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Produce What is Consumed or Consume What is Produced: Importance of Regional Self-Sufficiency (RSS) Model in Managing COVID-19 Pandemic

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A B S T R A C T

The novel human coronavirus disease (COVID-19) pandemic coupled with the enforced lockdown to contain its spread has wrecked unequivocal havoc on the economy front in which the agriculture sector is no exception. Though the Union Government in India rightly kept agricultural activities out of the lockdown purview with relaxed norms, the supply-chain disruptions have had impacted both the delivery of inputs as well as the marketing of harvested produce. Limitations in mobility seem to be the major reason for the economic losses incurred due to the ongoing pandemic. With rising trend of urbanization, it is always possible for the producers and consumers to fall apart further. With neither the demand getting fulfilled nor the surplus being liquidated, farmers would be at the receiving end in such a scenario. In this connection, we have deliberated the importance of the Regional Self-Sufficiency (RSS) model wherein production and consumption needs are met within the region and only the surplus moves outside. This way, not only the demand fluctuations can be addressed but also the food scarcity woes can be minimized. Further, the strategies for implementing the RSS model have been also been elaborated and shown in a way to tilt the terms-of-trade in favour of agriculture.

Introduction

The novel human Coronavirus Disease (COVID-19) pandemic has quite changed many of our priorities down the socio-economic milieu along with our collective response to such priorities. The economic lockdown that was enforced to halt the spread of the pandemic has seriously affected the lives and livelihoods of the millions the world over (Nicola *et al.,* 2020). Nevertheless, India has got a long and successful track record of managing many viruses such as polio, measles and encephalitis. There is no question of economic revival though but how quick that is going to happen remains the moot question. And as a good crisis is not to be wasted, it becomes our utmost priority to

seize the moment and place agriculture sector on par with other industrial and service sectors. Further, the present Corona virus (Chinese/Wuhan) strain too will stay for longer time ahead and we need to find or evolve new ways to be put up with it. Thereby, the strategies or measures that have been put in place by the institutional agencies to address the ongoing demand-side and supply-side bottlenecks in farm sector should stay longer and should not become just a knee-jerk reaction to the underlying issues.

India has attained both food self-sufficiency and food sovereignty and regularly tops the annual global charts in terms of production of food grains, milk, fruits, vegetables, millets, pulses, cotton and a host of other crops. The prevalence of buffer stock in food grains, thanks to the country's entrepreneurial and hardworking farming community, is already being leveraged to manage food scarcity or deficit in resource-poor areas. At the same time, Indian agriculture has also been marred with rising farm distress, indebtedness and farm suicides for the past three decades (Narayanamoorthy, 2019). To be particular even before the pandemic, with the food inflation remaining considerably weak, the market prices that the farmers were receiving in 2018-19 were found to be more or less equal to that of 2008-09 price levels (Satyasai and Sandhya, 2016). In addition, even when the objective of doubling farmers' income is to be achieved by 2022-23 the median income levels (i.e. income levels of 50 per cent of the farmers) would be just around Rs. 4,500 per month (Swaminathan *et al.,* 2018). In a nutshell, the terms of trade in India were not farm-centric even before the rise of COVID-19.

Like any other sector, agriculture has also been impacted by this existing pandemic though it is assumed to be the least affected for the demand of food items never gets waned that too during dire situations. As a matter of fact, it is a cruel coincidence that the Corona virus that originated in the wet markets of Wuhan Province, China (Shereen *et al.,* 2020; Lin *et al*., 2020) has altogether disrupted the functioning of agricultural markets in India in an unprecedented manner. For the first time it seems that the supply-side problems have outnumbered their demand side counterparts in the farm sector. With this background, the importance of regional self-sufficiency (RSS) model of producing what is consumed or consuming what is produced within a given region is explored as an option to tide over the existing uncertainty and also to tilt the terms-of-trade scenario totally in favour of farmers.

What is a 'Regional Self-Sufficiency (RSS) Model'?

Until the late 1930's, the villages in India were self-sufficient. Farmers, millers, primary food processors, weavers, artisans, potters, blacksmiths, goldsmiths, *etc*. were residing in the same village catering to all types of demand right from food and daily household needs to industrial to mobility needs of the people. This way every village in India was fully-functional with little dependence on outside facilities to run everyday business. This can be touted as a Village Self-Sufficiency (VSS) model or more popularly as *'gram swarajya'* as given by Mahatma Gandhi and Sri Aurobindo. The VSS model which was inherently natural to those times in Indian villages should be brought back and amplified to the extent of ensuring regional self-sufficiency taking in all the essential necessities and comforts of modern livelihood needs with infrastructure facilities, amenities, standards and work-life balance.

It is also to be noted that the regions need not be within the respective state boundaries but the border districts of the neighboring states

can also be brought together as one region. The moot point is that the region should be small enough for mobility (transportation / logistics) to take place and large enough for various farm and non-farm economic activities to flourish. In a nutshell, all that is consumed within a particular region need to be majorly produced within or all that is produced should get majorly consumed within the region itself. In better words, it is time for rural and urban India to co-exist within a region and farming should no longer be considered as an occupation of rural hinterlands alone.

In other words, a region under the RSS model should subsume several agro-climatic zones wherein the underlying topography, soil, microclimate and other environmental factors should favour the cultivation of a number of crops including cereals, millets, pulses, oilseeds and a host of fruits and vegetables, commercial and fodder crops along with dairying. The focus of the proposed RSS model is not on crops or cropping systems alone but the entire farming system is to be attended right from the decision making process of taking up of crops, input supplies, market led crop production, protection, harvesting management, and market intelligence. In addition, the spread of any virus or disease like COVID-19 or bird flu can be contained within the region and the management of the same will no longer be an issue.

The two cases in the country where the present RSS model can immediately be applicable are: (i) Saurashtra region in Gujarat and (ii) Kongu region in Tamil Nadu. In the first case, the districts of Junagadh, Amreli, Gir Somnath, Bhavnagar and Porbandar can be grouped together as one region (say, Saurashtra – I region) under the RSS model. All these districts fall within the radius of 200 kms in the Saurashtra region. In case of Kongu region, the districts of Coimbatore, Tiruppur, Erode, Ooty in Tamil Nadu and Palakkad district of Kerala can be brought together under the RSS model. In both the cases, roughly 80 per cent of agricultural and industrial needs of the people can be easily met from within. In both the models, even those crops which are not traditionally cultivated can be taken up. For instance, rice in Saurashtra region and wheat in Kongu region can be grown to fulfill the local demand to a major extent. In this way, the surplus production of, say, cotton or groundnut in Saurashtra RSS model can be diverted to rice under market-led production. Apart from managing the glut in the markets, the possibility of food scarcity or deficit can also be minimized with the food distribution getting streamlined within the region itself as a result of limited mobility.

Strategies for ensuring regional self-sufficiency amid the pandemic

The biggest obstacle that the COVID-19 has created is the mobility challenge. While it is possible for the people to wait longer for consuming industrial or service sector related goods / services, it may not be the same case with that of agriculture. One good lesson that is to be learnt from this pandemic is that sacrificing agriculture in the pretext of achieving industrial growth and preferring service sector for higher income levels over farming might lead to panic over the pandemic. A balanced growth of a region involving both farm and non-farm components can alone serve as the best solution forward. As already seen in the case of this ongoing pandemic, it is possible for a state or a district or why even a block in this country might be locked for months together to halt the spread of any arising problem. Thereby, smaller the region the more convenient it would be to ensure the delivery of all necessary supplies and to carry out all

the normal activities. The following strategies are presented for the successful implementation of regional self-sufficiency (RSS) model in India. As far as possible, the strategies are holistic in nature taking into account the aspects of both production and consumption of both food and non-food needs of the region concerned.

Identifying existing demand

The very first strategy in the proposed RSS model is to facilitate the producers to be made aware of the existing demand in the region. The *mantra* should be to produce what is required in the market and not based on the last year's prices alone (i.e. Cobweb phenomenon). The farmers need to be trained to fulfill the existing local demand and only then to explore outside domestic / offshore markets to liquidate their surplus. The commodity-wise and product-wise consumption demand of a region can be elicited by keeping track of the supply-demand scenario as well as by conducting random customer surveys periodically. The demand can be catered by incentivizing the farmers to practice optimal crop planning; crop rationing; food safety needs, diversified farming and market-led production. In this context, Haryana government has taken the right step forward by announcing Rs. 7000 peracre for farmers who choose other crops over paddy enabling the farmers to respond to the market needs.

Ensuring input availability

Once the production is ascertained based on market demand, the next step is to fix the supply of inputs. At least, 80 per cent of the input requirements including seeds, fertilizers and plant protection chemicals should be fulfilled from within the region. Based on necessity, input supply companies / firms need to be established paving way for the availability of non-farm employment options within. The supply requirements of seeds of food crops (non-commercial crops) and bio-agents can be taken up by the public/private agricultural institutions and extension agencies. As much as possible, the farmers should also be trained to use on-farm generated inputs and to rationalize the usage of purchased inputs. Besides, the practical importance of non-monetary inputs can also be effectively demonstrated apart from operationalizing custom hiring centres (CHCs) for promoting farm mechanization.

Diversifying cropping pattern

Diversification is the first rule for regional self-sufficiency. The cropping pattern in the region can be diversified with a mix of agriculture, horticulture and animal husbandry components on the basis of existing demand. Any fluctuation in demand can also be easily addressed with limited mobility. A small portion in the land-holding should be allotted for fodder crops. All that is consumed need to be produced. And if not produced, the dietary habits need to be changed. Promoting diversification within a region may lead to the harnessinf of triple benefits viz. (i) improvement in household nutrition; (ii) regular income flow; and (iii) less occurrence of farm distress/ suicides.

Learning from dairy sector

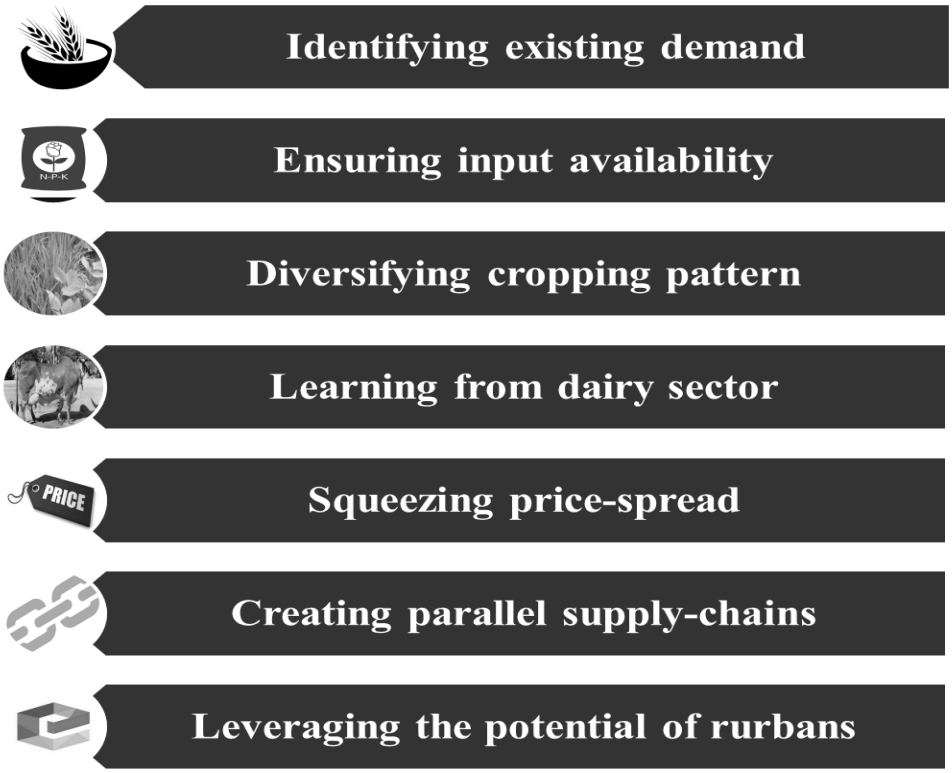
The share of dairy sector in the agricultural GDP has increased from 17 per cent in 1970-71 to 30 per cent in 2018-19. If it is possible for the co-operatives to be highly successful in dairy sector with such a highly perishable commodity like milk then why it is not so in agriculture with relatively less perishable and durable items in its fold? In the year 2018-19, more than 186 million tonnes of milk was produced and marketed through co-operative channels. Any increase in milk price goes to

the farmer directly. Value-addition of raw milk is also a common feature at the dairy farmer's level unlike the case of other farmers. Why the same success is not being repeated for distributing 280 million tonnes and 300 million tonnes of agricultural and horticultural commodities, respectively as of 2018-19. The successful dairy co-operative model has to be amplified for agri./ horti. commodities along with the required autonomy.

Squeezing the price-spread

A dairy farmer is able to know the procurement price as well as the retail price of milk and gets his share of any increase in price. But the agri./ horti. commodities tend to dwell in the conditions favouring market price asymmetricity where the farmer is completely unaware of both price discovery as well as price determination. The only way-out seems to be trimming down the number of intermediaries in the agrio-supply chains so as to keep the price spread short and remunerable for the farmers. The current pandemic is the best chance for institutional trimming down of surplus intermediaries in any given marketing channel. Lesser the intermediaries lesser will be the price spread leading to advantageous position for the farmers with improved producer's share in the consumer's rupee. Taking a leaf or two out of dairy sector, it may be easier to squeeze price spread in a region by spearheading the following: (i) expediting cold storage/warehousing facilities; (ii) establishing block level agro-processing centres to facilitate primary/secondary level processing; (iii) creating co-operatives for agri./ horti. produce; and (iv) direct markets for farmers to reach out to the ultimate consumers.

Fig.1 Strategies to ensure regional self-sufficiency post COVID-19 pandemic



Creating parallel supply-chains

The marketing channels have to be diversified and liberalized and the farmer has to be given the full freedom to exercise his option of selling to fulfill the region's demand and to take the surplus outside. The existing rigidity requiring farmers to sell off their produce only through agricultural produce market committee (APMC) wholesale markets should end and the Union Government has amended the APMC act recently in this direction. The warehouses should also be propped and supported to become full-fledged marketing yards (mandis). The Farmers Producers Organizations (FPOs) should become proactive in leveraging the group dynamics among small-scale farmers so as to pool their produce together. Produce once pooled can easily be marketed to large private players and also be transacted in commodity markets. In this way, the possibility of farmers becoming price setters or makers are higher than being price takers as of now. Similar to work-from-option in IT sector, sell-from-option is also gaining currency in farming wherein the wholesaler directly comes in contact with the farmer through a broker and takes complete responsibility of lifting the farm-produce off the farm-gate. The FPOs or Farmer Interest Groups (FIGs) can very well do the brokerage on behalf of the farmers and create parallel supply-chains and help in de-congesting the existing *mandis*.

In the recent times, the governments of Uttar Pradesh and Madhya Pradesh have taken revolutionary steps in de-congesting APMC mandis. Besides, the Union Government has also opened up the option of selling off agricultural produce in alternate channels apart from amending the Essential Commodities Act (ECA) of 1955 to keep out cereals, pulses, oilseeds, edible oils, onion and potatoes from the list of essential commodities. As stock limit would no longer be a concern, large scale private investments can be expected paving way for improved prospects of processing and value-addition. Only thing is that the current changes in agricultural policy as well as marketing reforms should not be a knee-jerk reaction to the pandemic but should be continued with a vision to ensure the regions becoming self-sufficient.

Leveraging the potential of rurbans

The workforce can be maintained in the region only through work diversification by availing essential urban amenities in rural areas which in turn can deter migration on one hand and retain workforce availability for farming on the other. With the return of the surplus migrants from the cities back to the villages, the ongoing COVID-19 pandemic presents once in a lifetime opportunity to realize 'Providing Urban Amenities in Rural Areas (PURA)' the vision of Dr. A. P. J. Abdul Kalam, former Indian President. Besides, leveraging the information and communication technologies (ICTs) would also increase the presence of non-farm options in rural areas which in turn may increase the income of rural households (Anandaraja *et al.,* 2015) and paves way for workforce diversification within the region. Non-farm options, when increase, may also take care of the existing disguised unemployed within the regions. Though ood inflation can be expected to increase as a result of increased money supply, a moderate rise in food inflation would ultimately benefit the farm sector nevertheless (Sonna *et al.,* 2014) besides altering terms of trade in favour of agriculture to a considerable extent. The amendment in labour laws carried out by the state governments of Uttar Pradesh and Karnataka is a step in the right direction towards workforce diversification and ensuring non-farm employment options within the region.

In conclusion the COVID-19 pandemic and the enforced lockdown that followed have led to deleterious consequences on the economy including agricultural sector which may take a long time to heal. At the same time, it is to be time again remembered that a good crisis, like this, should not go waste. Apart from the unequivocal crisis unleashed by the COVID-19 pandemic, a plethora of opportunities have also been opened up in many sectors including farming. Quite many radical steps are afoot in many states right from de-congesting *mandis* to sell-from-farm options. It is high time that the agriculture sector in India needs to be given autonomy, at least, on par with dairy industry and not be bulldozed with countless subsidies in the name of support. As the current pandemic has firmly established the importance of farming, it is for the central/state governments and for the civil society in general to take up the cause and place farming in the center of all economic activities and alter the existing terms of trade in favour of farming community.

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