

## **INCREASING FARMERS' PAY IN INDIA: EXAMINING FACTORS AND GOVERNMENT POLICIES**

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DOI: 10.46609/IJSSER.2023.v08i02.011 URL: <https://doi.org/10.46609/IJSSER.2023.v08i02.011>

Received: 20 Feb. 2022 / Accepted: 28 Feb. 2023 / Published: 5 March 2023

### **ABSTRACT**

The paper focuses on the plight faced by farmers in the Indian agricultural sector and particularly those related to income. The initial parts of the paper are devoted to highlighting the scale of the problem, the composition of the Indian agricultural sector, and the policy measures introduced by the Government of India to ease the situation. Additionally, it focuses on the factors that affect farmers' pay and suggests affecting them in order to increase farmers' pay. The latter half of the paper examines exactly how those factors can be influenced and what the expected outcomes could reasonably look like. The latter half of the paper also pays attention to how non-conventional policy measures can impact farming incomes. The paper concludes by highlighting how different sectors of the government and civil society need to cooperate to achieve the goal of high income for farmers.

### **1. Introduction**

Farming plays a vital role in the Indian economy. It has given employment to 41.9 percent of the population in 2020, according to the International Labor Organization (ILO), and contributes to 17 percent of the absolute GDP (ILO, 2020).

As such, farmers' income needs to be increased for manifold reasons. Firstly, over 20 percent of the farmer population lives below the poverty line. While the Indian GDP grew by 8.7 percent, the agriculture sector and allied activities included a growth of 3.9 percent in the year 2021-2022.(Ministry of Finance, 2022).A very large proportion of farming households in most of the central and eastern states (23%–45%) live below the poverty line (BPL) - higher than the national average (22.5%). The proportion of BPL farming households (17.5%–22.5%), even in some of the so-called agriculturally progressive states, such as Gujarat, Karnataka, Maharashtra, and Tamil Nadu, is close to the national average. We have already established that agriculture plays a vital role in the Indian economy, and the Indian economy would be devastated if most of

the farmers left their jobs in order to grab other opportunities. According to the NSSO (National Sample Survey Office) survey in 2003, 40% of Indian farmers disliked farming as a profession due to its low profits, high risk, the lack of social status and would, therefore, like to leave it at the first opportunity. Further, the gap between farm and non-farm incomes has grown over the decades, from a ratio of 1:3 in the mid-1980s to 1:4.08 in the middle of the last decade and 1:3.12 in 2011–12 (Chand, 2017). The country also witnessed a huge increase in the number of suicides in the agricultural society - losses from farming, shocks in farm incomes, and low farm income were identified as the causes.

There were five main strategies implemented in India to alleviate some of the effects, but all of them were primarily focused on raising agricultural output and raising food security. The first policy (The Soil Health Enhancement) focused on increasing the productive potential of soil through concurrent attention to their physics, chemistry (macro and micro- nutrients) and microbiology. The second policy (Irrigation Water Supply Augmentation and Management) sought to improve water supply through rainwater harvesting and recharging of the aquifer should become compulsory. The third policy (Credit and insurance) emphasized the issue of farmers debt. The fourth policy (Technology), wanted to improve technology to improve agricultural products. The fifth policy (Regional differentiated) aimed to increase diversification of products in the North Western High productivity region and aimed to achieve the productivity potential in the Eastern region. As can be clearly seen, none of the above policies aimed at increasing farmers' income directly.

Before scrutinizing the most recent arrangement the public authorities have applied to multiplying farmers' pay, it is prudent to check out the patterns of the farmers' pay in the previous many years. There is insufficient data on the pay of farmers which makes it challenging to know the sufficiency, fluctuations and development in farmers pay. However, there are studies that aimed to fill the gap by planning appraisals of farmers' pay. One such review is by Chand et al. (2015) which gives appraisals of aggregate and per cultivator farm pay for the period 1983-84 to 2011-12, and distinguishes wellsprings of development in farmer's pay. The creators report that expansion in efficiency, rise in genuine homestead costs, and shift of workforce from agribusiness are the significant elements of development in farmer pay. The review states that the pay acquired from agribusiness was inadequate in keeping upwards of 53% farmers families out of neediness, who worked on less than 0.63 hectare of land holding (Chand et al., 2015). As per the NSSO Assessment Survey of Farmers in 2003 and circumstance evaluation Survey of Agricultural Household (SAS) in 2013, the normal yearly pay of a farmer's family from farmer as well as non-farm sources was Rs. 77,112 ("Farm Sector News," 2020). A little over half of all pay of a horticultural family was received from farm exercises and 40 percent was received from non-farmer sources (Chand, 2017).

The main policy that the government implemented was doubling the farmers' income. It applied this policy in 2015-2016 and the policy targeted doubling farmers income by 2022-2023. This implied that the ongoing and previously achieved rate of growth in farmers' income had to be sharply increased. To get this sharp increase, strong measures would need to be taken in order to harness all possible sources of growth inside as well as outside the agricultural sector. This would have included improvement in productivity, increase in cropping intensity, shifting cultivators from farm to non-farm occupation and other similar measures.

## **2. Background - Current Debates**

There have been many interesting debates regarding the steps and policies introduced to achieve the policy. The Indian government introduced the following laws: The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, and The Essential Commodities (Amendment) Act. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act argues for setting up a mechanism that allows the farmers to sell their farm produce outside the Agriculture Produce Market Committees (APMCs). Any license-holder trader can buy the produce from the farmers at mutually agreed prices. This trade of farm produce will be free of mandi tax imposed by the state governments. The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act allows farmers to do contract farming and market their produce freely. The Essential Commodities (Amendment) Act is an amendment to the existing Essential Commodities Act. This law now frees items such as foodgrains, pulses, edible oils and onion for trade except in extraordinary, crisis-like situations. The government had presented these laws as reforms akin to the 1991-opening of the Indian economy linking it with the globalized markets.

It had argued that the three laws open up new opportunities for the farmers so that they can earn more from their farm produces. The government had said the new laws will help to strengthen basic farm sector infrastructure through greater private investments. Successive governments have found financial constraints in investing in farm and rural infrastructure. It is argued that with food markets growing exponentially in India, private players would make agriculture profitable for the farmers. But farmers were, and still are, worried over Minimum Support Price (MSP) assurance. The MSP assurance emerged as the main sticking point in the farmers' protest. There has been an apprehension among the farmers that allowing outside-APMC trade of farm produce would lead to lesser buying by the government agencies in the approved "mandis". The protesting farmers have said the new laws would thus make the MSP system irrelevant and they would not have any assured income from their farming. Right now, the government announces a fixed MSP for around two dozen crops. However, paddy, wheat and some pulses are the ones that are procured by the government agencies at the APMC mandis. A NITI Aayog member's

claim that the target of doubling farmers' income by 2022 will not be fulfilled if the three new legislations are not implemented immediately has sparked a fresh debate. According to the farmer, the government cannot predict that the income will go up as they have no control over the private players. Farmers and farm experts termed the statement as an excuse to protect the central government — which had announced in 2017-18 its target to double farmers' income by 2022 — and asked how these laws can double their income when there is no provision of even assured Minimum Support Price (MSP) in these laws.

To increase farmer's income, we will need to look at the factors that determine farmer's income. The major sources of growth can come from inside the agricultural sector and outside the agricultural sector.

Sources of growth from inside the agricultural sector are:

- 1) Improvement in productivity
- 2) Resource use efficiency or saving in cost of production
- 3) Increase in cropping intensity
- 4) Diversification towards high value crops

Sources from outside the agricultural sector:

- 1) Shifting cultivators from farm to non-farm occupations
- 2) Improvement in terms of trade for farmers or real prices received by farmers.

So let us look how we can affect the factors for farmers' income to increase it.

### **3. Discussion**

#### **3.1 Increase in agricultural productivity**

We can increase agricultural output through land and productivity. Increasing agricultural output through land will not be possible due to rising demand for land for non-agricultural uses, and the population of India is also rising rapidly so there will be increasing demand for land. Thus, we would need to look at how to increase agricultural productivity through the production method.

Enhancing access to irrigation and technological advancement are the most potent instruments to raise agricultural productivity and production. Aggregate productivity of crops increased at a rate of 3.1 percent per year during 2000-01 to 2013-14. Assuming the same increase in input as in productivity. If this rate of growth in productivity is maintained then it will result in 16.7 percent

increase in total farm income in seven years and 25 percent increase in 10 years from the crop sector, which comprises 70 percent of total income from agriculture. The other 30 percent we get from livestock. This sector grew at a rate of 4.5 percent during 2000-01 to 2013-14. Maintaining the same growth, total farm income will increase by 10.8 percent in 7 years and 16.8 percent in 10 years.

This increase in crop and livestock taken together adds up to 27.5 per cent increase in seven years. Integrated nutrient management (INM) also increases agricultural productivity. The practice of INM includes all possible sources of plant nutrients to optimize nutrient inputs, spatial and temporal matching of the soil nutrient supply with crop demand and reducing nutrient losses while improving crop yield. Interaction of agricultural inputs leads to increases in crop productivity while substantially reducing nutrient losses and GHG emissions, judicious application of mineral and organic fertilization with higher resource-use efficiency, enhancing the soil-plant-microbes-environmental sustainability. Balanced use of organic manures will be of fundamental importance for crop productivity and environmental concerns. This provides a “win-win” opportunity to simultaneously increase crop productivity and agricultural sustainability.

### **3. 2 Improvement in total factors productivity**

Total Factor Productivity (TFP) is the portion of output not explained by the number of inputs used in production. It is an important source of output growth which directly contributes to cost saving and increase in income. TFP growth represents the effect of technological change, skill, infrastructure, etc. Resource misallocation can lower aggregate total factor productivity (TFP). Microdata on manufacturing establishments is used to quantify the potential extent of misallocation in India versus the United States. We measure sizable gaps in marginal products of labor and capital across plants within narrowly defined industries, in China and India, compared with the United States. When capital and labor are hypothetically reallocated to equalize marginal products to the extent observed in the United States, manufacturing TFP gains of 40%–60% were calculated in India (Hsieh & Klenow, 2009). According to Fuglie and Rada(2015), the agriculture sector in India has witnessed a 2.62 percent growth in total factor productivity. If it maintains the rate then over the period 2023-2030, average annual growth would end up being a staggering 5 ppts higher than the baseline scenario.

### **3.3 Diversification towards high value crops**

Enhancement towards high worth yields can be an immense chance to work on the farmers' pay. The staple yields - for example, oats, oilseeds, and heartbeats - possess 77% of the aggregate or gross trimmed region but just add to 41% of the complete result. Shockingly, a similar worth was

contributed by HVCs (fruits, vegetables, fiber sauce, flavor, and sugarcane). Normal efficiency of HVCs after adapting to editing power variety was assessed as Rs. 1,41,777 for each hectare when contrasted with Rs. 41,169 for staple yields. With this tremendous distinction in efficiency, moving one hectare region from staple harvests to business HVC can possibly increment gross returns up to Rs. 1,01,068. On the off chance that the pattern from the past persists, the farmers' pay can increase by 5% by 2022-2023 (Chand, 2017).

Additionally, there is scope to raise farmers' pay by broadening other partnered endeavors like ranger service as opposed to relying principally upon crop development. India meets 40% of its non-fuel lumber necessity from the import of wood and wood items. India imports wood and wood items worth more than Rs. 33 thousand crores, though, a great many hectares of private land stay infertile (Chand, 2017). Different legitimate limitations on felling trees and setting up of lumber industry and travel licenses for advertising of wood are significant obstructions to raising trees on confidential grounds.

### **3.4 Increase in crop intensity**

India has two primary harvest developing seasons - kharif and rabi - which make it conceivable to develop two yields a year on a similar land parcel. With accessibility of water systems and new innovations, it has become conceivable to raise brief term crops after the principal kharif and fundamental rabi season. Land use insights show that the subsequent yield is taken exclusively on 38.9 percent of net planted region. This suggests that excess of 60% agrarian land in the nation stays unused for around 50% of the useful period. In most of the states, the subsequent harvest is short of one fourth of new planted regions. Absence of admittance to water to meet yield necessities is supposed to be the primary justification for low harvest power. In any case, shockingly, crop power on flooded regions, assessed as proportion of gross watered region to net flooded region, is viewed as 140 which is not entirely different from crop force under downpour taken care of. The justification for this could be that the water system isn't available throughout the year (Chand, 2017).

Taking the second crop on the same piece of land is a significant source to address land constraints in the country and to raise income per unit of land.

### **3.5 Improving terms of trade for farmers**

When costs by farmers for rural produce rise quicker than CPIAL, it adds to the genuine pay, even without an expansion in the volume of result. During 2011-2012 to 2015-16, farmers' pay got a serious blow on two counts. One, development in esteem included agriculture at consistent costs was extremely low. Two, the expansion in CPIAL was 50% higher than the expansion in farmer door costs of farming produce. A few measures have been started by GOI to change what

is happening. A significant measure designated at better cost acknowledgment by the farmers is e-NAM. The Center is additionally convincing states to embrace different market changes. In addition to other things, these changes mean to diminish center men, modernize the esteem chain, draw in current confidential interests in agri-market and, hence, guarantee more ideal arrangement for the farmers (Chand, 2017).

There is some proof that the impact of web-based showcasing by farmers utilizing the Unified Market Platform made by ReMS in Karnataka shows large advantages to the farmers. The Rems drive is like the eNAM drive of the public authority of India. The UMP in Karnataka shows enormous advantages to the farmers. The impact of UMP on costs incurred by the farmers is discussed in the table given underneath which thinks about the cost increment between every year 2013-2014, which is the year going before UMP. After presentation of web-based exchanging and UMP modular costs mandis in Karnataka saw a much higher increment than the expansion in discount costs of a similar ware in the country. The expansion in genuine terms changes from 1 percent to 43 percent. The typical increment for the 10 products for which information is accessible was 38 percent in ostensible terms and 13 percent in genuine terms (Chand, 2017).

The Karnataka experience demonstrates the way that little changes in the means of promotion can have a major effect on the costs incurred by farmers. The two changes, to be specific, internet exchanging and opening business sectors to brokers outside the mandi, have had a massive effect. Full execution of market changes and bringing together a public agrarian market has a much bigger extension to raise costs incurred by farmers and thereby, their pay.

### **3.6 Shifting cultivators to non-farm and subsidiary activities**

In rural regions, agribusiness area draws in 64% of the complete labor force and contributes 39% of the all-out country net homegrown item. This shows over-dependance of the labor force on agribusiness and with huge underemployment. This likewise uncovers a huge contrast in per specialist efficiency among farming and non-agriculture areas. Non-farmer areas give 2.76 times more work than agribusiness areas in rural regions (Chand, 2017).

Pay of farmers can be further developed significantly by moving the labor force away from agribusiness. As a matter of fact, a few farmers have begun creating some distance from the agriculture area and many are searching for reasonable chances to leave cultivating. As per NSSO, labor force in the agriculture area in rural regions declined by around 34 million between 2004-05 and 2011-12, showing a yearly decay pace of 20.4 percent. If the quantity of cultivators continues to decline at a similar rate as experienced during 2004-05 to 2011-12, it will whittle

down by 13.4 percent in a range of 7 years. This infers that accessible farmer pay will be dispersed among 13.4 percent less farmers (Chand, 2017).

#### **4. Government strategies to increase farmer income**

##### **4.1 Development initiatives**

Some new advancement drives of the local government, planning to raise yield and decrease cost, include Pradhan Mantri Krishi Sinchai Yojana, soil wellbeing card, and Prampragat Krishi Vikas Yojana. One more significant drive that gives health care coverage against harvest and pay misfortune is Pradhan Mantri Fasal Bimal Yojana. It will empower interest in cultivating. Interlinking of waterways is one more solid drive with high potential to raise result and homestead salaries.

Nature of seed and ideal utilization of manures are significant mainstays of development in efficiency. It is additionally seen that the improved stock of the agribusiness area is exceptionally low in the vast majority of the states. These three sources of info ought to be elevated properly to raise results and farmers pay.

Further, public interests in and for farming have stayed low as just 2.76 percent of GDP agribusiness and partnered areas at current costs is spent for framework advancement in agriculture. This should be expanded to 4 percent as suggested by powerful committees (Government of India, 2007).

##### **4.2 Technology and innovations**

Sustainable development in efficiency and farmer pay requires a change in outlook from input serious innovations, which have ruled Indian farming since the beginning of green upheaval. Leap forwards in essential and other current sciences offer voluminous open doors for creating extraordinary advances for agribusiness. This has not been occurring for various reasons. Further, the difficulties in agriculture are turning out to be more imposing. Tending to these difficulties requires an energetic, responsive, and internationally cutthroat examination framework furnished with best-in-class information and logical labor supply of top quality outfitted with sufficient assets. While public area research establishments have significant qualities, they additionally face serious difficulties in addressing future necessities of Indian agriculture. Assets have been meagerly spread on multiplying rural colleges and organizations around the country with the main exploration establishments, at the same time confronting an extreme asset crunch.

Genome altering has arisen as an alternative to transgenic innovation. It includes designing of wanted plant characteristics by altering endogenous qualities, not at all like GM innovation which includes the transfer of qualities starting with one animal category then onto the next. Such genome change can be communicated to the future and can become heritable. Public Research and development organizations ought to be upheld to foster limits in such state-of-the-art areas of advances which seem to have extraordinary potential.

Proof about the extent of agronomic innovations like accuracy cultivating to significantly raise creation and pay of farmers is emerging. Also, current hardware, for example, laser land leveler, accuracy seeder and grower, and practices like SRI, direct cultivated rice, zero culturing, raised bed ranch and edge estate permit profoundly affect cultivating. These innovations are created by the public and their attractiveness is extremely poor. They require solid augmentation for their reception by farmers. The accentuation ought to be on illuminating farmers regarding the open doors these advances offer, further developing admittance to credit and establishing an empowering strategy climate for their reception (Chand, 2017).

#### **4.3 Policies**

Strategies influence creation, value acknowledgment and farmer's pay in countless ways. The association government got a progression of changes to the agriculture area with hardly a pause after starting in 2002. These included (a) evacuation of (Permitting Necessities, Stock Cutoff points and Development and Limitations) on Indicated Staples Request, 2002 and 2003 - according to this request, wheat, paddy/rice, coarse grains, sugar, palatable oilseeds and edible oils, beats, gur, wheat items and hydrogenated vegetable oil or vanaspati were taken out from the rundown of Fundamental Products Act(1955) and did not need a grant or permit for their exchange, stockpiling and development, (b) endlessly milk item Request of 2002 altered MMPO of 1992 and expulsion of limitations on setting up new limits in milk handling and to get rid of the ideas of milkshed, and (c) expulsion of forbiddance on fates exchanging any ware, in 2003. This was trailed by the transition to acquire changes in horticultural advertising. Changes made in the ECA in 2002-2003 were turned around in 2006-2007 (Chand, 2017).

It arises that without a trace of market changes, the farming development stays low and the area could not keep up with development in the non-agriculture area. Opening agriculture and evacuation of different limitations on advertising, land rent and raising of wood species on ranch land can empower farmers to get more exorbitant costs for their produce and improve financial exercises - the two of which are important for farmers' pay.

#### **4.4 Institutions**

Indian agriculture is overwhelmed by peripheral and little farmers, who experience serious impediments with regards to scale. Little homestead size deters numerous farmers to go for broadening of foods grown from the ground chiefly considering the cost risk and uneconomic part for advertising. Little estimated farmers are likewise distraught regarding bartering power in different exchanges in the information and result markets. The debilitations can be overwhelmed by arranging farmers under some institutional component like the homestead maker association. There are examples of overcoming adversity of expansion underway and better routers from the market through aggregate activity through some sort of gathering activity or organization(Gupta 2015). Whatever associations have shown extremely great advantages to little farmers. Ladies, ancestral farmers, even in remote or impeded regions. Till June 2016, SFAC has advanced 510 FPO's with enrollment of 5.71 needed farmers in 28 conditions of the country. A few state legislatures and NABARD are likewise advancing FPOs is tiny, and it should be extended to empower farmers to diminish exchange costs, access innovation, raise bartering power and coordinate with esteem chains (Chand, 2017).

## **5. Conclusion**

In conclusion, there are several strategies that can be implemented to increase farmers' income. These include diversifying crop production, implementing sustainable farming practices, and utilizing new technologies such as precision agriculture. Additionally, developing value-added products and exploring new markets can also help farmers increase their income. Furthermore, increasing access to credit and financial services in addition to providing training and education to farmers on best practices can also have a positive impact on farmers' income. To achieve these goals, it is important for governments, private sector, and other stakeholders to work together to support farmers and create an enabling environment for their success.

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