Abstract

Farmers have been performing agriculture and allied activities since the dawn of human civilization. The agriculture industries rely heavily on the hard work and dedication of the farmers to provide food and other resources to the entire population. Despite, their vital role many farmers struggle to make ends meet due to low revenue of farm produce. The paper addresses the current nature of Indian agriculture, the change in the pattern variables governing them, and the challenges faced by Indian farmers at large. Doubling farmer's income is necessary to address these challenges and to ensure sustainable agriculture. Furthermore, it can help in improving their livelihoods and well-being by enabling them to meet their basic needs. The researcher's focus will be towards generating substantial returns for the farmers. A thorough exposition will also be on the welfare approach and how the government's decisive role in policymaking will go to lengths to protect the interests of the farmers. In addition to these, a discussion of the novel techniques will also find a place in the paper. The paper will eventually end on a note providing a sociological analysis of how the improved, innovative technologies have are harbinger of new era for Indian agriculture in general and farmers in particular.

Key Words: Doubling Income, Government Policies, Novel Techniques, Sociological Analysis.

Introduction

Agriculture has been a crucial aspect of human civilization since the dawn of time. Over 58% of the rural households depend on agriculture as their principal means of livelihood (Wagh *et al.*, 2016). In the early days, agriculture was mostly subsistence based, with farmers growing crops for their own consumption. However, as civilizations grew, agriculture became more specialized, with farmers growing crops for trade and commerce. Today, agriculture is a highly specialized industry, with farmers using high technologies and scientific knowledge to produce more food with few resources.

India has a diverse economy, with agriculture being one of the key sectors. In fact, agriculture accounts for approximately 18.3% of India areGDP and employs around 50% of the workforce (Singh, 2023). However, the Indian agriculture system has been subject to several vagaries and challenges, which have hampered the growth and development of the sector. These vagaries include unpredictable weather conditions, the high costs of agricultural inputs, inadequate infrastructure, low productivity and market volatility. Despite all the challenges, the Indian agricultural system has been able to sustainably produce enough food to feed its entire population.

Despite its importance, many farmers still struggle to make a decent living from their work. Official recognition of the distress and the agrarian crisis came in the form of a NSSO (National Sample Survey Office) survey in 2003, reported that 40% of Indian farmers despise farming as a profession due to lower profits, high risk, and the low social status and therefore, would like to leave it at the first opportunity (Agarwal and Agrawal 2017). The condition of farmers in Indian agriculture system has been a matter of concern for a long time. Farmers are facing several challenges such as:

A. One of the most significant issue that has beset farmers throughout history is the exploitation they face at the hands of money lenders. Moneylenders, often operating outside the formal banking system, offer loans to farmers, these loans often comes with exorbitant interest rates, and unfavourable repayment terms, leaving many farmers trapped in cycle of debt.

- B. Another significant factor contributing to the poor condition of farmer is the issue of market access. Farmers face several challenges in selling their produce, as they may be located in remote areas or lack the infrastructure to transport their crops to the market, this lead to a situation where farmers are forced to sell their produce at low prices, which makes it difficult for them to earn a decent income.
- C. Further, another reason for declining conditions of farmers is debt and loan defaults. A significant number of farmers in India depend on loans to invest in their farms, but they often face difficulties in repaying the loans due to low crop yield or market price fluctuations. This lead to cycle of debt and loan defaults, which can be devastating for farmers.
- D. In line withthis, government policies have also played a significant role in the decline of farmer's conditions. Agriculture policies in India have traditionally focused on providing subsidies to the farmers rather than improving the market access. This has resulted in a situation where farmers look out for government support and are unable to compete in the global market.

These issues not only affect the livelihood of individual farmers but also have broader implications for food security and rural development and at the same time also address the loopholes in Indian agricultural system.

Towards doubling the farmer's income in India:

India's agriculture system is a diverse and complex one, with a wide range of crops being grown cross various regions of the country. This diversity not only ensures food security but also create job opportunities for millions of people engaged in the agriculture sector. India can be self-reliant even if farmer's export their crop production. Exporting the farm produce can potentially increase farmer's income by accessing new markets and getting high price for their products. Here are a few ways this can be achieved with the help of government support:

- **A.** Identify the high value crops and meeting the quality standards: Farmers can identify crops that are in high demand in international markets. This will help them to grow crops that have a higher value and can fetch better prices in the export market. Further exporting requires meeting specific quality standards such as packaging, labelling and certifications. Farmers can invest in upgrading their farming practices which can help to increase the value of their products in export market.
- **B.** Interconnecting the supply chain with the help of buyers: an interconnected supply chain is essential for ensuring the efficient and effective movement of the products from the farm to the export market. A holistic interlinkage between supply chain by involving farmers at the base level can definitely lead to incremental results.
- C. Cold house chain management: is essential to prevent spoilage by preserving quality. Food processing is crucial for obtaining raw materials and creating jobs in rural areas. Rural areas' industrial output has grown very quickly in recent years, but employment growth has only been around 1%. The reason is that the type of industry that is expanding quickly does not require a lot of labour, whereas the employment-intensive industry (food processing) is expanding at a very slow rate (about 3 per cent per year) (Chand, 2017).
- **D.** Relaxation in export rules and easy paperwork- Integrated Seed Management and Usage of New Technologies- The usage of the newer forms of technology available to the farmers has to be the cornerstone of increasing farmers' income. For ensuring the availability of quality seeds and planting materials, our focus has to be on increased varietal replacement, enhanced seed replacement rate, maintaining the quality of seed, use of tissue culture production for

- planting material, usage of GM and hybrid seeds for enhanced productivity and creation of sustainable seed production and distribution System (Sandhu & Sharma, 2017).
- **E.** Non-Reliance on the Informal Credit System- The income flowing in the hands of the farmers is majorly gone with payment of the past dues and loans taken up from local moneylenders. The farmers in India at large are facing this structural problem to tackle with this menace of non-institutional lending. A shift away from the conventional farming practices towards newer forms has given us substantial results which encourage farmers and takes them out of the credit cycle. One such example was the case study on non-conventional organic farming done in Madhya Pradesh. The study highlighted that post the introduction of organic farming in Madhya Pradesh, the liabilities in the form of loans reduced as much as by 80 percent with significant increase in the assetownership(Hoop, McPike, Vasudevan, Holla, & Taneja, 2018).

Sociological analysis:

In an agrarian society, farmers rely heavily on their crops and livestock's for income. Over the years the traditional farm practices have evolved to modern farming practices (such as integrated pest management, drip irrigation etc.), which have brought about significant improvements in crop yields. These advancements have not only contributed to the growth of the agriculture sector but have also improved the livelihood of the farmers. By implementing modern farming practices, farmers have access to better yields, high quality crops and reduced labor costs allowing them to achieve economic stability and improve their standard of living. Doubling farmers' income cannot just be attained with the high yielding seeds which show an incremental increase in output but also decreasing the overhead costs that farmers had to bear. The 2017 Government of India report on Production Enhancement through Productivity Gains put forth that market inputs, farming practices overall and true value realisation of the crops can definitely impact the socio-economic status of farmers and the country at large (GoI, 2017).

Moreover, high income levels enable farmers to improve their quality of life in following ways:

- A. Better healthcare access: Healthcare is not always equally accessible to all the individuals. In the context of farming communities, high income farmers can have better access to healthcare than others, leading to improved quality of life and better social mobility. In the seminal work done in the state of Gujarat, it was seen that the net profit for the farmers after shifting to Organic Farming increased by 25 per cent which made farmers to access better health facilities (Dhandhalya, Shiyani, & Viswadia, 2007).
- B. Quality education for their children: with increased income, farmers can afford to send their children to better schools. This can help to break the cycle of poverty and improve their overall well-being, leading to greater confidence and self-reliance.
- C. Gaining the self-confidence of the farmers: When farmers have steady and increased income they become financially more secure. This financial security can help them to invest in their farms, improve their agricultural practices, and purchase better equipment, which can add on to higher yield and further increase their income. This sense of security can also help farmers to feel more confident in making decisions related to their farms and livelihoods

Overall increase in farmer's income can have a positive impact on their socio-economic status. By taking a multi-faceted approach to increasing income, farmers can not only improve their livelihood but also contribute to the development and growth of their communities.

Holistic analysis of various government policies towards doubling farmer's income:

The initiative taken by the government for doubling farmer's income has been a meritorious step towards improving the livelihood of farmers in India. The government has launched several schemes and programmes such as:

- A. E-Nam (National Agricultural Market for Agri-Business) The e-NAM initiative is aimed at creating a unified national market for agricultural produce. This scheme help farmers to access a large market and sell their produce at better prices. It also helps to reduce the gap between farm gate prices and retail prices, which benefits both the farmers as well as consumers. Provided that the conditions are met by states, the government's plan to establish the National Agricultural Market (NAM) e-platform for farmers can change the game by removing interstate barriers to transferring farm products. The state's Agricultural Product Marketing Committee Act (APMC) Acts needs to be amended, and farmers need physical logistic support so they can move their commodities. These are the two most crucial criteria. The opportunity exists for e-NAM to transform conventional Indian agriculture into a forprofit business. But, this will only be achieved with additional infrastructure upgrades, simple credit disbursement, and diligent implementation and inspection (Raghuvashi, 2017).
- B. PradhanMantriFasalBimaYojana(PMFBY)- The scheme focuses on providing crop insurance to farmers in case of crop loss due to natural calamities, pests or diseases. This scheme helps to safeguard the income of farmers and reduces the risks associated with farming. The role of the credit agencies such as NABARD and cooperative banks is crucial while discussing the particular scheme. There is a growing consensus that PMFBY would be a game changer with respect to the farm distress and providing much needed impetus to the farmers (Das, 2017).
- C. PradhanMantriKisanSamman Nidhi is a cash transfer scheme that provides financial assistance to small and marginal farmers. This scheme helps to augment the income of farmers and provide them with a cushion against income shocks.
- D. PradhanMantriKrishiSinchayeeYojana (PMKSY) The farmer's position in the agrarian society in particular has gone through momentous shifts. The "PradhanMantriKrishiSinchayeeYojana" scheme was introduced with the goal of improving water use efficiency "More crop per drop" and expanding irrigation coverage under "HarKhetkoPani" in a targeted manner with end-to-end solutions on source creation, distribution, management, field application, and extension activities.

Conclusion: The strong foundation of agricultural growth is rightly said to be the stepping stone towards prosperity for any nation. For a country like India, the need for a rock-solid agricultural sector is even more crucial keeping in mind that around 60 per cent of our population in involved in this segment. The case for the betterment of farmers makes a case even more because of the well-known fact that farmers won't be able to produce while incurring losses. The doubling of income by trying and testing newer forms of technologies is crucial for the entire Indian agriculture ecosystem. The interrelated gains while aligning traditional farming with animal husbandry and related enterprises have shown one way through which the abysmal condition of farmers can be addressed.

There are certain bottlenecks and challenges for sure but having a farmer-centric policy in play can be a game changer for India agriculture in general and farmers in particular in the near future. The time has come to launch a new Green Revolution but this time with the futuristic imagination of strengthening the farmers and thus solidifying the nation.

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