

Why challenges of doubling farmers' income by 2022 are acceptable in context of the present Indian agricultural scenario

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The earlier strategies for agricultural development in our country focused primarily on enhancing agricultural production and food security. The policies largely emphasized on increase in agricultural productivity through latest technologies and cultivars, and augmented use of quality seeds, agrochemicals and plant nutrients. Those approaches transformed India not only as food self-sufficient at the national level, but also as one of the leading food-exporting countries at the global level; though it did not explicitly recognize the need to increase farmers' income and never identified any direct means to support the welfare of farmers. Past experiences show that although growth in production enhances farmers' income in some cases, in most others, it does not enhance with output. The net result is the stagnating farmers' income, which is evident from the increasing poverty among rural households. The National Sample Survey Office (NSSO) survey data on consumption expenditure for the year 2011–12 revealed that one-fifth of rural households whose main occupation is agriculture fall below poverty line. Furthermore, farming occupation fetched income which is less than non-farm workers. This discrepancy is large and needs a policy strategy to enhance farmers' income at a profitable rate. It could be achieved in two ways, i.e. increase in producers' share in consumers' rupees, and reduction in the number of farmers to share their total income.

Reducing profitability and wider deteriorating discrepancy between the income of a farmer and a non-farm worker are important factors for the emergence of agrarian distress. Our country also witnessed a large number of farmer suicides during the period 1995–2005, mainly because of huge loss from farm business, share in consumers' rupee and low farm income. This phase also corresponds to the slowdown in agricultural output growth rate¹. The highly fluctuating and low farm income is the key reason behind the detrimental effects on farm investment, and ultimately leads to the rural population, particularly

the younger generation, to leave agriculture.

Realizing the need to focus on the plight of farmers, the Government of India changed the name of the Ministry of Agriculture to Ministry of Agriculture and Farmers' Welfare in 2015. It is oblivious that revenue earned by a farmer from agriculture is important to address agrarian distress² and endorse farmers' welfare. In this background, the target set by the Prime Minister Narendra Modi to double farmers' income by 2022 is central to promote farmers' income, establishing parity between income of farmers and non-farm workers. Hence, to improve the economic condition of Indian farmers, the Prime Minister has implemented a seven-step path to move forward: (1) Big focus on irrigation with large budgets, with the aim of 'per drop, more crop'. (2) Provision of quality seeds and nutrients based on soil health of each field. (3) Large investments in warehousing and cold chains to prevent post-harvest crop losses. (4) Promotion of value addition through food processing. (5) Creation of a national farm market and e-platform. (6) The Pradhan Mantri Fasal Bima Yojana (PMFBY) to reduce the possible risks. (7) Focus on agri-allied activities.

The concept and time-frame

According to some experts, the aim of doubling farmers' income by 2022 seems unrealistic and impossible³. Few experts calculated that the agriculture sector needs an annual growth rate of 14.86% for five consecutive years to double farmers' income and also mentioned that this growth level has not been accomplished even for a single year in the history of Indian agriculture. It seems that critics and sceptics focused more on five years and ignored substantive aspects of the matter. Some of the substantive points are: (i) what is the baseline period for which farmers' income needs to be doubled; (ii) what has to be doubled – output, value-added products from raw materials or net income of farmers from

agricultural activities; (iii) whether nominal or real income needs to be doubled, and (iv) whether targeted income includes only that derived from farming or does it also include income generation from subsidiary enterprises.

So, it is important to clarify what has to be doubled – is it farmers' income, or farm output or total income of farm families, or the GDP of agricultural sector? Farmers' income would rise at a much higher rate if input prices, technology, labour use, wages, etc. could result in per unit cost savings. The other important source of boost to farmers' income is the increase in relative prices of agricultural products compared to prices of non-farm products. Previous trends of farmers' income have shown a considerable difference between output growth and farmers' income growth. Farm output at constant prices increased by 63% during 2004–05 and 2011–12 (ref. 2). Besides, in the mentioned period, farm output became 2.65 times more while farmers' income tripled.

It is obvious that if inflation in farm prices is high, farmers' income in nominal terms will maximize within a short period of time. In the past 30 years, farmers' income at nominal prices nearly doubled twice within five years, once in 1987–88 to 1992–93 and 2004–05 to 2009–10 (ref. 4). Increase in agricultural prices results in enhancement in increase in real farmers' income. A five-point strategy is suggested here to double farmers' income in India.

Strategy for improving farmers' income

Policies

Government policies play an important role in input prices, price realization and farmers' income in various ways. These reforms include liberalization, deregulations, and withdrawal of excess control which produced favourable macro-environment for corporate sector involvement in economy. The MSP regime

in India has been a subject of heated debate in recent years. Since the regime favours cultivation of wheat, rice and sugarcane, not only has it led to reduction in the area under acreage of other crops like pulses, oilseeds and coarse grains, but has also led to distortion in cropping patterns. So MSP needs to be increased and inclusion of more crops under it is required. Direct marketing, value-chain management, supply-chain management, crop insurance against disease-pest infestation and post-harvest loss management during storage are necessary. Subsidies on farm inputs are needed for farmers' betterment. The three most important input subsidies for raising farm income are fertilizer subsidy, irrigation subsidy and power subsidy. A fourth indirect subsidy is credit; an interest subsidy on farm loan availed from various financial institutions.

Institutions

Marginal and small farmers who constitute more than 85% of Indian farming⁴, suffer from serious disadvantage of scale. Small farm size is not profitable for diversification with vegetables and fruits due to price risk and uneconomic marketing. Marginal farmers are disadvantaged due to low bargaining power in both input and output markets. These problems can be solved by organizing farmers in institutional structures like Farmer Producer Organizations (FPOs) and Farmer Producer Company (FPC). Collective action by farmers working through organized institutions can be successful in this situation. It has given credible evidence of enhancing farmers' income through integration with value chain⁵. Some such organizations show promising benefits to small farmers, women and tribal farmers even in disadvantaged areas. Small Farmers Agribusiness Consortium (SFAC) has set up 510 FPOs with 5.71 lakh farmers in 28 states of India. Other organizations like NABARD and state governments are also promoting FPOs. The number and networks of FPOs are limited and they need to be widened to facilitate farmers to reduce transaction costs, increase bargaining power, affordable technology and integration with supply and value chain.

Improvement in total factor productivity

Increase in total factor productivity (TFP) is the only source of output growth which directly contributes to cost-saving and thus enhances income generation. TFP accounts for effect in output growth relative to growth in total inputs used in production and influences technological change, skill, infrastructure, etc. which are not counted as production inputs. Increase in TFP also represents increased efficiency with which inputs are utilized in production. Agriculture sector in our country has witnessed 2.62% increase in TFP during 2004–2012 (ref. 6). A recent study explored TFP taking into consideration input used in agriculture, and reported similar findings⁷. The implication of 2.62% annual growth in TFP is that farmers' income will also increase at the same rate. If it increases at the same rate after 2015–16, it will lead to 26.3% enhancement in farmers' income by 2022–23.

Potential of secondary agriculture

Secondary agriculture is considered as a sunshine sector for Indian economy, due to its enormous unexploited potential. The drive for expansion of secondary agriculture is mainly due to consumers' demand for value-added goods like convenience food, ready-to-eat and functional food, ready-to-serve and various nutri-foods in both global and international markets. This can be favoured by the growth of organized retail which makes the processed food easily available to consumers. Thus, demand-side factors are key drivers for establishing market opportunities for end-products of primary agriculture through the expansion of secondary sector.

Diversification towards high-value crops

Cultivating high-value crops (HVCs) has great potential to enhance farmers' income. Major crops like cereals, pulses and oilseeds occupy 77% of gross cropped area (GCA), which contributes 41% output to the crop sector. However, nearly the same value of output was contributed by HVCs (fruits, vegetables, fibres, condiments, spices and sugarcane), but only occupying 19% of GCA

in 2013–14. In view of this differential productivity, changing 1 ha area from staple food grain to HVCs has a huge potential to enhance gross returns. Advances in genetic engineering can accelerate the productivity of HVCs and ultimately lead to sustainable growth of farmers⁸.

Thus there are several opportunities to enhance farmers' income by diversifying towards forestry crops rather than solely depending upon crop cultivation. India imports wood and wood products from other countries to fulfil 40% of non-fuel timber requirements. Annually, India spends more than 33,000 crores on wood and wood products, whereas 1000 ha of land is barren in the country. Hence, for doubling farmers' income we need to go for unexplored enterprise choices which have good market demand and suited to locality.

1. Chand, R. and Parappurathu, S., *Econ. Polit. Wkly*, 2013, 47(26), 55–63.
2. Chand, R., In Proceedings of the 23rd Dr B. P. Pal Memorial Lecture, Indian Agricultural Research Institute, New Delhi, 2016.
3. Gulati, A. and Sweta Saini, In Proceedings of Foundation Seminar on Doubling Farmers' Income by National Bank for Agriculture and Rural Development, Vigyan Bhavan, New Delhi, 12 July 2016.
4. Department of Agriculture and Cooperation (DAC) Report, Ministry of Agriculture and Farmers' Welfare; <http://agricoop.gov.in/sites/default/files/DFI%20Volume%202.pdf>
5. SFAC, Krishi Sutra 2: Success Stories of Farmers' Producers Organizations, Small Farmers Agri-business Consortium, Ministry of Agriculture, Government of India, New Delhi, 2013; [http://sfacindia.com/PDFs/Krishi-Sutra\(Version2\).pdf](http://sfacindia.com/PDFs/Krishi-Sutra(Version2).pdf)
6. Wang, L. *et al.*, Economic research report: United States Department of Agricultural Economic Research Service, 2015; <https://www.ers.usda.gov/data-products/international-agricultural-productivity.aspx>
7. NIAP Annual Report, Indian Council of Agricultural Research, New Delhi, 2016, pp. 7–19; http://www.ncap.res.in/upload_files/annual_report/2016-17.pdf
8. Padmanaban, G., *Curr. Sci.*, 2018, 114(12), 2432–2433.

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