

Impact of Covid-19 on Indian Villages

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INTRODUCTION

The nation-wide lockdown imposed in India from March 25 to May 31, 2020, following the breakout of the Covid-19 pandemic affected rural India in diverse ways. This was only to be expected given the great variation in production systems and socio-economic conditions in villages across agro-ecological zones.

This note analyses the impact of the lockdown – which brought almost all economic and public activity in India to a halt – on a select group of villages based on a rapid assessment survey conducted by the Foundation for Agrarian Studies (FAS) in April 2020.¹ The survey was conducted through telephone interviews of 52 informants from 21 villages across 10 States of India. The FAS had already conducted detailed socio-economic surveys of 19 of the 21 villages under its India-wide programme of village studies (Project on Agrarian Relations in India) during the last decade.² In addition, interviews were conducted in two villages, Adat and Chittilappilly, in Thrissur district, Kerala.

Two to three credible informants from each village were selected. At least one manual worker or poor peasant household, and one landlord or capitalist farmer household were interviewed from each village.³ The first round of the survey was conducted

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¹ The questionnaire used for the survey can be found here: <http://fas.org.in/event/impact-of-covid-19-on-rural-india/>. The preliminary findings from the first round of the survey were published in *Frontline* magazine (Special Team 2020).

² Project on Agrarian Relations in India (PARI) involves description and analysis, and the creation of a detailed database on village India in diverse agro-ecological and socio-economic regions of the country. PARI began in 2006, and now covers 27 villages in 12 States of the country. The villages cover a wide range of different agro-ecological regions in the country.

³ The following villages did not have landlords or capitalist farmer households: Amarsinghi and Kalmandasguri in West Bengal, Adat and Chittilappilly in Kerala, Siresandra in Karnataka, and Khakchang, Mainama, and Muhuripur in Tripura.

between April 15 and 18, 2020, and covered 43 residents of 21 villages. To fill the gap in representation, nine more individuals were interviewed between April 22 and 23. Of the total of 52 informants, 13 were from landlord or capitalist farmer households, 23 belonged to peasant households (of whom three were from rich peasant households and 20 were from poor peasant households), and the remaining 16 were from manual worker households.⁴ Interviews were conducted (with informed consent) through a questionnaire that canvassed employment and incomes, government benefits, and health.

TYPOLOGY OF THE VILLAGES

The villages chosen in the Survey were already part of the FAS database, having been extensively surveyed in the past. This gave us the opportunity to compare the “before” and “after” lockdown situation in each village. The two villages from Kerala, chosen outside of PARI study villages, were surveyed in 2018-19. We could therefore check with the prior studies to obtain a pre-lockdown scenario of economic activities in these villages.

The villages chosen under the rapid assessment survey – hereafter referred to as the Survey – represent diverse agro-ecological regions of the country and characterise different agricultural production systems, agrarian relations and social composition.⁵ We have broadly grouped the villages into irrigated and rainfed or dry (Table 1). Such a distinction is useful as there are many similarities to be found in the nature of production, particularly agriculture, in the irrigated and dry villages.

Of the irrigated villages, Alabujanahalli in Mandya district of Karnataka, Gharsondi in Gwalior district of Madhya Pradesh, Tehang in Phillaur district and Hakamawala in Mansa district of Punjab, Harevli in Bijnor district and Mahatwar in Balia district of Uttar Pradesh are in the command area of different canals. Groundwater irrigation is also used as supplementary irrigation for cultivation, particularly in the rabi season. In eastern India (two villages in Bihar and three villages in West Bengal), groundwater is the predominant source of irrigation. In Tripura, lift irrigation from a river, using diesel or electric pumps, is the main source of irrigation for lowland cultivation in Mainama and Muhuripur villages. The two villages surveyed in Kerala fall under the low-lying *kole* wetland region known traditionally for rice cultivation. These villages are irrigated by canals.

Palakurichi and Venmani are located at end of the Lower Cauvery region in Nagapattinam district of Tamil Nadu. Cultivation in both these villages is entirely dependent on the water from Cauvery river. This water supply is available in sufficient quantity only during the kharif season.

⁴ This classification, based on Ramachandran (2011), has been followed by FAS in its village studies. The socio-economic classification of households is based on the following aspects: control over the means of production; relative use of family and hired labour; and the surplus a household is able to generate within a working year.

⁵ See Table 1A for more details.

Table 1 *List of surveyed villages and availability of irrigation*

Village	Status of irrigation
Katkuian, Bihar	Irrigated
Nayanagar, Bihar	Irrigated
Alabujanahalli, Karnataka	Irrigated
Siresandra, Karnataka	Dry
Zhapur, Karnataka	Dry
Adat, Kerala	Irrigated
Chittilappilly, Kerala	Irrigated
Gharsondi, Madhya Pradesh	Irrigated
Warwat Khanderao, Maharashtra	Dry
Tehang, Punjab	Irrigated
Hakamwala, Punjab	Irrigated
Venmani, Tamil Nadu	Irrigated
Palakurichi, Tamil Nadu	Irrigated
Mainama, Tripura	Irrigated
Khakchang, Tripura	Dry
Muhuripur, Tripura	Irrigated
Harevli, Uttar Pradesh	Irrigated
Mahatwar, Uttar Pradesh	Irrigated
Panahar, West Bengal	Irrigated
Amarsinghi, West Bengal	Irrigated
Kalmandasguri, West Bengal	Partially irrigated ⁶

Siresandra in Kolar district and Zhapur in Kalaburagi district of Karnataka, Warwat Khanderao in Buldhana district of Maharashtra, and Khakchang in North Tripura district of Tripura are all mainly rainfed or dry villages, with cultivation mainly in the kharif season.

LOCKDOWN AND AGRICULTURAL PRODUCTION

The lockdown coincided with the end of the rabi and/or beginning of the summer season of the agricultural year in India. As we shall see, the impact of the lockdown on agricultural operations was distinctly different between irrigated and rainfed villages.

The Lockdown and the Rabi Harvest

Irrigated Villages

In the irrigated villages the following crops were either under harvest or scheduled to be harvested at the time of the Survey: rice, wheat, sugarcane, maize, and vegetables.

⁶ As per FAS survey in 2010, around one-third of the net sown area in the village was irrigated, but a substantial part of the land in the village was double-cropped because of high rainfall.

Rice

The lockdown did not impact the rice harvest, which in most surveyed villages was completed before March 25. Rice is a major kharif crop in all villages except Gharsondi (Madhya Pradesh), where soybean is the most prevalent crop. In the villages of West Bengal, where rice is grown as the major summer crop (*boro* paddy), rice was in its early stages of growth when lockdown was announced, with only the transplantation operations over.

Rice harvesting was underway only in Adat and Chittilappilly villages in Kerala, among all the villages that we surveyed under the rapid assessment survey. We interviewed three cultivators here. The two villages belong to the low-lying *kole* wetland region, known for its distinct cultivation practices. In these villages, crop operations such as draining water from the field, and harvesting with combine harvesters, are usually done collectively by farmers organised into groups on the basis of *padasekharam* (a Malayalam word for a collection of adjacent fields, bounded by natural or artificial barriers like canals). These groups function under the Adat Farmers Service Cooperative Bank, which facilitates major agricultural operations, including procurement of rice. It also provides agricultural credit to farmers. The State Government had assured cultivators that harvest and procurement operations would not be affected due to the lockdown restrictions. Our respondents informed us that the Kerala Agro Industries Corporation (KAICO) had provided 50 combine harvesters for 17 *padasekharams*.

Wheat

The wheat harvest was generally not disrupted by the lockdown owing to the mechanisation of harvest and availability of machinery in most of the wheat-growing villages surveyed.

Wheat is the most important rabi crop in the villages of Bihar, Madhya Pradesh, Punjab, and Uttar Pradesh. At the time of the Survey, harvesting of wheat was either just over or underway in these states with the exception of Punjab where it was scheduled to begin within a few days.

Except in Katkuian (Bihar) and Harevli (Uttar Pradesh), wheat harvesting was largely done by machines. Respondents across socio-economic classes agreed that wheat harvesters were available during lockdown. A poor peasant from Gharsondi (Madhya Pradesh), who cultivated wheat on 0.75 acres of land said: “Machines are available in the village. In our land, wheat was harvested with machine and a straw reaper was used for making straw.” The same response was seen across socio-economic classes in Mahatwar (Uttar Pradesh). A Scheduled Caste peasant owning about three acres of land reported: “There was no hurdle in getting machines [to harvest his wheat crop].” However, two poor peasants from the same village who owned a tiny extent of land (0.2 acres) said that though harvesters and

straw reapers were available for those who wanted to hire, they harvested and threshed the wheat manually with family labour. In Punjab, where wheat harvesting would begin within few days of the interview, a capitalist farmer from Tehang village said “Punjab Government has ensured the movement of combine harvesters, so wheat harvesting will not be affected in the State.”

Other crops

The harvesting of other major crops was also not affected significantly at the time of the Survey. Sugarcane was either standing or being harvested in Katkuian and Nayanagar (Bihar), Harevli (Uttar Pradesh), and Alabujanahalli (Karnataka). The harvesting of maize, an important standing crop in Nayanagar (Bihar), was scheduled to begin mid-May. The harvesting of potato, which was the main rabi crop in the villages of West Bengal, was completed before the lockdown. Harvesting of other vegetables was ongoing in almost all villages.

While the sugarcane harvest was not affected per se, the schedule of harvesting (that is dependent on sugar factories) was, as the factories had placed some restrictions on cultivators due to the lockdown. All the sugarcane-growing villages are located near sugar factories. At the time of the Survey, sugarcane harvesting and sale to factories was almost complete in Alabhujanahalli (Karnataka), and Katkuian and Nayanagar (Bihar). The harvesting operation was underway in Harevli (Uttar Pradesh). A capitalist farmer who cultivated sugarcane on 27 acres said, “The sugarcane factory is running and the sale of sugarcane is underway; on April 12, I sold 50 quintals of sugarcane.” A poor peasant household, who cultivated sugarcane on 1 acre of land, however stated,

Sugarcane was being harvested and taken to the factory as per the order/quota (*parchi*) received from the factory. But, the last delivery to the factory was 5-6 days back. After that I did not get any new order from the factory.

He explained that “it may be because of the sugar factory wants to ease out the crowd during the lockdown.”

Rainfed Villages

There was no direct effect on agricultural operations and production due to lockdown in rainfed villages except in Tripura.

In rainfed villages, April is the lean season and there was no major standing crop at the time of the Survey. In these regions, even in normal times only a few landlords or capitalist farmer households, with their own means of irrigation (mainly tubewells), cultivate during the rabi and summer seasons. The kharif crops in these villages are sown depending on the arrival of the monsoon.

In the tribal forest village of Khakchang (Tripura), *jhum* or slash-and-burn cultivation is generally practiced on the hilly slopes, and paddy cultivated in lowlands. Slashing, burning, and cleaning land for *jhum* is carried out collectively by the members of the households that cultivate in the same location. Workers have to travel long distances to reach the fields of *jhum* cultivation. The lockdown restriction disrupted land preparation for *jhum*, where sowing of most crops starts in the months of May and June. A resident of the village said,

Among the households performing *jhum* cultivation, some had cleared the forest foliage, while some were able to burn the cleared foliage on the land. However, since the lockdown all operations are stalled.

Marketing Channels Restricted by Lockdown, Harvest Prices Fall

Our earlier PARI village surveys show that farmers sell their produce to varied agents: merchants, commission agents, cooperative societies, government procurement centres, and regulated markets. The Survey, however, shows a significant disruption of existing marketing channels across the study villages, except in Kerala. The restricted functioning of commission agents and markets, and constraints on mobility after the lockdown have affected both sale and prices of agricultural produce.

In Tehang and Hakamwala (Punjab), a majority of cultivator households sold rice and wheat through commission agents (*arthiya*) in the procurement centres. The same commission agents often advance credit to farmers. A capitalist farmer from Hakamwala village, who cultivated wheat on 15 acres of land, told us,

The local mandi is functioning in the nearby village, namely Boha [at a distance of 2.5 km from the village]. The transport is arranged by own tractors, trucks, etc. with precautionary measures, of single person operating the vehicle. The State government had announced the prices of wheat beforehand, even before there were any chances of lockdown, thus prices would not be affected.

In the same village some respondents who sell their produce at Ratia (Haryana) reported that a commission agent had asked farmers to stock the grain after harvesting, but the shop owned by the commission agent was now closed.⁷ While it is clear that a proactive state procurement system can effectively ensure farmers a remunerative marketing channel, there were uncertainties in terms of functioning of commission agents who procure from poor peasants.

In Kerala, the state procurement system had covered all farmers, and an assured price was offered for rice, the major crop in the survey villages. This measure immediately protected farmers from price fluctuations. A cultivator from Adat village who cultivated lowland rice on 21 acres said that “the price of rice is already fixed at Rs 26.95 per kg, and the State-owned SUPPLYCO would procure rice from farmers.”

⁷ Hakamawala village is at the border of Punjab and Haryana. Ratia is a town in Fatehabad district of Haryana, and is about 22 km from the Hakamawala village.

The procurement price of rice in Kerala is higher than the centrally-announced minimum support price of Rs 18.15 per kg.

Vegetable prices are market determined and volatile even in normal times. After the lockdown, transport restrictions and partial closure of markets reduced the mobility of merchants and adversely affected the sale and prices of vegetables. In Tripura, where cultivators had grown vegetables on the riverbed, our respondents said there was a drastic fall in vegetable prices. A poor peasant from Muhuripur village, South Tripura district, said:

There are two main agricultural markets near Muhuripur village, Baikara and Julaibari [within a distance of 5-7 km from the village]. After the lockdown announcement, the vegetable growers are not able to go to these markets due to transport restriction. Even, the merchants are not coming to the village. Thus, the farmers can only sell the vegetables in the village market which is restricted to morning hours. As a large number of cultivators of Muhuripur village have engaged in vegetable cultivation, the supply of vegetables in the village market is much higher than the demand with respect to the population of the village. It has led to sharp decline in prices. The market price is only Rs 10 per kg for bitter melon and brinjal now, while the normal price would be around Rs 50 for bitter melon and Rs 25 for brinjal.

A rich peasant from Siresandra (Karnataka) cultivated cauliflower and tomato on two acres of land each. The nearest regulated market for vegetables is in Kolar, 20 km from the village. He said,

The cauliflower and tomato crop withered in the fields since I stopped harvesting. This was mainly because the market prices of vegetables had fallen drastically after the virus outbreak. For instance, one bag of cauliflower which contains around 16-18 pieces, which usually fetches a price of Rs 300-350, was sold at only Rs 20-30. The price of tomato has also declined sharply. Before the lockdown, the market price of tomato was Rs 150-180 per box (containing 12-15 kg). This has now declined to only Rs 50 per box during the lockdown period.

Vegetable growers from West Bengal shared similar experiences. A poor peasant from Amarsinghi village said that the Kisan Mandi (farmers' market) was open, but there were no merchants. Only local markets were functioning for a few hours each day.

Potato was the main cash crop in Panahar (Bankura district) and Kalmandasguri (Koch Bihar district) villages of West Bengal. The sale of potatoes began just before the lockdown. In Panahar, poor peasants sold the product immediately after harvesting to local merchants, while the capitalist farmer households kept potato in cold storages to sell later at more favourable prices. This year, the potato yield in these villages was low due to a blight outbreak and untimely winter rains. Farmers, who sold before the lockdown, received a higher market price due to lower production. "The market price for potato was Rs 560-600 per bag (1 bag = 50 kg) this year, while it was Rs 250-300 per bag last year." Potato prices declined after the lockdown. A

manual worker from Panahar village, who regularly leases-in small parcels of land for potato cultivation, said

After the lockdown announcement, potato price declined from Rs 600 per bag to Rs 500 per bag. This was mainly because the demand for potato declined in the market due to inter-state transport restrictions. As I delayed my harvest, I was forced to sell at a lower price.

A capitalist farmer who hails from a traditional landlord household of the same village said that despite a high price of potato this year, all big farmers of the village including him had kept their potato harvest in the cold storage. He was concerned that the potato price may be affected later this year, if the lockdown continued for a longer time.

The Case of Natural Rubber in Tripura

The cultivation of natural rubber in Tripura has been an important State-sponsored strategy to increase employment and income of the rural population. Tripura was the second largest producer of natural rubber in India and contributed 7 per cent of total production in 2016-17.⁸ During the lockdown, the market for rubber was severely affected, and interruptions in global supply chains may further aggravate this condition.

One of our survey villages in Tripura, Mainama, is part of the Tripura Tribal Autonomous District Council (TTADC) area. The Tripura Rehabilitation and Plantation Corporation (TRPC) initiated rubber plantations in the village, providing extensive institutional support to tribal households. A latex collection centre was set up by the TRPC in 2007. Normally, production of latex continues from April to December. Due to the lockdown, TRPC stopped purchasing latex at a time when rubber cultivators usually begin the production cycle. A small rubber cultivator said

As the TRPC is not collecting the latex, the rubber cultivators had to convert the latex into scrap (by-product of rubber). The economic value of scrap is much lower than the value of latex or a rubber sheet. On the other hand, rubber cultivators who had their own processing unit could continue the preparation of rubber sheets.

In another village, Muhuripur, the rubber growers depended on private marketing agencies. A poor peasant from Muhuripur expressed concerns over rubber prices.

The rubber cultivators in Muhuripur village primarily had to depend on private merchants for selling rubber sheets since there is no government procurement centre. Currently, the small rubber cultivators had to sell their rubber sheet at much lower cost to get cash for family needs. The market price of rubber sheet declined from Rs 110/kg to Rs 70-80/kg.

⁸ According to the Rubber Board, Ministry of Commerce and Industry, as reported by Press Information Bureau, India (<https://pib.gov.in/PressReleasePage.aspx?PRID=1578142>).

Lockdown Affects Allied Activities

The lockdown has resulted in a contraction in allied activities in rural India, and adversely affected those involved in these allied activities of agriculture. The Survey found that the impact on sericulture, dairying, and aquaculture/inland fisheries was due to restrictions placed on sale of commodities and disruption in supply of raw materials. While these activities are generally pursued as supplementary activities, there was a significant share of respondents for whom these were main economic activities, and they were hit hard by the lockdown.

Sericulture

The sale of cocoons has been severely affected by the disruption in transport services and closing of markets in Karnataka, where sericulture is an important economic activity. A rich peasant from Siresandra said,

In this year, we sold five cycles of cocoons, of which the last cycle was being sold to a merchant from Shidlaghatta market during the lockdown period. Due to limited transport services, I arranged own transport and travelled to the market at night. However, there was a sudden fall in the price of cocoons. While the market price of cocoons was about Rs 450-500 per kg for the last four cycles, it crashed during lockdown to only Rs 150 per kg.

A respondent from a landlord household in Alabujanahalli said he sold around 75–100 kg of cocoons at Rs 150 per kg to the Department of Sericulture, Government of Karnataka. Since the market was not functional, the Department directly bought cocoons from some villagers.

Dairy

Milk sales declined during the lockdown and the limited functioning of milk procurement centres affected a large number of rural households who were engaged in rearing cattle and sale of milk.

In Katkuian (Bihar), the informants reported that the lockdown severely affected retail sales of milk. A poor peasant owning one adult cow and who usually sells three litres of milk daily said,

There is one private milk collection centre in the village affiliated to Sudha Dairy. The centre usually collects milk from the villagers every day and sends it to the dairy centre in a milk van. After four-five days of the lockdown, the milk van stopped coming to the village.

Respondents from Karnataka said that the procurement centre was functioning, though it was closed for the first few days of lockdown. In both villages of Karnataka, the procurement centres are run by public milk cooperatives and

functioned but reduced the purchase price of milk.⁹ In Tehang (Punjab), respondents said that the procurement centre had reduced milk collection. A capitalist farmer with a dairy farm of 30 cows reported that “because of reduction in milk procurement, we started giving less feed to the cows.”

Aquaculture/Inland Fishery

Our Survey found that the reduced movement due to lockdown affected sale of fish and supply of fish eggs. Fishing is an important occupation among Muslim households of Kalmandasguri village (West Bengal). A landless informant reported

In Kalmandasguri and nearby villages, the landless and poor residents form groups of 10-12 members and collectively take contracts for harvesting fish from pond owners in the village and nearby, and they sell the fish in the nearby towns. This activity happens throughout the year. I am also part of one of these groups. During the months of March-April, generally, there are two types of activity: the usual fish harvesting and selling, and the rearing of fingerlings in the ponds.

In the initial days of the lockdown, there was a sudden increase in the demand for local fish in the market, as the supply of fish from other states was stopped. This also led to an increase in the price of local fish, but we could not make much profit because of restrictions on mobility and limited hours that markets were open. Now the supply of fish from the local ponds is dwindling. In the last week, I went for fishing for only two days.

The lockdown also severely disrupted the supply of fish eggs. The lockdown may affect fish cultivation activity for the whole year. The three months (April-June) are the main period for fish cultivation in the ponds and that will give the supply of fish for next 8-10 months. If we cannot cultivate fingerlings now, we will lose employment and earnings from the fish business for the next one year.

DIFFERENTIAL IMPACT ON WAGE EMPLOYMENT

Wage employment from both agricultural and non-agricultural work constitutes a critical component of the household economy in the Indian countryside. FAS studies indicate that the poorer sections of the peasantry are increasingly becoming dependent on manual wage work (Bakshi 2017). There is also a growing dependency on non-agricultural work, especially in rainfed villages.¹⁰

The Survey highlights that while wage employment has been severely affected by the lockdown, there are differences in the nature and degree of impact on agricultural and non-agricultural work.

⁹ KOMUL has reduced price of milk twice during lockdown.

¹⁰ In fact, the dependency on non-agricultural work is high even among the irrigated villages during the lean agricultural season between the rabi harvest and kharif sowing, from April to June. It is significant that the landless working class in the villages in India today cannot be classified as agricultural workers, as they labour at all types of tasks in the countryside, agricultural and non-agricultural (CPI(M) 2016).

The impact of the pandemic on agricultural employment was not pronounced in unirrigated villages, as there was limited agricultural activity in this period. The situation with regard to availability of agricultural work is different in the irrigated regions of the country. The use of harvesters, mechanical threshers, and straw reapers for wheat harvesting and post-harvesting operations has increased in the last decade across villages in the wheat belt of Bihar, Punjab, Uttar Pradesh, and Madhya Pradesh. Of the villages surveyed under the rapid assessment survey, it is only in Harevli (Uttar Pradesh) and Katkuian (Bihar) that we found manual wheat harvesting operations, although machines were available for hire even in these villages. It is clear that while there is agricultural work available in these villages, the volume of manual work is limited.

When asked about availability of agricultural work in Mahatwar, Uttar Pradesh, a rich peasant said,

There is work available in harvesting and threshing, loading and unloading. [However] 90 per cent of the work it is done by machines and only a few people are employing labour. Wages are the same. The labour class is hard hit by the lockdown. Only 2-3 per cent of them are getting any work. There are no other [non-farm] activities taking place.

The distress of the “labour class” came out clearly in the response of a Paswan (Scheduled Caste) poor peasant from the same village. He says, “there is no agricultural work available at present. People are harvesting with family labour or by machines.” A poor peasant from Amarsinghi (West Bengal) said, “small cultivators in the village are helping each other in agricultural work.” With help from his neighbour, he had just finished the sowing of jute on half an acre of land. He did not employ any worker.

Labour Shortage, Falling Wages

Interestingly, the reasons for increased use of family labour draw different responses across socio-economic categories. Many landowners claimed that this was because of labour shortages. By contrast, a young Scheduled Caste (SC) woman who works as an agricultural worker in the same village claims there is no shortage of labour, but in the wake of the lockdown cultivators had increasingly started using family labour to take care of their own land. Such contrasting views also emerged in responses related to wages, where rich farmers claimed that a labour shortage had led to an increase in wage rates, while workers said that the wage rates had remained the same or declined, particularly in villages from where migrants had returned.

A real concern about labour shortage, however, is to be found in villages where there is a significant dependency on migrant workers. In Tehang (Punjab), the capitalist farmer who had otherwise shown confidence over easy availability of combine harvesters and threshers said,

We need labour for unloading and storing of wheat straw. There might be a shortage of labour for that task. Migrant labourers are few and local labourers will not do this job. Even if they do, they will ask for more wages.

Another capitalist farmer from Tehang echoed the same concern in relation to upcoming paddy transplantation operations. Agriculture in Tehang is highly mechanised, but paddy-transplanting is performed by migrant workers from Bihar, Jharkhand, Uttar Pradesh, and elsewhere. Some migrant families from Bihar and Jharkhand have settled permanently in the village, but big groups from these States come to the village in the paddy-transplanting season. The farmer said,

Labour shortage might be a problem if the migrants do not return till paddy transplanting. The workers are willing to return for work even now but are unable to because trains are not running.

A poor peasant from Muhuripur (Tripura) also expressed concern over unavailability of migrant agricultural workers. He said,

Bangladeshi labourers come here during paddy transplanting and harvesting period. Now, the international border is closed . . . If the lockdown continues for another month, we do not know if the farmers will be able to harvest their *boro* paddy.

Migrant workers in Kerala had left the survey villages before the lockdown. Usually, the operators of combine harvesters and the workers who pack grain in sacks during paddy harvest are from outside Kerala. A peasant respondent said

For post-harvest tasks, usually, migrant workers (particularly from North India or Tamil Nadu) were employed for packing harvested grain in sacks. But they could not be employed this time. So those who are sitting idle at homes, those without work currently, including students, are currently doing these operations. Only 3-4 Tamil workers, who could not go home, are working. Due to shortages of labour, there is a delay in harvesting.

In Katkuian village (Bihar), from where workers migrate for agricultural and non-agricultural work, many had come back for Holi celebrations and could not return. Some migrants returned during the lockdown from Punjab and Bangalore. Now they are all available in the village for agricultural work. In addition, a few artisans are also competing to get work in agricultural operations. This created a situation of excess supply that is gradually pushing wage rates down. A landless manual worker from Katkuian said the daily wage rate has come down from Rs 250 per day to Rs 200 per day. A young agricultural worker from the village, who also works in construction activity in and around the village, says

Migrants are unable to go outside the village for work. As a result, [number of] workers in the village have increased during this time. Lockdown has effected the wages of the workers also. Earlier I used to get Rs 150/cottah but now it reduced to Rs 100/cottah (a cottah in Katkuian is 0.075 acres).

Non-Agricultural Work Collapses Under the Lockdown

Non-agricultural economic activities such as construction, petty business, and brick-making that usually absorb labour in the pre-monsoon lean agricultural period have all stopped. The impact of this collapse was most severely felt in non-irrigated villages.

In Zhapur (Karnataka) – a rainfed village – many workers were employed as daily labourers in a stone quarry located on the boundaries of the village. This is a major source of non-agricultural employment for manual workers from Zhapur. “The quarry,” reported our respondents, “has closed down,” and “there is no non-agricultural activity within the village or outside.”

A young landless manual worker from Katkuian said,

There is no non-farm employment available in and around the village. Many households in the village are not calling workers for other non-farm works also as they have a fear of spread of Covid-19 through workers. Even regular employers of non-farm related employment stopped calling workers. There are no brick kiln quarries functioning in and around the village.

A capitalist farmer from the same village explains,

The brick kiln is very near [to the village] but the work is closed in lockdown. Police has banned such works, as many workers work together [and distancing is not possible] in the kilns. All non-farm employment, including construction, is stopped. Cement shops have closed down.

He further deliberates on the impact on artisanal works, and business and trade activities.

The non-farm workers are facing the major brunt. Those who can work from their homes, like iron-smiths, have some work to do. But those, like carpenters, who go door to door for doing different work, are not getting any work at all. Some of them are trying to get work and do it from home. Their wage-incomes have declined as they are all forced to take up agricultural work. The mason, who used to get Rs 400 per day, now can get only Rs 250, which is the daily wage rate for male agricultural workers. Regular vendors and businessmen are also affected. Cloth merchants and scrap metal businessmen are now taking up vegetable sales, as only medicine, grocery shops, and vegetable vendors are functioning.

No Work Under Mahatma Gandhi National Rural Employment Guarantee Scheme
Work under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) had also come to a complete halt under the lockdown.¹¹ While many of the respondents complained about a general lack of functioning of the scheme, it

¹¹ MGNREGS work was permitted only after April 20 (after our Survey).

is a major cause of worry among manual workers in those few villages where the scheme played an important role in supporting the household economy.

In the three villages of Tripura, Khackchang, Mainama, and Muhuripur, in 2015–16, households worked for more than 90 days in a year under MGNREGS (Das and Usami 2019). All that work has ceased under the Covid-19 lockdown. The anxiety about MGNREGS is captured in the response of a small restaurant owner in Khackchang

MGNREGS work is the most important source of employment in the village. It is also a major source of cash flow into the otherwise cash-limited village economy of Khakchang. During the lockdown all MGNREGS works have stopped. That's a major worry for the villagers.

The stopping of MGNREGS work immediately after the lockdown was also evident from other respondents. A small farmer respondent belonging to the SC category from Adat, Kerala, who also hires himself out for agricultural work, told us that the work stopped after the first week of March. His wife who has regularly worked under the scheme has not received any work after the lockdown and she received the last payment in this regard in February.

OTHER SOURCES OF INCOME

In addition to crop production, allied activities, wage employment and non-agricultural work, rural households get income from business, salaried jobs, and remittances.

Rural Self-Employed Forced to Find Other Sources of Earnings

The lockdown has affected self-employed persons, especially the poorer sections, in our study villages due to a sudden fall in the income flows. As a result, some were compelled to look for other sources of earnings or rely on prior savings.

Among businesses, grocery shops and vegetable sellers that were allowed to operate did not suffer much. In Katkuian (Bihar), a respondent said “many petty businesses closed due to the lockdown; auto and taxi drivers are now working as agricultural labour in their village.” A peasant from Amarsinghi (West Bengal) who used to offer tuitions told us that “after the lockdown, all private tuitions are closed; I conducted tuition classes at home but it is very risky to continue now.” Similarly, a petty salesman and band singer from Muhuripur (Tripura) said:

My regular income is from selling clothes in village *haats*. I usually go for six days in a week. The *haats* are functioning, but only vegetables and grocery shops are open. Other commodities are not allowed . . . I earned Rs 200-300 per day on an average but, I don't have any income now.

However, wealthier households in the villages had savings and other sources of income that provided some insurance from the losses due to lockdown. A respondent from Nayanagar (Bihar), who runs a relatively big business, had a different experience.

One of my sons has a stationery shop in the village. Every day my son opens the shop but for a limited time. There is no decrease in customers due to lockdown.

A landlord from Alabujanahalli (Karnataka) said his rental income had fallen due to closure of his commercial establishments. But, he also reported having enough cash at hand. A rich peasant from Adat (Kerala), who runs a business establishment and employs many workers, said that while he has incurred losses on account of lockdown, he considers this as a “leave period” for his business.

While by and large salaried employees faced less economic uncertainty, there were exceptions. An ASHA worker from Warwat Khanderao, who was engaged in Covid-19 related awareness campaigns, said that she has not received the monthly honorarium of Rs 1000 for March. She is yet to receive the extra payment that was promised for Covid-19 activities. Similarly, a landlord respondent from Zhapur (Karnataka) told us that his brother, who works as a bus driver with the Bangalore Metropolitan Transport Corporation (BMTTC), had not received his salary after the lockdown. In the private sector, a hotel worker from Tamil Nadu reported that he has not been to work since the announcement of the lockdown.

Village Remittances Fall

The collapse of employment has affected the inflow of remittances to villages with migrants. Respondents from Bihar reported that migrant workers have not been able to send remittances to their households. Another respondent from Amarsinghi, West Bengal said his brother, who used to send remittances from his work in Haryana, is unemployed due to the lockdown. Our respondents from Bihar also talked of the plight of migrant workers who are back in the villages.

Migrants worker are unable to go anywhere because of lockdown. This resulted in decrease in household income of the migrant worker households. Those who able to return back to the villages, were initially kept at government school for 15 days by police and medical officers. They did the complete check-up of the migrant workers.

Government Income Support Inadequate in Quantity and Reach

The coverage of government support in terms in transfer of incomes to people during the lockdown is grossly inadequate. This is the case with regard to both existing government schemes and the new measures announced in the wake of the lockdown. The Survey revealed that disbursal of old-age pension schemes and existing scholarships were affected in some cases. A peasant from Warwat Khanderao (Maharashtra) said that his old-age pension was delayed. An ASHA worker from the same village also said she had not received scholarships for her

daughter since her school is closed. Kerala and Tamil Nadu were notable exceptions. Respondents from Kerala reported receiving two months of welfare pensions in advance. Households in Tamil Nadu reported receiving a one-time transfer of Rs 1000 from the State Government.

The rapid assessment survey specifically asked questions on whether respondents have received cash transfers announced by the Central Government, especially the transfers announced after the lockdown. Among all 52 surveyed households, only 15 respondents reported receiving the advanced disbursement of Rs 2000 for Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme. While manual workers and tenant cultivators are excluded from PM-KISAN by definition, a significant proportion of landowners from the Survey also had not received this amount at the time of the Survey. Further, only eight households reported receiving cash transfer of Rs 500 promised to female bank account holders under the Pradhan Mantri Jan-Dhan Yojana (PMJDY).

HOUSEHOLD CONSUMPTION CONTRACTS

The Survey found that households were affected by low cash availability, limited functioning of markets and shops, price fluctuations, inadequate public food distribution, and increased indebtedness.

Survey questions pertained to cash in hand during lockdown, prices and availability of food items, access to public distribution system, functioning of *anganwadi* and community kitchen, and borrowings, if any, to meet present consumption.

Manual worker households had small amounts of cash with them, most reporting sums of less than Rs 1000. Most of the landlord and capitalist farmer households did not reveal how much cash they had in hand at the time of announcement of lockdown (though one revealed he had Rs 30,000 in hand). The cash in hand reported by poor peasant households was more than that by the manual worker households. A peasant from Palakurichi (Tamil Nadu) said that “after the post-harvest expenditures and other pending obligations, I had Rs 3000 with me.” And a peasant from Muhuripur (Tripura) reported that he had Rs 10,000 from the rent he received by leasing out land for *aman* paddy cultivation.

The stock of food items with manual worker households was very small. An agricultural labourer and construction worker from Katkuian (Bihar) said that his household had rice and wheat for one week. Similarly, a respondent from Nayanagar (Bihar), who worked as a scrap collector in Delhi, had food stocks for 4-5 days.

Some peasant households had their own produce for household consumption. Peasant households from Bihar held stocks of rice and wheat from the previous harvest. Peasant

households from West Bengal reported having potato and pulses from the most recent harvest. However, there were also other peasant households, from Maharashtra, Tamil Nadu, and Uttar Pradesh, who bought food items from shops immediately after the lockdown since there were no produce from their cultivated lands.

Less Food, Less Nutrition During Lockdown

The lockdown constrained food intake and diversity. Some landlords and capitalist farmers attributed this change to non-availability of food. However, most poor peasant and manual worker households were forced to lower consumption due to a reduction in incomes. The immediate reaction by many households was to reduce or eliminate eggs, meat, and fish from their diets. A petty salesman and band singer from Tripura said, “we used to eat non-vegetarian food once weekly, but it is not possible now as we do not have any income.” Most respondents reduced green vegetable consumption and substituted cheaper and less nutritious vegetables for expensive ones. A poor peasant from Mahatwar, reported cutting down on vegetable curry in their meals as they could only afford *dal* right now. Another respondent from the same village recalled that his household has not cooked any green vegetables for the past few days. Two respondents from Amarasinghi said that they could not afford vegetables now. A peasant and factory worker from Gharsondi, Madhya Pradesh, said that green vegetables have become expensive after the lockdown.

Most respondents reported a change in prices after lockdown. A shop assistant from West Bengal said the price of rice rose from Rs 30 to Rs 35 per kg and that of mustard oil from Rs 100 to Rs 150 per litre. In the words of a tenant cultivator from Venmani,

The price of everything has shot through the roof. A milk packet which was Rs 11 is now Rs 15; it is Rs 17 in some shops. I went to buy a quarter kilogram of tomato and it was Rs 15. A packet of chillies is now Rs 15; it was Rs 7 earlier.

However, there were instances of lower prices after lockdown, triggered by a fall in demand. “Vegetable prices have declined. But, people are not buying much. We don’t have cash in our hand,” said a manual worker from Kalmandasguri.

The lockdown also brought about a change in functioning of markets and shops. Working hours were reduced: until 1 p.m. every day Tamil Nadu, two hours in the morning and evening in Bihar, until 2 p.m. in Tripura, two hours in the morning in West Bengal, and so on. There were also cases of police harassment. “They are locking down shops everywhere; only vegetables from grocery shops are available,” remarked a tenant from Venmani. According to a peasant and manual worker from Gharsondi,

Buying grocery is very difficult. Shops get closed without notice and information. We have to find ways to avoid the police [as they] harass while going to buy grocery. [We] have to travel through odd routes and at timings.

There were also communally-charged rumours in some villages. A respondent from Harevli said,

We are not buying vegetables from Muslim vendors who come to village. [Those who] have been detained by the police on suspicion of infection in the area are Muslims. So people are not buying stuff from them. There are lot of rumours about their role in this whole thing.

Further, the respondents also reported unavailability of certain food items after the lockdown. A peasant from Gharsondi (Madhya Pradesh) said there were no stocks left with the village shop. Green vegetables were not available in the shops in Mahatwar (Uttar Pradesh).

Distribution of Food from Ration Shops Varied and Uncertain

As opposed to the uncertainty in functioning of private shops and markets, all villages reported that the ration shops (PDS centres) in the village or in a nearby location were open even during the lockdown. However, the distribution of food items from the start of lockdown to the date of the Survey showed variations across villages. In the villages of Kerala, Maharashtra, Tamil Nadu, and Tripura, all respondents reported receiving rations from PDS shops even after the lockdown. Some respondents received ration in the villages of Karnataka, Madhya Pradesh, Uttar Pradesh, and West Bengal. On the other hand, none of the respondents in the villages of Bihar reported receiving foodgrain from the PDS shops after the lockdown. While some respondents said that they have heard news about distribution of extra foodgrain and other commodities (in addition to the quantity that they usually receive), only a few households reported to have had actually received them.

The crisis due to the pandemic has once again highlighted the critical role that the institution of PDS can play in ensuring food security. At the same time, it has also underlined the weaknesses that it suffers from. For instance, the households from the villages in Kerala reported that while they usually received between 5 to 15 kg of rice in a month through the ration shops, they had received 15 kgs after the lockdown. In contrast, we found a respondent in one of the villages in West Bengal who had not been able to access any foodgrain from PDS as he did not receive a ration card till the date of the Survey, despite applying for one long ago. There were also reports of religious polarisation disrupting distribution in ration shops. A respondent in Maharashtra said foodgrain was distributed on alternate days to Hindus and Muslims.

The distribution of dry ration to children from *anganwadi* centres and schools was reported in Karnataka, Kerala, Tripura, and West Bengal. These were provided as an

alternative to cooked food distributed when *anganwadis* and schools closed. The dry ration for children included rice and a nutritious supplement in Kerala and rice, potato, pulses, and eggs in varying quantities in West Bengal.

There were State-run community kitchens in only two villages of Kerala. In Kerala, community kitchens were functioning at the level of village panchayats. In Tehang, Punjab, *langars* supported by religious organisations, rich farmers, and non-resident Indians who belong to the village served cooked food to the needy.

Debt, Especially Informal Debt, Increases

To sustain their household consumption during the lockdown, several respondents reported borrowing from informal sources. For instance, a poor peasant from Mahatwar, who also worked as a security guard, reported that he had taken a salary advance of Rs 3000 from his employer during the lockdown. Similarly, an ASHA worker from Maharashtra, who had not received her monthly honorarium in the month of March, told us that she had borrowed some amount from friends and family to tide over the crisis. A shop owner from Khakchang, Tripura had borrowed Rs 8000 from a relative. A significant share of borrowings was from the shop keepers and almost all were for meeting daily household consumption. An agricultural labourer from Katkuian, and a scrap collector from Nayanagar said they have taken loans from local grocery shops. A poor peasant from Harevli, Uttar Pradesh said he has borrowed from a villager for household consumption. Similarly, a tenant cultivator from Tamil Nadu, who is also a migrant worker, has borrowed Rs 3000 for buying food.

CONCLUSION

Through the FAS rapid assessment survey, we tried to understand the immediate effects of Covid-19 pandemic and lockdown on production and its consequences for households in rural India. The evidence presented here strongly suggests that the lockdown has affected every aspect of the rural economy, including agriculture and allied activities, employment opportunities, and household incomes and consumption. However, the impact is differential across socio-economic classes and regions of the country.

1. The impact on harvesting operations in the irrigated villages was limited, mainly because of the easy availability, and widespread use of combine harvesters in most of the surveyed villages. While it is too early to conclude, one can argue that the use of machines for various agricultural operations has received a thrust under the current crisis. In rainfed villages, being the lean agricultural season, the opportunities for farm employment were already restricted.
2. The major impact on agriculture, however, was in terms of access to marketing channels, and price received for the produce. In villages of Punjab and Kerala, there

was active intervention by respective State governments to ensure procurement at fair prices. Such institutional mechanisms were absent in other States. The local market channel of sale through small traders and merchants had collapsed, and gravely impacted poor peasants for whom these traders were the main channel. Restricted mobility hindered access to regulated markets even for richer capitalist farmers. The disruption of the supply chain has led to a slump in the local farm harvest prices for most agricultural produce. Producers of perishable goods, particularly vegetables, were severely affected. Among them, the worst hit were poor peasants, without any access to storage facilities or procurement centers.

3. While agricultural operations were not affected much in the irrigated villages, a tendency seemingly encouraged by the lockdown is an expanded use of family labour among smaller landowners. The tendency to use family and exchange labour among poor peasants implies that the scope of agricultural wage work was lower for manual workers during the lockdown.

4. Non-agricultural work, which was crucial in the lean agricultural season, had completely collapsed. In the complete absence of non-farm employment, workers, and even artisans, were being forced to seek employment in agriculture. The reduced mobility due to the lockdown also implied that workers who otherwise regularly migrated for work were now competing for agricultural employment. As a consequence, a downward pressure on rural wage-rates was already beginning to be felt. The Covid-19 lockdown has broken down the complementary relationship between agricultural and non-agricultural work, where the surplus labour from the former was usually absorbed by the latter.

5. Despite income flows drying up for all socio-economic classes to varying degrees, the immediate impact was most severely felt by manual workers and poor peasants who did not have any savings. With meagre cash in hand, no home produce for consumption, and lack of employment, the class of manual workers were certainly the worst affected. In addition, a major blow to the class of manual workers, and poor peasants has been the complete breakdown in receipt of remittances. The combination of low levels of income, ineffective public distribution systems, and negligible income-support had serious implications for subsistence of these households, leading to increased indebtedness especially from informal sources. The class of landlord and capitalist farmer was the least impacted by the lockdown. Better access to storage facilities and regulated markets implied that their farm incomes were relatively protected. Also, they had sufficient cash in hand and food stocks for daily household consumption.

To sum up, the Covid-19 lockdown has worsened the already prevalent distress in the Indian countryside especially for manual worker and poor peasant households. There is also a fear that if the lockdown restrictions are prolonged, crop production in the kharif season will be severely affected. Government intervention is critical to

maintain a basic level of household consumption and to resume normal agricultural production.

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APPENDIX

Table 1A *List of study villages by agro-ecological zone, type of irrigation, and specific features*

Village	District	State	Agro-ecological zone	Types of irrigation	Specific features
Katkuian	West Champanan	Bihar	North West Alluvial Plain Zone	Groundwater	Major source of labour out-migration.
Nayanagar	Samastipur	Bihar	North West Alluvial Plain Zone	Groundwater	Falls in the litchi-growing region of Bihar.
Alabujanahalli	Mandya	Karnataka	Southern Dry Zone	Canal	Falls in the Cauvery-irrigated region of South Karnataka. The major crops grown are sugarcane, rice, and finger millet.
Siresandra	Kolar	Karnataka	Eastern Dry Zone	Limited groundwater irrigation	Dry village. Sericulture and dairying are important agricultural activities
Zhapur	Gulbarga	Karnataka	North East Dry Zone	Unirrigated	Many workers from the village are employed as daily labourers in stone quarrying.
Adat	Thrissur	Kerala	Central Zone	Canal	Low-lying wet region known traditionally for rice cultivation.
Chittilappilly	Thrissur	Kerala	Central Zone	Canal	Low-lying wet region known traditionally for rice cultivation.
Gharsondi	Gwalior	Madhya Pradesh	Gird Zone	Limited canal and groundwater irrigation	The major crops are soya bean, wheat, sesame, and black gram.
Warwat Khanderao	Buldhana	Maharashtra	Western Maharashtra Plain Zone	Limited groundwater irrigation	Cotton is the main crop in the kharif season.
Tehang	Jalandhar	Punjab	Central Plain Zone	Groundwater	Rice (kharif) and wheat (rabi) are the main crops. Agricultural activities in the village are performed mostly by migrants from Bihar.
Hakamwala	Mansa	Punjab	Western Zone	Groundwater	Rice (kharif) and wheat (rabi) are the main crops.

Venmani	Nagapattinam	Tamil Nadu	Cauvery Delta Zone	Canal	Located in the Lower Cauvery delta. Rice (kharif) is the main crop.
Palakurichi	Nagapattinam	Tamil Nadu	Cauvery Delta Zone	Canal	Located in the Lower Cauvery delta. Rice (kharif) is the main crop.
Mainama	Dhalai	Tripura	Mid Tropical Plain Zone	River lift irrigation	It has a mix of low land and sloping land. Rice and vegetables are cultivated on low land. Rubber is cultivated on sloping land.
Khakchang	North Tripura	Tripura	Mid-tropical Hill Zone - Jampui Hills and Rest under Mid Tropical Plain Zone	Unirrigated	It is a tribal village located near the border of Tripura and Mizoram. Slash and burn (<i>jhum</i>) cultivation is practiced here.
Muhuripur	South Tripura	Tripura	Mid Tropical Plain Zone	River lift irrigation	A low land village characterised by rice and vegetables cultivation.
Harevli	Bijnor	Uttar Pradesh	Bhabar and Tarai Zone	Canal	Rice, wheat, and sugarcane are the main crops.
Mahatwar	Balia	Uttar Pradesh	Eastern Plain Zone	Groundwater	The major crops grown are rice, maize and wheat. Livestock activity is important for all sections of households.
Panahar	Bankura	West Bengal	Old Alluvial Zone	Groundwater	The major crops are rice (kharif and summer), potato, and sesame.
Amarsinghi	Malda	West Bengal	New Alluvial Zone	Groundwater	The major crops are rice (kharif and summer), and jute. It is source of labour out-migration to North India.
Kalmandasguri	Koch Bihar	West Bengal	Terai Zone	Groundwater	Muslim and Schedule Castes (Rajbanshi) households constitute the majority in the village. Fishing is an important occupation among Muslim households. A major source of labour out-migration.

Note: Agro-ecological zone as per National Agriculture Research Project (NARP) classification.