



POLICY  
BRIEF

18

## **New Deal for Agriculture for Viksit Bharat@2047**

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## New Deal for Agriculture for Viksit Bharat@2047

*Access to modern technologies and most lucrative markets, along with diversification towards high value agriculture in line with emerging consumption patterns, can help augment farmers' incomes substantially and sustainably*

### Introduction

A clarification call for *Viksit Bharat@2047* by the Prime Minister represents his long-term aspiration to transform India into a developed nation by 2047. There is no standard definition of a developed economy. The World Bank categorises economies with annual per capita Gross National Income (GNI) exceeding \$13,846 as high-income, those ranging between \$4,466 and \$13,845 as upper middle-income, and those between \$1,136 and \$4,465 as lower-middle-income economies. Thus, India with a per capita GNI of \$2,390 in 2022, is a lower-middle-income economy at present by the World Bank's classification. To become a developed nation by 2047, India's per capita GNI must rise by about 6 times over its current levels. It is a tall order. We believe that not only per capita GNI must increase substantially, but the incomes of the masses must rise sustainably for development to be inclusive. And this depends inevitably on farm incomes improving, given that 45.8% of the working population is engaged on farms, with an average holding size of just 1.08 hectares (ha) (2015-16), and agriculture contributing only about 18% to overall GDP (2022-23). Their meagre incomes and struggle for survival often erupts in agitations demanding either higher prices for their products or loan waivers, etc. Thus, resolving farmer issues and creating conditions in which their incomes can improve substantially

and sustainably is essential for making development process inclusive and sustainable, and accomplishing the goal of *Viksit Bharat* by 2047.

Let us first look at what farmers are demanding in their ongoing agitation, and why. Farmers have presented a list of demands that they believe will help raise their incomes with minimal ambiguity. These include: a legal minimum support prices (MSPs) guarantee for 23 agri-commodities to be computed as 1.5 times the comprehensive cost; a minimum of 200 days of wage employment at Rs. 700 per month in each financial year funded by the government's Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), state-provided pensions for farmers and farm labourers; loan waivers, among other demands.

Before we assess the pros and cons of these demands, and whether it is feasible for the government to accept any one of these, we must recognise that these demands essentially reflect a desire for significantly higher incomes with least uncertainty. The resolution of the current standoff, therefore, depends on assessing the current income levels of the farmers and how best they can be augmented followed by persuasive communication with the protesting farmers to assure them that what they seek can be more effectively accomplished through means other than those they have proposed. Against this backdrop, we first examine

how the incomes of farmers have increased in the recent years, especially from 2002-03 onwards, for which the Situation Assessment Survey (SAS)<sup>1</sup> results are available. The SAS was followed up in 2012-13, and then again in 2018-19. Not much information about farmers' incomes after that is available. For the subsequent period, we have used proxies that closely followed the incomes over the period from 2002-03 to 2018-19. These proxy variables, which are available on

annual basis, give us a reasonably good idea of the rate at which farmers' real incomes have increased after 2018-19.

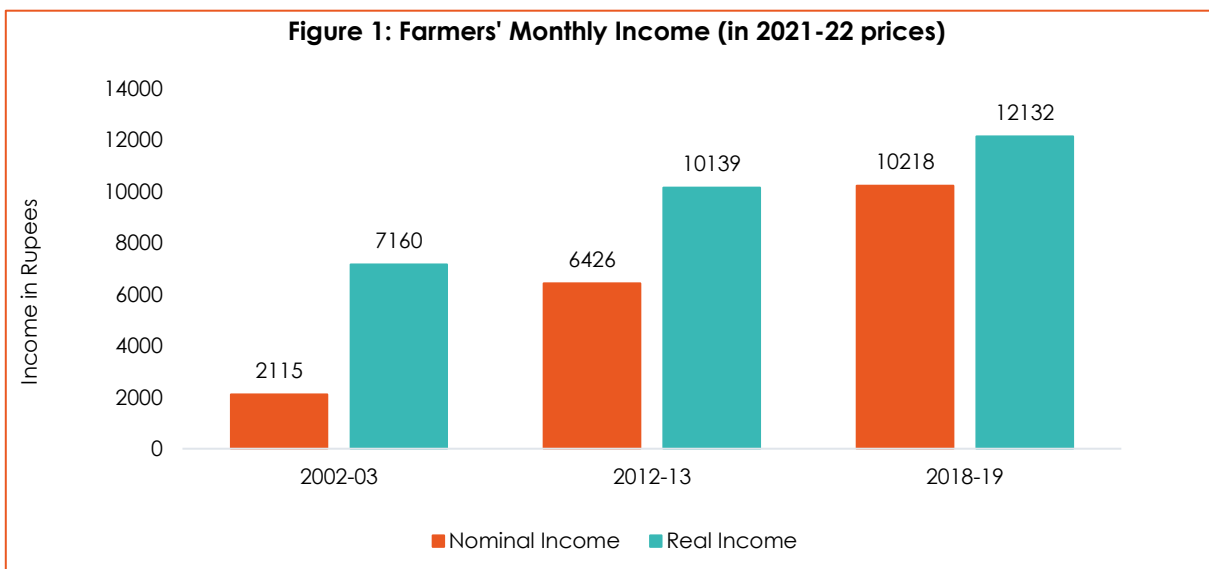
This analysis leads us to conclude that a business-as-usual (BAU) approach is unlikely to result in incomes rising dramatically. For that, concerted efforts and a different strategy may be needed. This policy brief spells out a set of alternative strategies that have the potential to significantly augment farmers' incomes.

## Farmers' Incomes (2002-03 to 2018-19)

The real income of an average Indian farmer rose moderately at the rate of 3.4% per annum from 2002-03 to 2018-19 (calculated by deflating their nominal incomes by consumer price index for agricultural labourers). This is not bad, but clearly not good enough. Farmers' incomes have been low in relation to non-agriculture segment, which has been growing at 6.4% per annum

(National Statistical Office (NSO), MoSPI) or so for the last two decades.

In 2002-03, the monthly income of an average farming household was recorded at Rs. 2,115 (equivalent to Rs. 7,160 in 2021-22 prices). By 2018-19, it had risen to Rs. 10,218 (adjusted to Rs. 12,132 in 2021-22 prices) (Figure 1)<sup>2</sup>.



Source: SAS, MoSPI, various years

<sup>1</sup> Conducted by National Statistical Office (NSO), Ministry of Statistics and Program Implementation (MoSPI)

<sup>2</sup> In real terms, the growth rate depends on the deflator used. The growth in real incomes in the period of 2002-03 to 2018-19, works out to 5.3%, 4.1%, and 3.4%, depending upon the deflators such as wholesale price index, GDP

deflator, and consumer price index for agricultural labourers. Respectively. Since, individuals must spend their incomes in retail purchases, consumer price index seems the most appropriate index to deflate nominal incomes to know the real purchasing power of their incomes.

Farmers' income growth in this period closely followed average annual agricultural GDP growth rates that increased by about 3.1%. However, if one looks at the CAGR of agricultural GDP, it reached 4.7% annually between 2015-16 and 2022-23. But to double farmers' real incomes by 2022-23 over 2015-16, which was the dream shared by Prime Minister in February 2016, required a growth rate of 10.4% per annum, as per the Dalwai Committee (Report of the Committee on Doubling Farmers' Income, MoA&FW, September, 2018). By applying the average annual growth rate of agri-GDP from 2018-19 onwards, the estimated level of farmers' real income is projected to reach Rs. 15,410 in 2023-24. This would be true even after including the amount of Rs. 6000 per annum received by farming households under PM-KISAN.

### State-wise variation in farmers' incomes

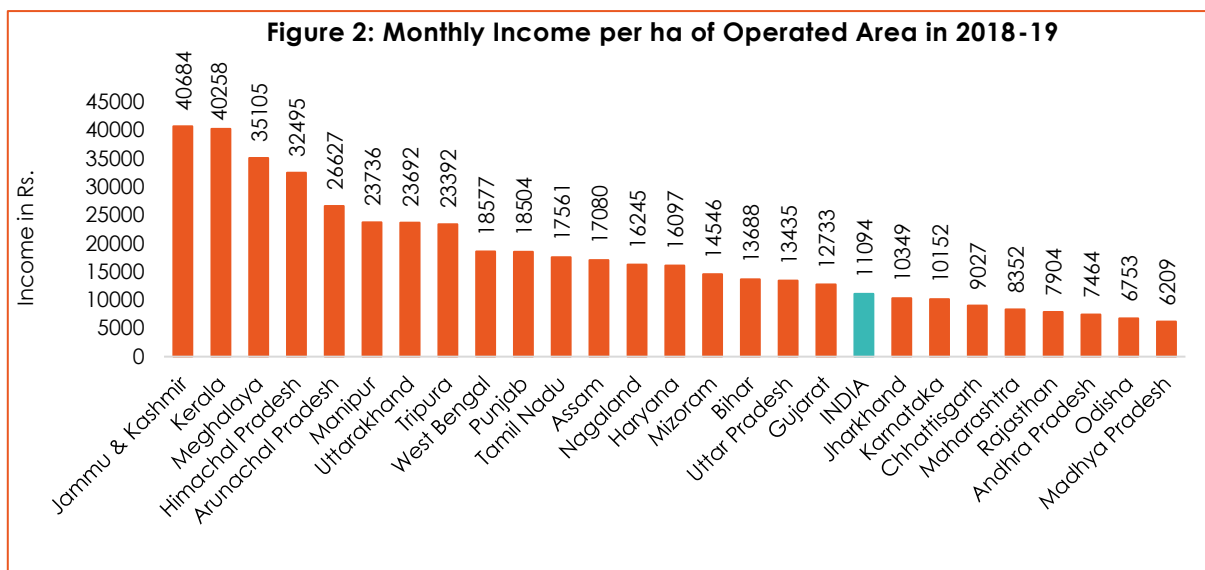
A wide variation in the monthly incomes of agricultural households is observed across various states. The SAS survey (2018-19) found that farmers in the states of Meghalaya (Rs. 29,348), Punjab (Rs. 26,701), Haryana (Rs. 22,841) had higher monthly incomes than those in Jharkhand (Rs. 4,895), Odisha (Rs. 5,112), West Bengal (Rs. 6762), and Bihar (Rs. 7,542). The real (CAGR) income growth was slower in the latter states in the period from 2002–2003 to 2018–2019. For instance, the average income of farmers in Haryana grew 6.1% as compared to 0.4% in the state of Jharkhand.

The level of income of an agricultural household depends among other factors on

the size of their land holding, the productivity of the crops/animals reared, the cropping intensity adopted, and the choice of crops grown (staple crops or high value agricultural produce). At the national level, the average holding size has been declining over years. It was around 1.08 ha as per the latest Agriculture Census (2015-16). It is likely to have reduced to one ha by now. We normalise the incomes by holding sizes to see which state produces more income per ha. Dividing income by the average area operated per holding<sup>3</sup>, in a way, also indicates the efficiency of that household in earning income. Interestingly, farmers in states that specialize in high-value agriculture seem to earn higher incomes on per ha basis. For example, Jammu and Kashmir (fruits), Kerala (spices, rubber), Himachal Pradesh (fruits), Uttarakhand (fruits), and West Bengal (vegetables and jute) have a more diversified cropping pattern in favour of high value agriculture. Farmers in these states seem to earn higher incomes on per ha basis than those in Punjab and Haryana, which are largely engaged in wheat and rice cultivation (Figure 2). This happens even though Punjab and Haryana have very high productivity of wheat and rice on per ha basis. Their incomes are lower nevertheless, as they are yet to adopt high value agriculture. States that rely more on horticulture, livestock, fishery, that have no MSPs, have market driven, demand driven, systems that seems to be giving much better incomes on per ha basis than MSP supported crops like wheat and rice.

<sup>3</sup> Average landholding data is collected by both SAS and Agriculture Census (latest 2015-16) but there is a huge gap between the values from these two data sources especially for states like Punjab, Rajasthan, Haryana, and Gujarat. As per SAS, average operated area per holding for Punjab is

1.44 ha, but Census gives a much higher value of 3.62 ha of average operational holding. We have used the holding sizes as given in SAS in this study as the income data is also from SAS.



Source: SAS, MoSPI (2019)

A question arises as to why despite the potential for lucrative returns farmers are hesitant to transition to high-value crops. Small farmers are often not in a position to manage the risks involved in moving away from a system of assured returns that can be expected from MSP crops. Market price fluctuations, unpredictable weather patterns, and a lack of infrastructure linking farms to markets and sellers to buyers adds to the uncertainty

that shifting away from MSP crops inevitably involves. The fragmentation of land holdings often prevents economies of scale, making it harder for small farmers to compete in markets, especially where no level playing field exists between large and smaller market players. Before discussing how these issues can be addressed, let us understand the structural nature of agriculture.

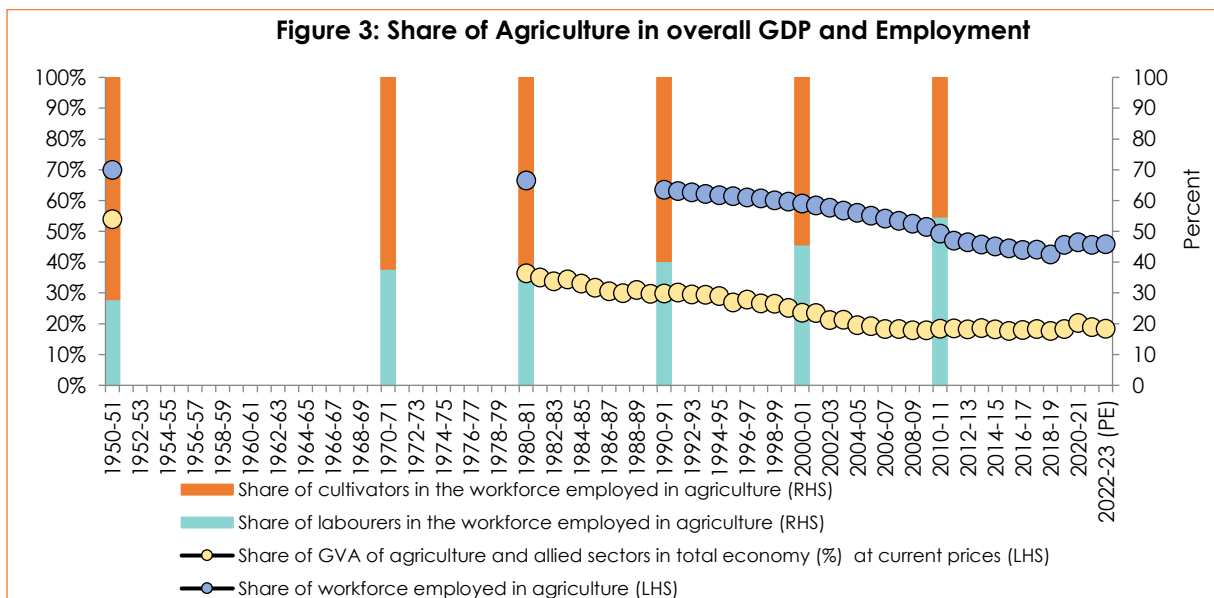
## The structural shift in agriculture and its impact on farmers' incomes

During the last 70 years or so, share of agriculture in overall GDP has declined sharply from 54% in 1950-51 to 18% in 2023-24. However, the share of the workforce engaged in agriculture has declined from 70% in 1950-51 to only 45.8% in 2022-23. It is noteworthy that the secular decline in the share of workforce engaged in agriculture was arrested in 2019-20 just ahead of the outbreak of the Covid-19 pandemic in 2020. In fact, the percentage of workforce engaged in agriculture increased from 42.5% in 2018-19 to 45.6% in 2019-20. It further increased to 46.5% in 2020-21 (reverse migration

from the cities to villages due to the lockdowns) before settling at 45.8% in 2022-23 (Figure 3). This relatively slow shift of labour out of agriculture means that the average holding size has declined from 2.3 ha in 1970-71 to 1.08 ha in 2015-16 (Agriculture Census). It is, thus, difficult to eke out a comfortable living with one ha land, especially if staple crops are grown with low productivity. Data suggests that switching either to high value agriculture with some value addition or combining agriculture with wages and salaries can help farmers make a respectable living.

The absolute number of workforce employed in the agriculture sector has increased from 97.2 million in 1951 to 263.1 million in 2011 (Census). The relative proportion of cultivators has fallen from 72% in 1951 to 45% in 2011 while that of labourers rose from 28% in 1951 to almost 55% in 2011 (Figure 3). One of the possible reasons for the declining share of cultivators could be the increasing fragmentation and continuous shrinking size of land holdings, which has reduced profitability in cultivating smaller farms due to a lack of economies of scale. As a result, these cultivators either shift to non-farm activities and leave their land fallow or lease it out to agri-labourers (Subramanian, 2015). Another plausible factor slowing migration of labour out of agriculture could be the lack of skills required for moving to non-agriculture. Yet another factor could be insufficient

absorption capacity due to slower growth in non-agriculture sectors. The high growth rates of population in rural areas, especially among the agri-labour, could also be a factor. Understanding the relevant causes for the changing pattern of the agricultural workforce is a matter of further study. But suffice it to say here that the sluggish pace of change does not allow for fast increases in real wages in rural areas. The periodic labour force survey (PLFS) data shows that in rural areas, real wages in fact have had negative growth in the last five years. From 2019-20 to 2023-24, the average annual growth rate of the agriculture wage rate was negative 0.6% and of the non-agriculture wage rate was negative 1.4%. This indicates that agriculture in India has not been very remunerative for farmers<sup>4</sup>.



Source: PLFS (MoSPI), National Accounts Statistics (MoSPI), and Census (various issues)

<sup>4</sup>Surjit S Bhalla in his article in the Indian Express dated April 25, 2023 reported positive average growth rate of the agriculture wage rate of 1.5% and of the non-agriculture

wage rate of 1.2% for the period FY2014-21 (based on year-on-year log growth rate estimation method).



## Farmers Demands and their likely implications

Of the 12 demands in the charter presented by the protesting farmers, the following could have significant economic implications if accepted.

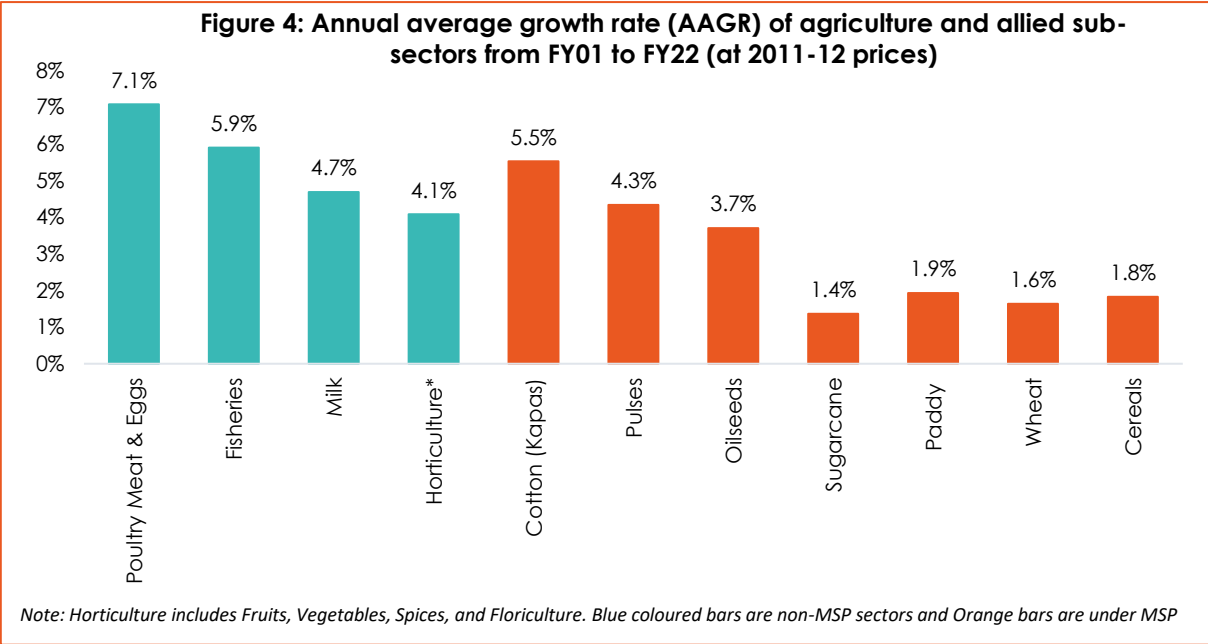
### Demand 1: MSPs

Farmers want that MSPs should be calculated based on Cost C2+50% profit. Cost C2 includes all the paid-out costs plus imputed cost of family labour, imputed rental value of owned land and interest on owned fixed capital. Farmers also want a legal guarantee that no one will be allowed to buy below these MSPs.

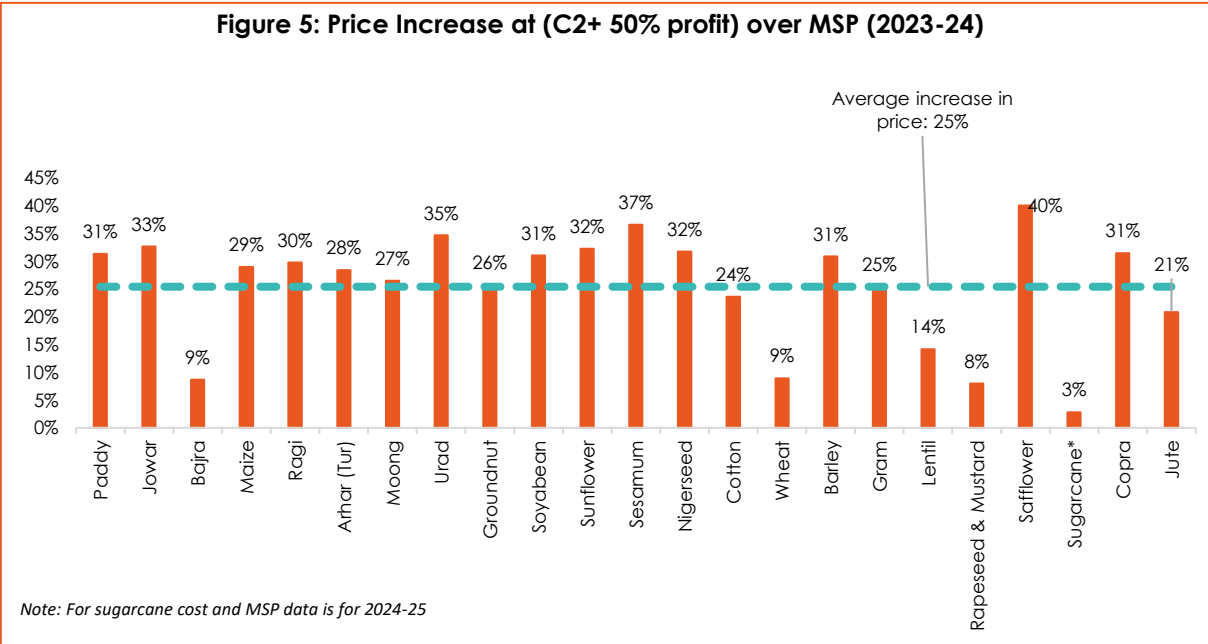
Let us discuss the likely repercussions of accepting farmers' demands on the agriculture sector as well as on the overall economy. The 23 commodities for which MSPs are announced comprised less than 28% share of the total agricultural output in 2021-22. The other sub-sectors not covered under the MSP regime have more than 72% share in agricultural output. These segments, especially poultry meat and egg (have grown on an average rate of 7.1% per year in the period from 2000-01 to 2021-22. In contrast, cereals grew at just 1.8% per annum over the same period (Figure 4). This shows that demand patterns are gradually shifting away from cereals, as revealed by recent Household Consumption Expenditure Survey (HCES) of 2022-23. Adjusting production to the

changing consumption demand pattern, requires farmers to shift towards high-value agricultural commodities. By capitalizing on sectors' experiencing rapid growth, such as horticulture, livestock, and spices, farmers can potentially unlock greater economic opportunities and mitigate the challenges associated with stagnating incomes in traditional crop sectors.

If MSPs are raised to cost C2+50%, it would require, on an average, raising MSP of 23 crops by about 25% in one go (Figure 5). This would lead to high food inflation. For many commodities, the supplies will exceed demand, as farmers will likely respond to the MSP hikes by switching to producing these crops. At the same time, traders may not come forward to buy these crops if a legally guaranteed MSP is enforced whereby buying at prices below it could lead to harassment and/or fines. In such a situation, the excess supplies will either stay unsold with farmers or government will have to buy all the excess supplies at the MSP. Many experts suggest that instead of government buying, government should give price deficiency payments. Our take on this is that it was tried in Madhya Pradesh earlier and given up in one season as the traders gamed it and lowered the market prices further. This would cost heavily to the government.



Source: MoSPI



Source: Commission for Agricultural Costs and Prices (CACP) reports

The question arises: what prompts farmers to persist in cultivating rice and wheat, especially in Punjab-Haryana belt? The answer lies in the legacy of MSP and open-ended procurement in this belt in the wake of green revolution in late

1960s. Continuing policies of 1960s when India was living from 'ship to mouth' situation, in 2024 and beyond when India has been the largest exporter of rice (22 MMT in 2022-23 accounting for 40% of global trade of rice) is simply irrational.

## New Deal for Punjab and Haryana Farmers

Punjab and Haryana farmers can gain substantially from doubling the area under high value fruits orchards (like plums, peaches, litchi, strawberries, guava, etc.) and vegetables that are suitable to their climatic conditions. And, by encouraging poultry and fishing through contract farming. Instead of banking on public procurement as in the case of rice and wheat, Government (centre and state together) should invest in marketing as well as in value addition/processing of these commodities. Promoting food parks, cold chain investments, cluster based FPOs/FIGs, etc. could very well support the diversification. They will need to be linked to processors, organized retailers, and exporters, well in advance. Market access to Gulf countries for these commodities could be the way forward. This would require major investments in cold storages and reefer vans, for exports. Government could also incentivise trade by giving some air freight subsidy, as well as consider a tax exemption to export houses through SGST refund on the export value or raw materials sourced for export business efforts. This will go a long way to augment farmers' incomes in a sustainable manner. A corpus fund, say of Rs 15,000 crores, on 50:50 basis by the Centre and the respective state governments of Punjab and Haryana, can be established to incentivise farmers for adopting these new crops, and build marketing and processing infrastructure suitable for these crops for exports from these states.

### Demand 2: MGNREGA

The protesting farmers have also asked for guaranteed 200 days of employment under MGNREGA at a wage of Rs. 700 per day, up from 100 days the present provisions assure. The MGNREGA got a budget outlay of Rs. 86,000 crores in the budget for FY25. The MGNREGA data shows that an average household is working on an average for 48.7 workdays a year at present at an average wage rate of Rs. 236.6 per day. A minimum daily wage of Rs. 700 for 200 days would require the budget outlay to be

increased to more than Rs. 10.4 lakh crores!

The higher MGNREGA wage would also push up the cost of all labour. That in turn could potentially push up the MSP, as they depend on labour costs, leading to even higher increases in the MSPs and food inflation. The burden on the budget of the additional costs on account of higher MSPs and MGNREGA outlays may not be sustainable. More importantly, as already explained above, these fiscal resources would end up going towards incentivising production of items that consumers want less and less of.

### Way Forward: New Deal for Agriculture

We discuss alternative policy options that can be beneficial for farmers without

placing any undue costs on the rest of the economy.

- 1. Diversification away from Crops towards High-Value Commodities:** Our study finds that the contribution of livestock sector in total income of the agricultural households has increased from 4% to 16% between 2002-03 and 2018-19. The poultry sector has seen a remarkable transformation from a mere backyard activity to a fully integrated and commercial industry, primarily led by private players. The introduction of institutional innovations such as contract farming and vertical integration of farm operations have helped the poultry industry become one of the fastest-growing sectors in India. Next, the fisheries sector contributed approximately 15.2% to India's agricultural exports in 2022-23, and became a substantial source of income for fishing families. Even horticulture is growing at much faster pace than cereals. Innovative production techniques, such as under controlled environment in polyhouses equipped with fertigation can augment productivity and incomes of farmers, while saving on water and fertilizers.

These findings suggest that the potential for increasing farmers' incomes lies primarily in animal husbandry and pisciculture. It is noteworthy that there is no MSP for animal husbandry or fisheries products, and the government does not engage in procurement. The market for these products is demand-driven, and most of their marketing occurs outside of the Agricultural Produce Market Committee (APMC) mandis. This trend is expected to strengthen in the future as incomes of consumers rise and dietary preferences diversify. Encouraging private sector investment in building efficient value chains through a cluster-

based approach can be an effective investment strategy. The 27% increase in allocation 2024-25 (BE) over last year's revised estimate for the Ministry of Fisheries, Animal Husbandry and Dairying, this may allow it to allocate a special package for farmers of Punjab-Haryana which will encourage them to shift away from paddy.

- 2. Improved Market Access:** Small producers, who constitute 86% of agricultural households, dominate agriculture and allied sectors and they contribute significantly to farm output and employment. However, they face market challenges typical to small size holdings. They have to contend with limited bargaining power, inadequate storage facilities, and the perishable nature of their agricultural produce. The following marketing channels can help farmers reap better returns.
  - 2.a. Contract Farming:** Since farmers may not always be able to access markets, they can rely on contract farming arrangements with business entities. These arrangements can facilitate a direct link between the market and primary producers. They assure pre-determined market demand, thereby mitigating price and production risks and uncertainties in the market, helping smallholders navigate imperfections of markets and their own asset limitations. This insulation from risk not only benefits farmers but also fosters the introduction of innovative farming techniques and skills. Contract farming arrangements for different types of crops like sugarcane, cotton, vegetables, coffee, and tea are already in use in

many parts of the country. The benefits that accrue from these contracts to farmers also include inputs, credit facilities, insurance, and cold chain infrastructure. Studies have also found that farmers returns have been higher in contract farming (Gulati et al., 2019; Das, 2022).

### **2.b. Farmers' Producers Organizations**

**(FPOs):** A well-functioning FPO enhances market access for its members by improving their bargaining power, enhancing their productivity, increasing incomes, and ultimately mitigating rural poverty. In a bid to promote FPOs, the Government has introduced a Central Sector Scheme, with the objective of establishing 10,000 new FPOs by 2027-28. By June 30, 2023, a total of 10,000 FPOs had been allocated to various Implementing Agencies (IAs), 6,319 FPOs had been successfully registered across the country (PIB, 2023). Based on SAS 2018-19 data, it was estimated that the monthly income from cultivation of member farmers was Rs. 4,808 as against Rs. 2,978 earned by non-members in 2018-19. It requires more effort from the government to bring more farmers under producer organizations to increase their bargaining power which will fetch better returns and augment their incomes.

### **2.c. The Open Network for Digital Commerce (ONDC) initiative**

led by the government aims to establish open networks for e-commerce in goods and services, fostering transparency, inclusivity,

and innovation. ONDC seeks to streamline existing e-commerce processes, reduce the barriers to entry for small businesses, and promote fair competition. In the agriculture sector, ONDC can bring transformative changes by providing farmers direct access to digital marketplaces, eliminating intermediaries, ensuring fairer prices for agricultural produce, and enhancing competitiveness for FPOs. This facilitates equal visibility to potential buyers across India, expanding market reach and profitability. Additionally, small traders, farmers, and sellers can participate on an equal footing with larger players, promoting inclusivity and fair competition while accelerating transactions, and reducing time and resource wastage.

### **2.d. Futures Market in Agriculture:**

Farmers in India encounter both price and production risks due to significant uncertainties in market prices. At the time of sowing, farmers lack visibility into the prices their produce will command post-harvest or the yield levels they can expect, leading to considerable uncertainty. In the absence of this information, they often base their sowing decisions on the previous year's price realizations, resulting in a cycle of boom and bust (typical cobweb problem). It is imperative, therefore, that cropping patterns and sowing decisions adopt a forward-looking approach rather than relying solely on historical data. India initiated futures trading in agricultural commodities more

than two decades ago (in 2003), but momentum was lost due to poor policy choices made by successive governments, especially from 2012 onwards, when futures trading was frequently disrupted by suspensions and bans. These need to be revived with liberal policy framework.

**3. Liberalise Trade Policy:** Indian farmers often lose out on opportunities for higher earnings presented by high international prices for their produce due to policies aimed at preventing exports. In times of high domestic prices, imports are incentivised for lowering prices that result in lower earnings for Indian farmers. To provide a level playing field for Indian farmers, the government should remove all curbs on selling farm produce. The most prudent policy would be liberalising the trade policy, especially on exports side so that farmers can benefit from access to lucrative foreign markets. In contrast, what the government has done recently is to ban wheat and rice exports and restricted sugar exports. Such abrupt export bans and restrictions, adversely impact farmers' prices and incomes. Rather than an outright export ban, a better solution would be to filter exports through a gradual process of minimum export prices and transparent export duties for shorter durations, if that is needed at all to protect the consumers from rising food prices (Gulati, 2022). Similar ad-hoc restrictions on the domestic front such as invoking the Essential Commodities Act (ECA), and imposing stocking limits on pulses,

create an environment of uncertainty that not only dampens trade sentiments but may also harm farmers' interest in cultivating that crop in the long run. This ECA of 1955, when India was in the grip of food shortages, needs to be repealed to create a unified national market for farmers.

**4. Incentivising workforce away from agriculture:** A positive indicator of structural transformation is the shift in employment away from the low-subsistence agricultural sector. However, sometimes, there could be a "push factor" too—since agriculture cannot sustain the workforce, job-seekers are pushed to take up any work that can give them subsistence earnings. Structural change in India is peculiar. Almost 45.8% of the working population living on only 18% of GDP cannot make them prosperous. Quite a substantial part (about 15%) of labour force needs to move out of agriculture. But how to incentivise this exit? One possible way is to link MGNREGA with development schemes of the government such as PM Awas Yojana, Nal se Jal, Swachh Bharat Mission, and Gramin Sadak Yojana for building rural infrastructure such as housing, drinking water, sanitation and rural roads at a higher pace. They can also be used for constructing agri-markets, value chains and storage facilities. Also, MGNREGA employment can be linked with environmentally sustainable activities such as groundwater recharge, soil protection, green cover, water and biodiversity conservation, sustainable food production, and mitigation of land degradation etc. This will create

remunerative and labour-intensive employment opportunities outside agriculture. Gujarat has created history in water conservation, by launching a drive for the blue revolution and constructing several check-dams, boribunds and Khet Talavadi (farm ponds) using MGNREGA labour and NGO cooperation. Investment in skill formation for new India can also play a pivotal role in a country's structural transformation.

- 5. Augmenting Total Factor Productivity in Agriculture (TFP):** TFP in agriculture is a holistic measure of a sector's growth, defined as the share of output increase with the same amount of inputs such as fertilisers, land, labour, capital, or material resources employed in production. TFP captures the effects of technological change, skills, or infrastructure, as well as the increase in efficiency with which inputs are utilized in production (USDA, 2018) (OECD/ICRIER, 2018). It is calculated as the ratio of total agricultural output to total production inputs. A higher ratio implies that resources are being used efficiently

(IFPRI, 2018). USDA estimates indicate that agricultural TFP in India increased at an average annual growth of 2.2% during 2000-21 (USDA). Investments in infrastructure, R&D and extension services are important indicators of sustainable agricultural growth (Global Harvest Initiative, 2014). In the interim Union budget 2024-25, out of the total budget expenditure of Rs. 47.6 lakh crores, the Centre has budgeted Rs. 5.5 lakh crores for welfare/subsidy schemes (including food subsidy, fertiliser subsidy, MGNREGA, PM Kisan, Fasal Bima Yojana, and Interest Subvention). At least 30% of this can be easily rationalised by making food subsidies targeted to only the most vulnerable (*Antyodaya*) and by direct transfer of food and fertilizer subsidies to relevant beneficiaries, and freeing up fertiliser prices.

These are some of the essential elements that can help form a New Package for Agriculture for journey towards Viksit Bharat@2047. We hope that the Central Government can take it up after the Parliamentary elections.







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