruits and vegetables and other essential items available to consumers, both in rural and urban areas, is the most critical challenge for government machinery during the lockdown period. Smooth functioning of the supply chain, with adequate safety measures for the people involved, is of paramount importance.
- Transportation of public distribution system (PDS) items to last-mile delivery agents, by both rail and road, should be ensured by respective government agencies. Distribution of the commodities to a vulnerable population, while maintaining prescribed guidelines and protocol, particularly of social distancing, must be effectively monitored.
- The poor communities and the farmers make up 85% of the Indian population. The lives and livelihoods of hundreds of millions depend on agriculture. In case of any mishaps, they suffer the most. COVID-19 may be with us for a year or more. Going forward, the government needs a contingency plan for the agricultural sector for smooth sailing of upcoming *khari* sowing.

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## Some Evidences on Migration Mitigating Development

**Brajesh Jha**

### Introduction

- COVID-19 is among the most contagious diseases and following the threat of mass-scale transmission, the central government after a slew of measures like work from home, spread of duty time and day curfew; announced a lockdown of 21-days and further extended it with the withdrawal of rigour, phase-wise and location-wise. Such a lockdown, along with 'social distancing' was considered necessary, keeping in mind the density of population in India<sup>1</sup> (Laxminarayan 2020). Alternately, the COVID-19 would have infected people indiscriminately, and it would have affected those people the most who can ill afford spacious surroundings.

<sup>1</sup> Various estimates suggest that with business as usual (as it was in the first week of March) around 25 percent of population would have been affected by corona virus by August 2020. Source: HT 24-04-2020, Ramanan Laxminarayan

- A lockdown of this scale was unprecedented in India, where about one-fifth of the population are poor, and a significant proportion (two thirds as of 2009) live at an income of less than two dollars a day. The people affected the most with such lockdown are workers in the unorganized sector, some of whom have just emerged from poverty. The chances of them falling back to poverty due to joblessness increases<sup>2</sup> (ILO 2020). Many workers in the unorganized sector are migrants. They (migrants) are crucial for all kinds of development in certain regions; yet they are the most vulnerable among the informal workers. Their unrest is being

<sup>2</sup> Previous literature shows that poor are more vulnerable to any shocks (economic and ecological) and many of them slips to poverty as a result of such shocks. International Labour Organisation (ILO) in its report on 7th April says that around 30 percent of population will be pushed deeper into poverty in India. (ILO 2020)

reported from various parts of the country and has brought the issue of migrants in focus. This policy brief attempt to understand the reasons behind their helplessness and unrest, the possible effect of restlessness on development and ways to address the issue of migrants and migration.

## Findings

- During the lockdown, migrant problems have become conspicuous, as internal migrants now account for about one-third of the workforce in the country<sup>3</sup> (NSSO 2010) (Table 1). Around three fourth of the economy was closed following lockdown. Most of the production units, barring food and health (essential items), were not in operation. The livelihood of most workers, many of whom were migrants, was lost. Migrants were either casual or salary workers in unorganized sector with hardly any social security benefits. They live in cities on a monthly income of less than Rs.8,000. Many of them leave behind their immediate family members (parents and spouse) to add to their family income (at source). In a situation of joblessness, migrants will not be able to send remittances, making their stay futile. Consequently, they prefer to return to their villages; otherwise, they may have to incur certain costs (rent and food). In fact, by the time migrants realized the potential of lockdown on livelihood, transport to their villages had become inoperative. In this background, the restlessness of migrants would have lessened had the process of lockdown been smoothened. The government assistance (financial package) other than the “free ration<sup>4</sup>”, should have preceded or at least become a part of the announcement of lockdown. A few days following the lockdown, a financial package incorporated under different government schemes was announced by the central government<sup>5</sup>. Subsequently, availability of meals; two times a

day, was assured<sup>6</sup>. Although it brought some relief to poor and migrants, the joblessness of migrants for such a long period, made them cash starved. Many migrants work through contractors, and in emergency like the present, they found themselves isolated. Despite these situations in their place of work (destinations), a refusal to allow them permission to return to their villages made them restless. Transport for migrants return to villages was arranged; but this has been considered inimical by some for development of place of their work (destination). In this context, one may note that even though migrants live in sub-human conditions, they are free persons like any other citizen of the country. Therefore, it is important that migrants, as per their wish, should be allowed to go back to their villages to forget trauma experienced by them.

**Table 1: Distribution of Internal Migrants by last usual place of residence for each component of migration streams.**

Streams of Migration	1999-00 (55th round)		2007-08 (64th round)	
	Intra state	Inter-state	Intra state	Inter-state
Rural to rural	95.4	4.6	95.6	4.4
Rural to urban	80.3	19.6	74.8	25.2
Urban to rural	80.0	20.0	82.6	17.5
Urban to urban	80.1	19.9	77.1	22.9

**Note:** Intra state in each of the reference year is aggregation of inter and intra district in a state. The intra and inter becomes 100 in each of the reference year. Source: Source: NSS Report on Migration in India (2007-8). Report no. 533.

- The fear that development in the destination will be affected as migrants will not return is unfounded as most of them (migrant workers) are ‘distress’ migrants. They would return to work, though the process of return will be slow and staggered. It would depend on their urgency to migrate and also on their experience with the work. A favourable response from migrants network would help in their return. Therefore, development work in the destination would not be affected for a period beyond three months. The restricted economic activities during the period may not miss migrant absence seriously. There is also fear of the second wave of the COVID-19. A significant negative effect

<sup>3</sup> The decennial census (2011) does not provide an estimate of migration with respect to work force, though it is 37 percent of population. The NSS 2007-8 presents internal migrants as 28.7 percent of workforce. Migration has increased thereafter. Some argue that these figures are underestimates of the magnitude of migration.

<sup>4</sup> The free ration is meaningless, as portability of ration card is not allowed.

<sup>5</sup> On the second day of lockout (26-03-2020), the Union finance Minister announced a financial package under which 80 crore people will get free cereals and cooking gas; a direct cash transfer of certain amount for three months. Pradhan Mantri Garib Kalyan Yojana (PMGKY) included higher wages in MGNREGA and an ex-gratia payment of INR 1000 to nearly three crore poor senior citizen, widow and disabled. Subsequently, direct cash transfer of INR500 each, in three monthly instalments, into jan-dhan account of about 20 crore women.

<sup>6</sup> The central government advises states to use funds earmarked for Disaster Relief for the purpose of providing food to the needy persons.



on development work is also unexpected, as migrants are not organized to highlight their difficulties, though inclusiveness of development requires that their difficulties are addressed compassionately. A situation like the present shows that difficulties faced by migrants are boundless, Therefore, their restlessness is not uncommon. We have also realized that migration led development causes uncertainty, yet development in certain regions are highly dependent on migrant workers. They definitely require favourable policies. However, it is important to understand the reasons for increase in migration, especially the rural-urban kind in the recent decade.

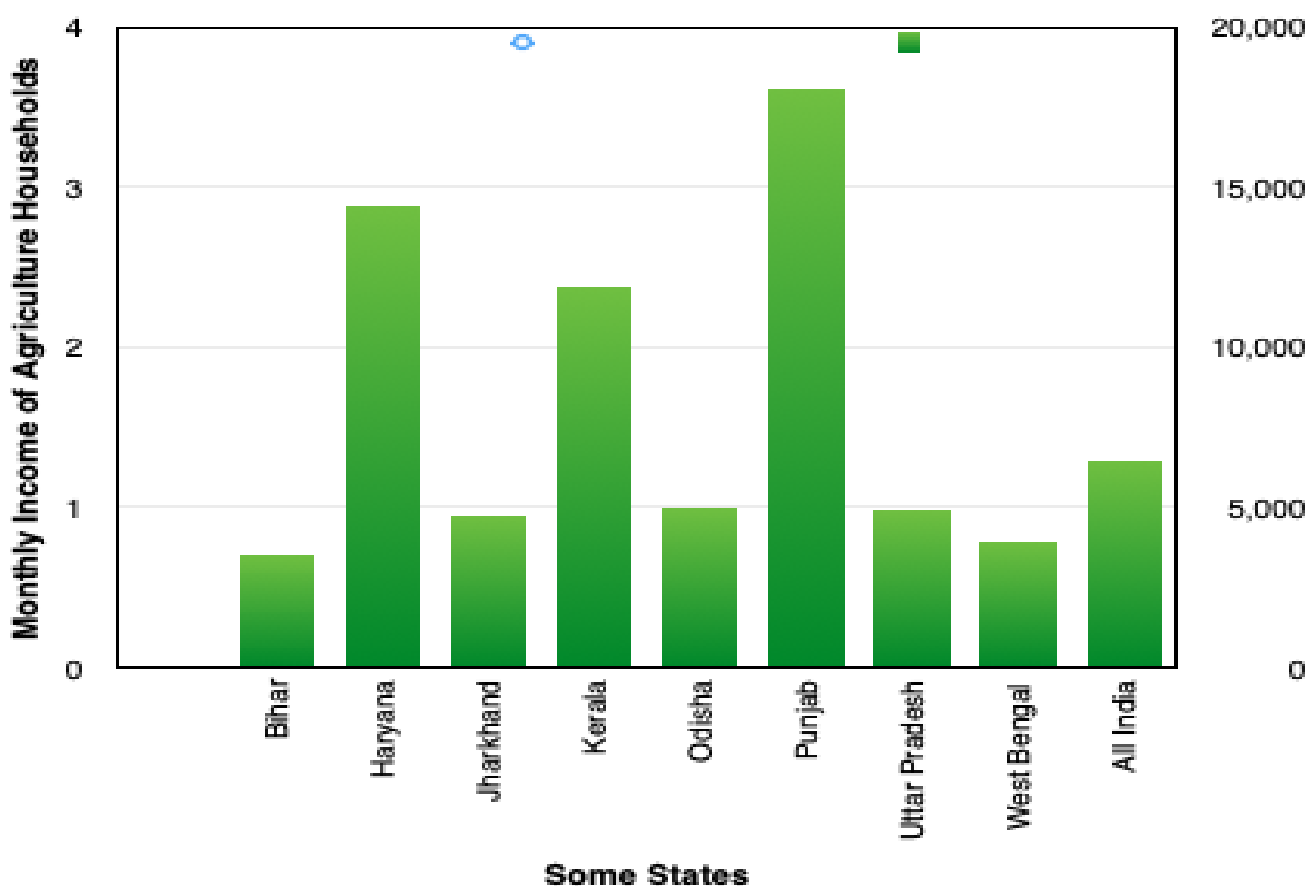
### Consequences of Development and Migration

- The possible reasons for increase in inter-state migration in general and rural-urban migration in particular can be related to both agricultural and non-agricultural economy. Evidences suggest that the growth of economy in the recent period has happened with a widening gap between agriculture and non-agricultural sector, and rural and urban areas of India. The growth has also been

concentrated in intra-spatial sense, in some pockets of India. Transition of Indian economy remains incomplete. The rate of urbanization remains low at 31 percent, in certain state (Bihar) it is as low as 10 percent. There are evidences of city-centric growth in Indian economy.

- There are literatures to suggest that divergence of growth in economy has increased among states. This is also true for agricultural economy. Nevertheless, Figure 1 below shows that the farmer's income in prosperous state (Punjab) is more than five times that of a poor state (Bihar). Besides disparity of growth in agriculture, the size of farm holdings is also important. Around 69 percent of agricultural holdings, at national level are of less than one hectare (marginal). The state wise variation in holdings is even wider. There are numerous studies to report that holdings of these sizes are not viable for an average family's livelihood. Therefore, they have to depend on other opportunities (farm or non-farm) for their livelihood.

**Figure 1: Monthly Income of Agriculture Households in Some States**



Source: NSS Situation Assessment of farmers 2014, NSS 70th Round.

- It is expected that as the size of holding shrinks due to population pressure, contribution of non-farm business in farmers' income should increase. The NSS situation assessment of farmers, however, shows that contribution of non-farm business in farmer's income has declined (from 11 to 8 percent) during the recent period (in 2013 over 2003). In addition to decline in rural non-farm (RNF) income, its contribution at around 10 percent to average farmer's income is extremely low (NSSO 2014). In certain states like Kerala and Tamil Nadu, the contribution of rural non-farm (RNF) in farm income (FI) is significantly high at 22 and 15 percent, respectively. Interestingly, in these states, interstate migration of farmers (for employment) is negligible. Hence, many land holders, in addition to landless labourers, become migrants for employment in urban space. Some migration of land holders has also been caused by the uncertainty of weather. In absence of vocational education, migrants are largely unskilled, and they end up joining a brigade of unskilled migrants. An ease of transport and communication further facilitates the process of migration.

## Conclusions and Recommendations

- Consequences of such development are reflected in an increased interstate migration in all streams, especially rural-urban. Various kinds of development in certain states requires migratory labour. However, it causes different kinds of problems: the civic amenities related are well documented, the present case also showed alienation of migrants from society. Migration in such areas (destination) may be regulated as per the "carrying capacity" of the place. The same may be expanded as per the requirement of development works. The migrants may also be provided wage and rights equivalent to the worker of that region. They may be assured of social security benefits and portability of the same.
- However, considering the problems associated with migration, the present rate of growth of migration, especially the rural-urban kind needs to be arrested. This requires creation of increased farm and non-farm opportunities in rural vicinity (at source). About increase of farm opportunities in agriculture, there have been numerous studies including the recent one on Doubling of Farmers Income (MoA&FW 2018b). This brief does not like to repeat these recommendations; however, author feels that consequences of certain issues related to agriculture have not been realized properly. The small size of land holding is one of such issues, and an overwhelming percent of farmers (landholders) not willing to continue in agriculture is another.
- As a matter of fact, the unsuitable (unviable) size of land encourages land-owners (farmers) to migrate. This also affects agricultural productivity of many agriculture commodities (Jha 2018). The above case highlights importance of vibrant land lease market wherein right of lessee and lessor is protected. In this regard, the NITI Aayog has suggested model land leasing act (in 2016). The state governments should realize damages on account of absence of tenancy and try to develop vibrant land lease market in the state by adopting the model Land Leasing Act of 2016.
- Farmers with small holding depend on multiple sources for their income, rural non-farm being the most important. The prosperous rural regions (Kerala, TN), where farmers hardly migrate for employment, has good contribution of non-farm sector in farmers income. In certain South East Asian countries with India like framework, the share of non-farm sector in farmers income is more than 30 percent. The non-farm opportunities for rural people requires growth of manufacturing, besides productivity induced growth in agriculture. It presumes that other sectors (construction, trade, business and services) of economy would grow subsequently.
- With the initiation of Khadi and Village Industries Corporation (KVIC), reservation of Small Scale Industry (SSI) and facilities for a cluster's approach to development, there have been some efforts at decentralization of manufacturing in economy. However, with trade liberalization, cost of production and economies of scale has become the most important; and for a country like India "mega" rather than small clusters are being recommended. As a result, manufacturing especially the rural kind stagnates (Jha 2020). Jha 2011 argues for decentralization of manufacturing for growth of non-farm opportunity in rural vicinity.
- Production requires market where many farmers (of surrounding villages) interact for agricultural inputs, outputs and similar other services. They (farmers) also require institutions of different kind (financial, educational) which can be accessible to people

of surrounding villages. Therefore, development of rural region depends on rural towns (small towns), where they can avail facilities of market and institutions. Hence, many vibrant towns, rather than cities, are key to development of rural regions in India.

- Incidentally in the post-COVID scenario a reorientation of international trade is being argued. The protectionist policies are on rise. Our Prime Minister is also arguing about increase of self-reliance. All these may encourage decentralization of economy, which will result in growth of non-farm sector in rural vicinity. This will definitely decelerate growth of rural-urban migration in the county. The recent budget (in a pre-COVID scenario) calls for identification of produce for each district; this is also a step, in decentralization of economy.
- This is an agenda for development of rural region in the post-COVID scenario which may arrest migration. However, in the immediate future, policy planners should recognize role of migrants in development works and provide social security in addition to benefits received by the informal workers. The states at source may also extend their helping hand in strengthening benefits to migrant (workers). For instance, medical emergency like the above (COVID-19), should have triggered meaningful income transfer to migrants. With digitalization, transfer of cash has emerged as an effective mean of support. The ration card and similar social benefits (if any) should immediately become portable. It is unfortunate that portability of ration card has improved only after insistence of the Supreme Court of India.
- However, the development of rural regions will take some time, the source states (Bihar, Jharkhand, and Uttar Pradesh) in intermediary stage should come out for suitable training. Especially when an overwhelming proportion of landholders are not willing to continue farming. Many of them require quality training with adequate backup to start non-farm activities in their surroundings. Nevertheless, suitable skill may improve bargaining power of the migrants. They will not be as helpless as they were looking following the announcement of lockdown.

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# Agriculture in the Shadow of Pandemic: Some Implications for Policy

CSC Sekhar

## Introduction

- There is a looming crisis over the global and Indian economies in the aftermath of COVID-19 pandemic. The IMF has projected a 3% decline in the global GDP and pegged India's GDP growth at a modest 1.9%, which has since been downgraded to 0.2 to 0.5 percent by various rating agencies (IMF 2020). However, one bright spot is agriculture. Niti Aayog projected a decent growth rate of 3 percent for 2020-21 in the GDP of agriculture and allied activities (AGDP). Coming on the back of a decent AGDP growth of 3.7% in 2019-20, this achievement is remarkable, particularly at a time other sectors of the economy are reeling under the impact of the lockdown. It is projected that the good performance of agriculture will add 0.5 percent to the growth rate of GDP.
- However, growth is only one of the many dimensions of agriculture. Given that food production is intimately linked with agriculture and nearly half of the labour force is employed in this sector, agriculture has large implications for the overall well-being of the society. Therefore, it is important to understand the current and likely scenario of agriculture in the country in the backdrop of the current pandemic, the emerging problems and plausible solutions. We focus on some of the important issues related to food supply & demand; storage and distribution; employment and incomes; international scenario and the government policies to deal with the crisis. We round off the discussion with the needed policy measures in the short, medium and long-term horizon. In view of the recent origin of the crisis, relevant data is yet to accumulate on the subject for undertaking a rigorous empirical study. Thus, much of the discussion here is based on simple measures using the available data, subject knowledge of the analyst, relevant literature and reports of national and international organizations.

## Findings

### Production

- There is adequate production of staple cereals in the country. The second advance estimates of the crop production (SAE) in mid-February had pegged the wheat output at 106.21 million tons while rabi rice to be 15.53 million tons. Current projections by the states show higher production of wheat and rice in rabi than the SAE.
- When the lockdown began in March, there were genuine apprehensions about rabi harvesting and procurement due to non-availability of labour and machinery. However, these operations appear to be largely on track. Harvesting of more than 80% of the wheat output was complete by April. Wheat procurement has also been brisk at 22.8 million tons (as of 8 May), although falling short by 18% as compared to same period last year due to inter-state movement restrictions. Some innovative measures taken by the central and state governments, such as extending procurement period by two to three weeks and staggering procurement; allowing farmers to sell and transport directly from registered warehouses and farmer producer organizations (FPOs); devising app-based transport aggregator services, etc. may have helped in this better-than-expected procurement.
- The crop outlook for the upcoming kharif season is also positive with several encouraging pointers. A normal monsoon; start of sowing in almost all the states; good uptake of fertilizers and seeds are some of the positive signals that augur well for the kharif season.

### Stocks

- There are sufficient grain stocks with Food Corporation of India (FCI). The grain stocks on 1 April were 56.9 million tons (24.7 wheat and 32.2 rice), which are nearly two and a half times of the buffer stock norms (MoCAF&PD 2020).
- The expected procurement in the current season is about 52 million tons while the outgo on all the programs, including the recently announced free grains of 5 kg per person under PMGKY, will be 27 million tons in the next three months. Hence, by the beginning of July, the stocks could reach a level of 82 million tons (MoCAF&PD 2020).

- FCI has dispatched nearly 60 lakh tons of foodgrains to the states in April – which is more than double the normal monthly dispatch. Also, almost all the states have completed their offtake of foodgrains for April. Hence states are also showing the necessary urgency in dealing with the situation.
- The global inventories are also adequate. The current global stock-to-use ratios, excluding China, are close to their median level of the last two decades, and substantially higher than previous food crisis in 2008 (Glauber et al. 2020).
- Harvests in several major producing countries in the next season are also expected to be satisfactory as per USDA's projections.

### Supply of other major food commodities

- Although the domestic supply of staple cereals is adequate, the same cannot be said about the high value food commodities (HVFCs) such as fruits & vegetables and eggs, meat and fish (EMF), which account for 56% of the total value of the output of agricultural and allied activities.
- Disruptions of the supply chain have affected this sector in a major way in several states. Marketing of perishables like watermelons (in AP), muskmelons (AP), grapes (Telangana), mangoes (Maharashtra, UP) and marigold flowers suffered due to stoppage of transport networks and closure of cold storages and mandis.
- Sugar and milk consumption declined due to the closure of hotels and restaurants and demand from bulk consumers. Poultry prices have plummeted due to COVID-19 fears. The chilly prices dropped by over 12 percent and 95 percent of the production in the two major states of Telangana and Andhra Pradesh is confined to cold storages.
- Urgent action is needed to smoothen the supply chains and help these farmers.

### Prices

- Prices of most commodities remained sluggish in March. The Y-o-Y inflation for almost all the important food commodities has declined at wholesale and retail level due to distress sales by the farmers and decline in demand from bulk consumers.
- Summing up, an overall assessment of the supply side suggests that availability of foodgrains is

adequate. Production, procurement, stock levels and the crop outlook for the upcoming season are satisfactory. Food distribution to states is also on track. Global stocks are also adequate and there are no major price spikes. However, the supply chain disruptions show adverse effects on the fruit and vegetable farmers.

### Rural Incomes and Demand

- Incomes of farmers of perishable crops and poultry products have been hit due to the crop losses, storage problems and halt of transportation networks. The fall in prices due to lack of demand has further aggravated these problems.
- The farm labourers are certain to face much lower earnings, if any, because of the movement restrictions and lowered agricultural activity.
- A complete halt of the construction sector, which absorbs the majority of agricultural labour, will further aggravate the crisis.
- This huge negative impact on rural incomes is likely to hit the economy hard, which is already reeling with demand contraction even before this crisis.

### Recommendations and Conclusion

#### Needed safety nets in short-run (6 months)

- A judicious mix of policies, combining direct payments with free food provision, in addition to providing employment under MGNREGA, is urgently needed to ensure economic and physical access to food for these vulnerable sections. The quantum of assistance and the coverage of beneficiaries for direct benefit transfers in the first stimulus package needs to be expanded.
- Payment for 8.69 crore farmers under PM-KISAN needs to be increased to Rs 6,000/-, from Rs 2,000/- per quarter, to meet the expenses for the next season. A payment of Rs 2,000 may be made immediately to the 7.6 crores of active MGNREGA job cardholders to help labour in general and agricultural labour in particular. As per the available estimates, there are about 1.36 crores of temporary or seasonal migrants (Keshri and Bhagat 2012). A payment of Rs 2,000/-, similar to agricultural labour, may be made to this segment.
- All these payments to farmers, rural labour and migrant workers will involve a total expenditure of Rs

70060 crores. This constitutes 2.2 percent of current Agricultural GDP and 0.4 percent of the current GDP of the country (Table 1). These payments are important for two reasons – first, these segments of the population have been very severely impacted by this crisis. Second, these sections have a higher marginal propensity to consume (MPC), which is so crucial to revive the economy.

- In addition to direct cash payments, the current provision of free foodgrains of 5 kg per person per month under the Pradhan Mantri Garib Kalyan Ann Yojana (PMGKY) needs to be continued for at least six months, if not more.

- The reverse migration, resulting in large pools of rural labour, can be used beneficially for agricultural operations. To this end, the guidelines for MGNREGA may be relaxed to allow employment on individual lands for agricultural operations. This will lower the cost of production and keep the food prices in check (as labour is a major component of CoP) and will also provide the much-needed employment to the displaced labour. Such an agriled employment and growth strategy should be the main plank of rural development in the long-run, as we will discuss in the next section.

**Table 1: Projected payments to rural labour (in Rs crores)**

Sr. No	Source	Number (in crores)	Rate	Total Amount in Rs Crores
1)	No of active job cards as per MGNREGS	7.6	@ Rs 2000 per worker	15200
2)	Number of PM Kisan Farmers	8.69	@ Rs 6000 per family	52140
3)	Seasonal / migrant labour	1.36	@ Rs 2000 per family	2720
Total				70060
Total as % of AGDP				2.18%
Total as % of total GDP				0.38%

**Sources:** CSO (2020) and Keshri and Bhagat (2012)

- The crisis offers an opportunity to rethink our agriculture & rural development paradigm and usher in some much-needed reforms. Reforms are most needed in two overlapping areas – first within agriculture and then encompassing the whole domain of farm, non-farm and rural economy

### Reforms within agriculture

- In the current as well earlier food crises in 1975 and 2008, India's buffer stock system has served the country exceedingly well (Johnson 1975, Sekhar 2003). Considering the usefulness of this system and the volatility of international markets, the MSP-procurement system needs to be continued for staple foodgrains. The system should be strengthened on similar lines for pulses also.
- However, a different approach needs to be considered for non-staple commodities. Out of 25 commodities for which MSPs are annually announced, only rice and wheat are procured in a sustained way at present, from a handful of states. Announcement of MSP's, without backing it up with procurement, is proving to be ineffective. Sugar,

pulses and cotton have some mechanisms in place, but have proven mostly inadequate. The deficiency payments system devised for oilseeds and pulses under PM-AASHA has also not yielded the desired results.

- Thus, a gradual movement away from price-based support system to the one based on basic income to farmer is desirable. Already the broad template under PM-KISAN is in place. However, the scheme needs some improvements to be really effective.
- At present, uniform assistance of Rs 6,000/- per annum is made to a farm family, which is not adequate considering the various costs incurred by a farmer. An area based approach may be adopted here. The quantum of assistance needs to be region-specific and should be linked to the average cost of cultivation in the region. In case of fiscal constraints, covering even half or two-thirds of the cost could be considered. Secondly, the payment needs to be delinked from marginal production (production in the current year), but should be based on average production of last three years.

- These steps will ensure a basic income to farmer that is commensurate with costs but without affecting the marginal production, and more importantly, the market price. When the policy objective is to ensure some basic minimum income to farmers, the direct income transfer may be better policy instrument than the indirect instruments such as output price, which are mainly useful in resource allocation.
- Tenancy reforms need to be implemented to enable easier land leasing. States must be actively encouraged to adopt the Model agricultural land leasing act 2016.
- The extension of E-NAM to cover 962 markets, as on 8 May, is a step in the right direction. Also, allowing farmers to sell and transport directly from registered warehouses and farmer producer organizations (FPOs); devising app-based transport aggregator services etc. are extremely important initiatives and need to be strengthened and expanded. All these steps will help in ensuring the much-needed social distancing in markets and mandis.
- Reforms beyond agriculture - wage employment and rural development.
- The plight of lakhs of rural migrants stranded in major cities across India during the lockdown period is a grim reminder of the need for reassessing our rural development strategy. Migration is not a very effective solution to alleviate poverty. Evidence shows that 81 percent of the worldwide reduction in rural poverty can be attributed to improved conditions in rural areas and only 19 percent to migration (World Bank 2008).
- There are nearly 10 lakh landless households in India for whom wage labour is the predominant source of income (NSSO 2016). In addition to the landless, wage labour is also a major source of income to the 70 percent of the agricultural households who own less than one hectare. Thus, nearly 35 percent of the rural income is derived from wages / salary and this proportion rises to 63% for the lowest land classes. Thus wage labour and agriculture (cultivation plus animal husbandry) are two major sources of livelihood to a majority of the rural population.
- Thus, a holistic approach integrating agricultural growth, farm and non-farm employment is urgently needed. At present, agriculture and rural development are treated as two separate entities and are handled by two separate ministries for planning and execution. It needs to change, at least as far as planning is concerned.
- A long-term and integrated vision for agriculture and rural development needs to be evolved. At present, the policy changes in farm support, subsidies, rural employment programs and the annual budget pronouncements are usually *ad-hoc*, based on immediate felt needs. Ideally, all such policy decisions should evolve out of a long term plan for agriculture and rural development, which is prepared for each geographic region (preferably at the district level) on the basis of the core objectives and resource constraints. Adequate attention to important aspects of human development, such as health, nutrition, and education should be an integral part of this planning exercise.
- Medium / short term action plans can then be drawn from this long-term plan. The wage employment programs like MGNREGA and livelihoods programs like NRLM, should be centered around agriculture and its related activities like processing, transportation and storage. The needed rural infrastructure such as rural roads, market yards, procurement centres, milk collection centres, dal mills can be built by synergizing the functions and resources of these ministries under flagship programs like RKVY, MGNREGA, NFSM, NRLM, etc.
- The food supply scenario is mostly satisfactory, but a challenge to India's food security can emanate mainly from the demand side. A judicious policy of direct payments, liberalizing wage employment under MGNREGA and food distribution is urgently called for.
- Some long term reforms in agriculture and rural development are also needed to reposition agriculture as the main plank of rural economy, employment and development.

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## Social Forestry in Jharkhand: A Potential Employment Opportunity

Ram Pravesh Singh, Rajiv Kumar Sinha

### Introduction

- The pandemic COVID-19 will impact economic activities, industry and MSME sectors. After the second phase of lockdown, i.e., after about 39 days, even in red zone of rural areas, all agricultural activities (including sowing, harvesting of rabi crops, procurement, and marketing operations in the agricultural supply chain, animal husbandry and activities consisting inland and marine fisheries) were allowed. Even then, during the first 21 days of lockdown, these sectors have been adversely affected to great extents due to temporary ceasing of all activities on national level.
- On April 29, 2020 the Indian government had allowed inter-state movement of the stranded migrant workers with some conditions. The state of Jharkhand estimated over 9 lakh people from the state including 6.43 lakh migrant workers, who were stranded in various parts of the country (Dastidar, Angad, and Mukherjee 2020). While attempts were being made to bring them back, a situation of unemployment is foreseen among these migrant workers.
- An attempt has been made through this policy brief to identify the sector/activities (other than crop raising activities), which has higher untapped potential of generating large employment opportunities, particularly in far remote areas of Jharkhand. Social forestry is one sector which could create a potential employment for migrants who have returned to Jharkhand.
- Social forestry contributes positively in reducing poverty in a way that it shares benefits among members of villages. The National Commission on Agriculture first used the term 'Social Forestry' in 1976. Government forest areas that are closed to



human settlement and have been degraded over the years due to human activities – need to be afforested.

- Having been categorized broadly in four categories viz. farm, community, extension and agro-forestry, Social forestry has potentiality (as medium – term measure) to generate large scale employment opportunities in remote villages of Jharkhand. The objectives of: increasing forest area, restoring ecological balance, meeting basic rural needs (referred to as ‘5fs’ – food, fuel, fodder, fertilizer, i.e. green manure and fiber), ensuring better land use, generation of employment more urgently desired in post – COVID lockdown period and controlling pollution- can be effectively achieved by social forestry.
- For outlining to generate additional employment opportunities, studies/guidelines related to person-days generated through social forestry and to know land use pattern of the state, Research study No. 43 of AERC for Bihar & Jharkhand have been used. The study was entitled, Dynamics and Revival of Fallow Land in Jharkhand (Sinha 2017).

## Findings

- Jharkhand has topped the country in developing agricultural resources under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), to a ranking released by the Union Ministry of Rural Development – followed by Telangana, Lakshadweep, Tamil Nadu, Chhattisgarh and Puducherry. It is encouraging that rural Jharkhand is marching ahead through various Central and state-sponsored programmes. However, fluctuations in agricultural production are frequent in Jharkhand (Centre for Fiscal Studies 2020).
- Though the development of agriculture in India is a state subject, and the sector plays a critical role from the perspective of ensuring food and livelihood security of its large population. However, the Central government plays a major role in formulating policies that have a direct bearing on the growth of the agricultural sector. Programmes, conceived at the national level, are mainly implemented by the states through its development departments. In Jharkhand’s rural economy, agriculture is one of the significant sectors, which provides food security, income, price stability and livelihood for the majority.
- More than 76 per cent of its total population lived in rural areas, and 66.85 per cent of the total labour force depended on agriculture (Centre for Fiscal Studies 2018). However, the perilous fact is that out of its total geographical area (79 lakh ha), net sown area (NSA) is only 25.60 lakh ha (32.41%).
- The percentage of net irrigated area (NIA) to NSA had increased from 11.5 in 2010-11 to 14.5 during 2014-15. It is, thus a matter of concern that in a state, where nearly 85.10% of the NSA had been rainfed, the remaining area may be out of the coverage of assured irrigation facilities. Concerned raised here is how more than 76% of Jharkhand’s total population (living in rural areas), can sustain on crop-raising activities, and how long they can have gainful employment opportunities to survive (Centre for Fiscal Studies 2020).
- We have here taken into consideration: (a) Barren and un-culturable land, and; (b) culturable wasteland. As per data available for the year 2014-15, areas under the two classes of land were 5,68,009 ha. and 3,52,871 ha. respectively. Total of the two types of land area came to 9,20,880 ha. (Sinha 2017). Now, it is desired to charily explore how ‘the beleaguered scenario of Jharkhand’ consequent to ‘post-Corona lockdown returns’ of such many migrant workers be dissipated by creating new employment opportunities through ‘social forestry’.
- It has been found that for maintaining ‘a pair of animals’ only on leaf fodder, about 2 to 5 trees shall be needed every day to meet the fodder requirement. Moreover, from the plantation in 1 hectare of land, where 1,000 fodder trees are planted, it will be possible to sustain a landless family, who has been given a cow or a buffalo for milk production.
- Though leaves of ‘Mahuwa Trees’ have proved to be very good fodder. However, species like ‘Sababul, Moringa, Seshbania, Ailanthos, Acacia, Nilotica, and Asbizzia can be planted at large scale successfully to meet the requirement and challenges of fodder scarcity in Jharkhand.
- Social Forestry activities help in generating employment for the rural poor. Unskilled and/ semi-skilled labourers can be engaged in nursery works, site clearance, preparation of beds, plantation, weeding, hoeing, watering, digging, trench fencing, guarding, etc. It can generate about 275 labour person-days per hectare (Kumar 1988). Table 1 mentioned below shows nature of work and person-days generated.

**Table 1: Nature of Work and Person-days Generated through Social Forestry**

SN	Nature of Work Particulars	Person-days Generated/ Required (per Ha.)
<b>A.</b>	<b>Advance Work</b>	
i.	Survey and Demarcation	2.5
ii.	Site Clearance	5.0
iii.	Trench Fencing	70.0
iv.	Soil Work (2,500 Pits)	52.0
<b>B.</b>	<b>Nursery</b>	
a.	Raising of Plants (up to March 3,000) Plants	19.0
b.	Maintenance of Plants (April to June) 3,000 No.	16.0
<b>C.</b>	<b>Completion Work</b>	
a.	Plantation (2,500 plants)	55.00
b.	First Weeding/Hoeing (in the month of August)	30.00
c.	Second Weeding/Hoeing (in the month of October)	25.00
	<b>Total</b>	<b>274.50*</b>

**Note:** The total person days was calculated based on the discussion with the author and forest department officials. Source: Kumar 1998, Sinha 2017

- In case of an event where all the expected and estimated migrant workers return to their native places in Jharkhand, an employment opportunity could be provided through plantation work under social forestry. Table 2 below shows an estimate of employment generation under social forestry.

**Table 2: Potential of Employment Generation under Social Forestry**

Person-days generated through Social Forestry	Wasteland Area (Barren and unculturable Land + cultural wasteland)	Estimation of person-days (to be generated) in 9.2 lakh ha.	Expected number of Reverse Migrant Labourers in the State	Net employment to each of reverse migrant labourers.
A	B	C	D	E
		(A*B)		(C/D)
274.5 Days/ha.	9.21 lakh ha.	25.27 crore person-days	6.43 lakh	393 person-days

**Note:** Calculated by the Authors

- In addition to these, social forestry generates employment indirectly too. It provides raw materials for many cottages, and minor forest produces (MFP's) based industries.
- unculturable and cultural wasteland. It will help in restarting post-Corona economy of the state safely and sustainably by generating employment opportunities of about 393 days – for all the estimated reversed migrant labourers.

### Conclusions and Recommendations

- To remove the dismay of large – scale unemployment in Jharkhand as consequent of return of estimated 6.43 lakhs migrant workers, while fighting the battle against COVID, the Government of Jharkhand - may contemplate undertaking plantation under social forestry programme in its 9.21 lakh ha barren,
- Intending to manage large scale unemployment in rural and even in urban areas also (likely to prevail due to return of high member of workforce after Corona lockdown) - there is urgent need to strengthen MGNREGA (Swaminathan and Rao 2020). The definition of a worker in MGNREGA has so far been applied only to unskilled manual work,

and not to 'skilled jobs' in agriculture, social forestry/ tree plantation and allied activities. Given the lack of jobs and already 'exhausted incomes' during the COVID-19 crisis, expanding the definition of work under MGNREGA is highly desired – to cover skilled work related to farmers and their farming activities.

- Considering that the state's socio-economic growth is dependent to a large extent on the natural resources sector, the state (as per the "Jharkhand Vision & Action Plan 2021") - is committed to ensure sustainable conservation and management of forests, strengthen to tackle and mitigate climate change impact, cultivate bio-fuel producing plants and fuel tree crops in the degraded and wastelands (Government of Jharkhand, n.d.). Also, with the view to fulfill the strategies under this Action Plan, plantation, as a part of social forestry- should be emphasized to create a large number of employment opportunities in the post-lockdown era. It will also help in achieving the objective of the revival of fallow land in Jharkhand.

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