

Impact of COVID 19 on production and productivity of Kerala agriculture sector

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Abstract

Kerala's economy has its own inherent strengths and capacities that helped to overcome the series of struggles over past years. In the form of flood, diseases such as Nipah virus infection, Cyclones like Okhi, and outbreak of pandemic due to COVID19 in 2020. Response to these government has initiate a number of programmes to boost up the condition of disadvantaged groups such as, women, children, scheduled caste and schedule tribe population, workers in unorganized sectors, old age people. Pandemics and epidemics are characterized by cumulative incidences that grow rapidly, initially in an exponential form and then level off, absolutely metrics related to Covid-19 from a large cohort of countries globally, or for the cohort of states and union territories with India, with varying population sizes, population age structures, quality of health care facilities, per capita income, reproduction numbers, etc. are dispersed within upper and lower bounds. That is, it has disrupted the growth process of global economy directly and paralyzed large parts economy by leading to recession and depression. Present paper look beyond the impact of COVID 19. Improvement of the agricultural sector is possible by developing mixture of foreign and indigenous technology. This offers a chance to boost domestic production and consumption of food commodities, such as, crops, vegetables, agriculture and allied sectors. If care is not taken, uncertainty, fear and panic could also negatively impact the planting decisions of farmers; hence the need for a massive enhancement in the agricultural sector.

Keywords: Pandemic, agricultural sector, Government Intervention, economic recovery

Introduction

Kerala's economy has its own inherent strengths and capacities that helped to overcome the series of struggles over past years. In the form of flood, diseases such as Nipah virus infection, Cyclones like Okhi, and outbreak of pandemic due to COVID19 in 2020. Response to these government has initiate a number of programmes to boost up the condition of disadvantaged groups such as, women, children, scheduled caste and schedule tribe population, workers in unorganized sectors, old age people. Kerala is a relatively high-income Indian State with the annual income per capita of ₹1,49,563 that is 1.5times than Indian average and Gross State

Domestic Product (GSDP) is ~~5668~~ All these efforts were executed in order to uphold the human development achievements. All these efforts points into the public action in persuasion of social justice.

COVID-19 and impact on economy

Pandemics and epidemics are characterized by cumulative incidences that grow rapidly, initially in an exponential form and then level off, absolutely metrics related to Covid-19 from a large cohort of countries globally, or for the cohort of states and union territories with India, with varying population sizes, population age structures, quality of health care facilities, per capita income, reproduction numbers, etc. are dispersed within upper and lower bounds. That is, it has disrupted the growth process of global economy directly and paralyzed large parts economy by leading to recession and depression. According to the International Monetary Fund (IMF), world GDP is projected to contract by 4.4 per cent in 2020, and the global economy's "long ascent back to pre-pandemic levels of activity is prone to setbacks."¹ As per the projections by United Nations Department of Economic and Social Affairs (UNDESA) 2020, the world economy is projected to shrink by 3.2 per cent in 2020.

COVID- 19 pandemic outbreak is a great shudder to the Indian economy. The Indian economy was in an uncertain state before the COVID -19 pandemic and the long lockdown affected it severely. The Indian economy has been showing signs of a slowdown, especially with respect to the growth of employment, much before the outbreak of the Covid-19 pandemic with a steady decline in the country's investment rates from 2012 onwards. In fact, as per the data compiled by the World Bank, investment rates (gross capital formation as a proportion of GDP) in India and China were at similar levels – around 40 per cent – in 2007. There are many sectors which faces a great hit of the pandemic the major sectors affected by the COVID-19 are manufacturing industries, agriculture and allied activities, entertainment industry, sugar industry, airlines industry, and tourism industry. Apart from these major industries many micro, small and medium industries also face the heat due to COVID-19. The lockdown very first affected daily wage labourers those who are working in other states. Because of the unanticipated lockdown they were not able to step out from the home and there were no Jobs available for them and even they were not able to go to their native places as the Railways were not working because of lockdown. In these 21 days all the industries were completely shut down with a great impact on our Indian economy only essential services were available. In 2019 the Indian economy was not in a good state. After the first lockdown due to an increase in covid-19 cases, the government declared a second lockdown. In this way there were a series of lock down came into effect in some areas. According to the Periodic Labour Force Survey (PLFS) conducted in 2017-18, unemployment rate in India had reached an all-time high of 6.1 per cent. India faces a stiff challenge in creating decent jobs for its growing young population, particularly so with the declining labour absorption in agriculture. Women have responded to the slow growth of job opportunities by withdrawing

from the labour market in large numbers, while young men, aged 15 to 29 years, comprised 68.3 per cent of all the unemployed in the country in 2018.

Kerala's economy attained a revival in growth during the period from 2016 to 2018, thus reversing a downward slide in the State's economy between 2013 and 2015. Kerala's economy has faced a number of setbacks over the last four years. The demonetization of high value currency notes in November 2016 and the problems associated with the implementation of the GST regime adversely impacted the economy in Kerala as they did in the rest of the country too. The economic crisis in the Gulf countries has had adverse impacts on the Kerala economy, with a number of emigrant workers returning to the State and with a slowdown in the inflow of remittances. Finally, the Covid-19 outbreak in 2020 has adversely affected Kerala economy as it has the rest of the world. In April-May 2020, the State Planning Board conducted a preliminary assessment of losses in different sectors of the economy on account of the Covid-19 pandemic and the subsequent lockdown. The first report prepared by the State Planning Board made an assessment of losses to the State economy during the lockdown period from March 25, 2020, to May 3, 2020. According to the Planning Board estimate, the shortfall in value addition in the State was

₹29,000 crore during

decreased economic activity from the middle of March. The loss in the first quarter of 2020-21 was estimated to be

₹80,000 crore

activity in April would continue in May and subsequent months and that the production level in 2020-21 would be 5 per cent higher than in 2019-20. The economic crisis associated with the Covid-19 pandemic is unprecedented, the economy suffered damage to its productive capacity over a specific time, with measurable consequences in the short and medium term. The production of goods and services during the Covid-19 pandemic came to an abrupt and almost total halt. Its effects are from top to bottom and across all locations. The situation is dynamic and policy changes and the duration of the pandemic will continue to influence the course of the economy. The recovery in economic growth that Kerala achieved during the 2016-2018 period was evident in most sectors of the economy. The agricultural sector in Kerala registered positive growth in 2017-18, as a result of innovative measures taken by the State Government to stimulate agriculture, especially paddy production, along with fishing and aqua culture.

Effect of COVID on different sectors

The Covid-19 pandemic affected the agricultural sector of the State by way of shortage of workers and machinery due to disruption of supply chain and restriction on its movement, lowering of prices of the produce due to demand variation, and increased sense of insecurity among farmers in addition to threatening the availability of food supplies. Planning Board conducted an assessment of losses in the different sectors of the economy in order to understand the extent of damage caused by the pandemic and the consequent lockdown. And it can be summarized as follows.

The response by the Government of Kerala to address Covid-19 can be understood as a timely response to a global crisis. All the sectors have been affected both supply and demand in all sectors. It is a collective effort of the all Departments in the State to address the pandemic. By anticipating a worse situation ahead, the Government of Kerala undertook various initiatives to beat the impact of COVID-19 on the State’s economy and lives of people. Infusion of money into the economy through direct and indirect support, ensuring food and shelter for the needy, generating employment opportunities, increasing production of agriculture and industrial sector, and support to non-resident Indians who returned home from abroad as well from other States were the strategies adopted by the government of Kerala. The Government disseminated information about the spread of the pandemic and the containment strategies adopted by it.

Sectors	Impact
Cultivators of commercial crops	Lost incomes with the sharp slowdown in global trade in agricultural products
domestic prices of most agricultural crops livestock products, and fish	Fell sharply after the lockdown began
lack of availability of workers	Migrant workers, has affected the functioning of a number of processing units in agriculture
public sector	large income losses
manufacturing sector	Declined growth
Industrial sector	Declined growth
construction sector	Fully discontinued
agriculture and allied activities	Declined growth
Trade	Partially discontinued
Hotels	Fully discontinued
Transportation service	fully discontinued
Communication	Visible increase
public and social services	Growth slowed down
IT industry	Declined growth

Impact of Covid-19 Pandemic in Agriculture in the State Kerala State

In this session impact on COVID 19 and agricultural sector is taken for discussion it is found that, Covid-19 pandemic has affected Kerala’s agricultural sector in multiple ways. Production of paddy, vegetables, fruits, fish, milk, livestock, plantation crops especially cash crops are affected. Due to lock down in Kerala, whole industries got jammed, delay in transportation and unavailability of workers were the main reasons for income loss to farmers.

Item	Reason	Impact
spices and plantation crops	Difficulties in collection, processing due to lock down. Denied export	Lower price, Loss of products, decrease in International trade

agricultural crops	Processing failed, unavailability of labourers and transportation facilities	Increased demand was there but unavailability of transportation facilities due to lock down Lower price, Loss of products. Directly affected the supply chain and farmers.
livestock products and fish	fall of demand and disruption of supply chains	Fell down prices, major income loss Increased demand
agricultural institutions in the public sector	Delay in harvesting Due to un availability of workers and delayed transportation facilities	Large revenue losses
Plantation and Spices 1. Rubber	high stocks, projected decline in rubber consumption and low international prices	prices declined. affected local rubber market by low International economic growth
2. Tea	absence of labourers, lack of cash to pay wages	loss in harvests closure of processing factories disruptions in the supply chain accumulation of unsold tea halt in exports rise in debt burden with banks
3. Coffee	shortage of trucks, transport restrictions	Major income loss, accumulation of product
4. Cardamom	Shortage of workers, absence of transportation	price fall and a reduction of arrivals in e-auction platforms

Government interventions to support farmers

To support the paddy farmers, government has introduced certain initiatives during the lockdown period. Department of Agriculture Development and Farmers Welfare, Vegetable and Fruit Promotion Council Kerala and HortiCorp have initiated the innovative farmer’s supportive programmes. By setting up of Farmers Retail Outlets one each in every panchayat, two each in municipalities and five each in corporations facilitate to sell products locally to consumers. Another strategy was the initiation of online marketing strategy by the Government agencies it also helped the direct sale of fruits especially mango, pineapple, banana, papaya and vegetables to the people cities. To support the paddy farmers, inter- District movement of surplus produce was also introduced, it helped to reduce the loss of paddy because of delayed harvesting.

Another important initiative during lockdown was the private sector online food delivery portals. These kind of individual and group initiatives were seen everywhere in Kerala, it helped the people by delivering on time over a call or message. Lot of returnees, job losers from different sectors of occupation incorporated in on line food delivery service. It also helped the farmers

especially vegetables and fruit. Supply of fruits and vegetables was also arranged to different community kitchens, residents' associations, guest worker camps and other agencies throughout the State. Marketing of fruits and vegetables to the consumers also took place through the 100 own-stalls and around 200 franchised outlets of HortiCorp. (**Economic review 2020-Kerala Planning Board**). Another important initiative by the state owned Civil Supplies Corporation to buy tea from farmers and distributed under public distribution system.

Awareness regarding Achievements of Department of Agriculture

The Agriculture Department of Kerala government focuses on production of crop, market development and value addition schemes, Farmer Welfare schemes and extension services. Creative resource management, eco friendly practices, agricultural technology enhancement programmes, manufacturing of value added products, and development of agriculture and allied industry are given importance by the department. Another major areas should addressed by the department is the income assurance to farmers, agricultural credit facilities, crop insurance, price stabilization, pension and other welfare programmes for farmers.

This part the selected farmers were incorporated in the present study. Awareness about the programmes will be helpful for getting financial and advisory assistance from the authorities. Here for the present study, 100 farmers were selected for primary data collection. 20 each from paddy, coconut, vegetables, fruits, plantation farmers were selected. It is found that, only a nominal number of farmers are aware about the achievements of the department of agriculture. It is found that, only 2 respondents known about assistance given for sustaining rice cultivation through group farming and for speciality rice cultivation, 4 persons have heard about homestead cultivation was promoted by distributing seed kits seedlings to households including school students with majority beneficiaries being women for vegetable development, 6 farmers were known about Assistance given to 55 new and 77 existing Keragramams in support of Coconut development, 4 of the respondents have heard about As part of the rehabilitation and rejuvenation of coconut palm campaign famous varieties such as, West Coast Tall, dwarf, hybrid varieties were produced and distributed at the rate of Rs. 75, only two of them make use of it. Only 3 of the vegetable farmers were known about assistance provided for establishment micro irrigation units, 15% of the respondents all together known about coconut seedlings, vegetable seedlings, vegetable seeds, paddy seed, lakh tissue culture banana, banana suckers, ornamental plants in the various departmental farms, all the 20 respondents were aware about the vegetable seed kits were distributed free of cost to household and to schools. None of the respondents were aware about disease free rooted pepper cuttings were produced for distribution to farmers, new Plant Health Clinics, new eco-shops were established, Supply of soil ameliorants and micro nutrients. 32% of respondents make use of the financial assistance under Pradhan Manthri Kisan Samman Nidhi. (personal interview conducted on first week of January 2021). It seems that, information dissemination by department of also affected due to lock down. In other words the

nominal farmers are not aware about the governmental achievements. The large scale farmers will be getting updated information and timely benefits.

There should be programme to attain self sufficiency in crop production such as, rice, pulses, tubers and location specific crops like millets, sugarcane and sesame, vegetables, fruits, coconut, areca nut, rubber and cash crops. other It can be attained through production and distribution of quality planting materials, comprehensive fallow land cultivation with people's participation, modernization of laboratories, institutional mechanism for marketing, strengthening extension activities, rejuvenation of spices economy, quality control of agricultural inputs and outputs and effective programs for soil and root health management, crop health management covering pests and disease surveillance, promotion of organic farming and safe food production, crop insurance, formation Agro Service Centres (ASCs) and Karshika Karma Senas for improved service delivery and revival package.

Subhiksha Keralam: The State Government in 2020-21 launched Subhiksha Keralam programme with focus on increasing food production by enhancing the area under cultivation and adopting innovative technologies. Fallow land cultivation, homestead cultivation, crop improvement activities for the existing cultivation, improved market facilities, interventions in the post-harvest management and long term interventions are the programmes included. Food crops like paddy, banana, vegetables, tubers, pulses and millets are the crops targeted under the programme. Departments of Agriculture Development and Farmers Welfare, Local Self Government, Animal Husbandry, Co-operation, Irrigation and Kerala Agricultural University are the stakeholder departments/agencies involved in the programme. (**Economic review 2020-Kerala Planning Board**)

Crop Insurance Schemes: farmers in Kerala mostly depend on the weather, and uncertainty of weather and unexpected flood, droughts, attacks of pests and diseases are the main threats to agricultural production in Kerala. Crop insurance scheme covers total of 25 major agricultural crops namely coconut, banana, rubber, black pepper, arecanut, cardamom, cashew, pineapple, coffee, ginger, tea, tapioca, turmeric, cocoa, groundnut, sesame, vegetables, nutmeg, clove, betel leaf, pulses, tuber crops, sugarcane, tobacco, paddy, mango and millets. In addition to this mango, potato, cabbage, carrot, garlic, french bean, yard long bean, snake gourd and bitter gourd were notified in Rabi season are also comes under insurance coverage. Under Prime Minister Fasal Bhima Yojana, paddy, banana, tapioca and plantain got preference.

Prospects for Economic Recovery after the Pandemic

All the industries, especially agricultural sector are finding the solutions to fight with the pandemic and trying to start their work by introducing new strategies. It is clear that the recovery in the Indian economy is likely to weaken in the post- COVID phase because of the deficiencies in aggregate domestic demand. It is not possible to restart production by keeping social distance by avoiding crowd, shift into digital platform, partial opening like hotels or cinema hall.

Products can be sold out on online platform, agricultural production cannot be performed in same platform. So there should be innovative planning and research in agriculture sector. It cannot be resuming with the demand deficiency. It will not be possible to continue the food grain supply programme through supplyco. There should be resourceful policies to improve the purchasing capacity of people that will generate positive effects on demand conditions and overall economic revival in the State. The State Government of Kerala had announced an economic relief package amounting to ₹20,000 crore on March 20, 2020, worthwhile without proper planning to cover the income losses suffered by the poorest sections of the State's workforce in the weeks that followed. More importance should be given to livelihood support programme along with social security ventures.

Conclusion

We have to look beyond the impact of COVID 19. As food forms part of man's basic needs and is vital in boosting the immune system, the agricultural sector should be improved. Improvement of the agricultural sector is possible by developing mixture of foreign and indigenous technology. This offers a chance to boost domestic production and consumption of food commodities, such as, crops, vegetables, agriculture and allied sectors. If care is not taken, uncertainty, fear and panic could also negatively impact the planting decisions of farmers; hence the need for a massive enhancement in the agricultural sector.

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