

# An Overview on Concerns of Agriculture in India

Dr. Shiva Sharma, Das, Priyank Bharti,  
Shobhit Institute of Engineering and Technology (Deemed to be University), Meerut  
Email Id- [shiva@shobhituniversity.ac.in](mailto:shiva@shobhituniversity.ac.in), [priyank.bharati@shobhituniversity.ac.in](mailto:priyank.bharati@shobhituniversity.ac.in)

**ABSTRACT:** *One of the most pressing problems in the agricultural industry today is the loss of land owing to population growth. Agricultural land is being transformed into industrial zones, which will become a significant issue in the future since land loss affects agriculture product production. Farmers confront a number of issues, including water supply instability, a lack of compensation, land holding fragmentation, and related infrastructure. The author of this review article addressed agriculture's problems and goals, as well as the main obstacles farmers confront during harvesting. By the conclusion of the century of greatest agricultural development, the farmer's dilemma had become a major problem. Soil degradation, natural whims, overproduction of basic crops, and a loss in self-sufficiency, as well as a lack of adequate legal security In the future, there will be many options for overcoming these obstacles in order to gradually address significant agricultural problems.*

**KEYWORDS:** *Agriculture, Challenges, Food, Issues, Priorities.*

## INTRODUCTION

Despite the fact that agriculture's proportion of the Indian economy has progressively declined to less than 15% due to the strong growth rates of the industries and service sector, the service sector's importance in the country's economic and social fabric verve far beyond these statistics. To begin with, almost three-quarters of Indian households rely on farm income. Second, the bulk of India's impoverished live in rural areas. Third, India's food security is reliant on expanding cereal crop production and increasing fruit, milk, and vegetable production to meet the need of a growing population with rising incomes [1]–[3].

India is the world's most important agricultural powerhouse. It is the world's biggest producer of milk, spices, and pulses, as well as possessing the world's largest cow herd (buffaloes) and the world's largest cotton, wheat, and rice growing area. Wheat, rice, cotton, farmed fish, sugarcane, sheep and goat meat, vegetables, tea, and fruit are among the main exports of the nation. In the area, there are 195 million hectares under agriculture, with 63 percent (approximately 125 million) being irrigated and 37 percent being rained (70m). As a result, India's woods cover 65 million hectares. Figure 1 illustrates the agriculture activities performed in India.



**Figure 1: Illustrates the agriculture activities performed in India [4].**

### Challenges:

The following three agricultural issues are critical to India's full improvement and growth of rural welfare:

- *Raising Agricultural Productivity per Unit of Land:*

Because almost all arable land is farmed, increasing productivity per unit of land will be the primary engine of agricultural growth. Water is also in short supply, and irrigation water has to compete with increasing industrial and urban needs. Increased yields, a shift to high-value crops, and the expansion of the value chain to reduce marketing costs are all measures that must be taken to boost production [5].

- *Reducing Rural Poverty:*

Rural poverty refers to scarcity in rural areas, including characteristics of the rural economy, rural society, and political institutions that have contributed to the poverty that has developed there. In this context, rural poverty is often discussed in conjunction with spatial inequality, which refers to the difference between urban and rural regions. Furthermore, there are substantial geographical differences: the bulk of India's impoverished population live in rain-fed areas or on the Eastern Indo-Gangetic plain. It's not simple to get in touch with such people. Despite improvements, the percentage of rural residents classified as poor dropped from over 40% in the earlier 1990s to around 30% by the middle of the 2000s (roughly 1 percent per year). As a result, there is an urgent need to reduce rural poverty.

- *Agricultural Growth Responds to the Food Security Needs:*

During India's Green Revolution in the 1970s, a rapid rise in food enabled the nation to achieve food-grain self-sufficiency and avoid famine. In the late 1970s and early 1980s, farming techniques expanded the use of rural labor, which, when coupled with decreased food costs, improved rural earnings and reduced rural poverty. Agriculture's decreasing growth is a significant cause of worry. India's rice harvest is a third of China's, with Indonesia and Vietnam contributing in part. Agricultural goods in general are in the same boat [6].

#### *Priority Areas for Support:*

- *Extension and Reforming Agricultural Research and Promoting New Technologies:*

The most essential need for agricultural growth in India is a significant strengthening and restructuring of the country's agricultural support system. As a consequence of ongoing underfunding of facilities and activities, the inability to replace retiring academics, and a lack of widespread access to cutting-edge technologies. These programs have deteriorated over time, and research now has nothing to market in addition to the tried-and-true packages of the past. The government's failing extension programs aren't providing any fresh information to farmers. Extension and research, as well as the services industry, have insufficient connections.

- *Improving Water Resources and Irrigation/Drainage Management:*

In India, agriculture consumes a significant quantity of water. However, increasing water competition between residential, agricultural, and industrial uses has highlighted the need to plan and manage water on a river basin and multi-sectorial basis. Irrigation water is anticipated to become limited as urban demand grows. There must be methods to improve irrigation efficiency significantly ("more produce per drop"). Transportation, which is better on the farm water management, and the use of improved supplies, such as drip irrigation, are two steps that may be implemented. It's also important to manage rather than exploit groundwater usage. Attempts to get people to use less water, such as enforcing electrical custodies and allowing communities to regulate water usage, have only had occasional effectiveness.

- *Facilitating Agricultural Diversification To Higher Value Commodities:*

Diversifying farmers' crops to higher-value items will be a critical element in promoting agricultural growth, especially in low-income regions. Additionally, there is tremendous opportunity to extend agro-processing from farms to cities, export markets, and build competitive value chains. Advertising, transportation, transfer, and processing limitations may be lifted by the government, but long-term growth initiatives should be left to farmers. It's important to play a little regulatory role and exercise caution while diversifying agriculture.

- *Promoting the High Growth Commodities:*

Many agricultural industries, such as dairy, have a significant potential for growth. Livestock production, mostly owing to dairy, contributes for more than a quarter of agricultural GDP and provides income to 70% of rural Indian households. The bulk of them are impoverished people who are ruled by women. Milk production has increased at a fast pace of approximately 4% per year, while future domestic demand is expected to increase at least 5% per year. However, milk output is limited by poor genetic superiority of cows, unavailable veterinary care, inadequate nutrition, and other factors. A targeted effort to overcome these constraints may boost output while simultaneously lowering poverty [7]–[10].

#### *Issues in Agriculture:*

- *Small and fragmented land-holdings:*

A small and dispersed land holding refers to a small, unprofitable piece of land. In order to be cost-effective in terms of buying and using inputs, as well as harvesting, an agricultural farm must have a specific quantity of land.

- *Seeds:*

Seed is an important and necessary ingredient for increasing crop yields and sustaining agricultural output growth. It is just as essential to supply high-quality seeds as it is to process them. Unfortunately, owing to expensive seed prices, excellent quality seed is beyond of reach for the majority of farmers, especially marginal and small farms.

- *Manures, Fertilizers and Biocides:*

Indian soil has been exploited to grow crops without concern for replenishing for hundreds of years. Soils have been drained and exhausted as a consequence, resulting in poor production. Almost all of the crop's average yields are among the lowest in the world. It's a serious problem that can be addressed by increasing fertilizer and manure usage.

- *Irrigation:*

Despite the fact that India is the world's second-largest wet nation after China, it barely irrigates one-third of its agricultural output. Irrigation is the most important agricultural input in a wet climate nation like India, where rainfall is uncertain, inconsistent, and irregular. India will not be able to achieve long-term agricultural growth until more than half of the harvested land is irrigated.

- *Lack of Mechanization:*

Despite large-scale agricultural automation in certain parts of the globe, most agricultural operations in the bulk of the nation are still carried out by hand, utilizing simple and traditional equipment and implements such as the wooden plough and sickle. Irrigation, seeding, thinning, ploughing, and pruning, harvesting, threshing, weeding, and transporting the crops all utilize machinery to a lesser or greater extent. For small and marginal farmers, this is especially true. It wastes a lot of low-wage labor and lowers human labor yields per capita.

#### *Problems Faced in Agriculture:*

- *Inequality in Land Distribution:*

The allocation of agricultural land in India is not normal since land distribution is a significant issue in India due to disparity in land distribution. Rather, land ownership is concentrated in the hands of affluent farmers, money lenders, and landlords across the area. The vast majority of small farmers, on the other hand, have tiny, unproductive farms, resulting in high cost per unit. Furthermore, many landless farmers have been growing on the absentee landlord's land, resulting in a lack of incentive on their side.

- *Land Tenure System:*

The Indian land tenure system is plagued with problems. Landlords had a lot of tenant instability, particularly in the years proceeding up to independence. Despite the fact that the land tenure system has improved in the post-independence period as a result of several land reforms, the issue of tenancy eviction and insecurity persists to some extent due to malingering landlords and has resulted in land transfers in a number of states across the country.

- *Fragmentation of the Holdings and Sub-Division:*

In India, the average holding size would shrink from 1.5 hectares in 1990-91 to 1.3 hectares in 2000. As a consequence, agricultural properties are few and dispersed, making them unprofitable. Agricultural land continues to be subdivided and fragmented as a result of population pressures and the breakdown of the joint family structure, as well as forced land sales to meet debt repayment requirements. As a consequence, the size of land holdings has shrunk year after year, resulting in an increase in the number of small and marginal holdings and a reduction in the number of big and medium holdings.

- *Cropping Patterns:*

Cropping patterns, which show how much land is planted in various crops at any one moment, are important indications of the sector's development and diversification. Food crops, cash crops, and non-food crops are produced by the country's agricultural industry. More areas have been diverted away from food crop production and towards commercial or cash crop cultivation as the prices of cash crop have grown more attractive. As a consequence, the globe is experiencing a food crisis right now. Faulty agricultural planning and execution have occurred as a consequence of the country's inability to establish a balanced cropping pattern after 50 years of preparation.

- *Fluctuations and Instability:*

As a consequence of weather unpredictability and the threat of the monsoon, Indian agriculture is always insecure. Food grain and other crops are manufactured in a variety of ways, leading agricultural crop prices to vary frequently. This has created a sense of fear in the agricultural activities of the nation.

- *Conditions of Agricultural Labourers:*

Agricultural workers are the country's rural population's most neglected and unorganized segment. Since the outset, Zamindars and Landlords have mistreated these employees, converting a few of them into slaves/bonded laborers and pressuring them to continue the system's generation. For the rural people, this resulted in terrible circumstances and utter destitution. After 50 years of democracy, the situation has altered little. These employees, however, continue to be abused economically since they are unorganized. Wage rates, income levels, and the standard of life all remained unusually low.

- *Agricultural Practices and Bad Farming Techniques:*

Farmers in India have been using inefficient and traditional agricultural practices. Steel ploughs, seed drills, barrows, hoes, and other upgraded equipment have only lately started to be used to a limited degree by Indian farmers. The bulk of the farmers used methods that had been passed down through generations. The country's low agricultural output is due to orthodox farming methods.

- *Inadequate Use of Inputs:*

Fertilizers and high-yielding variety (HYV) seeds are not utilized to their full potential in Indian agriculture. In India, farmers do not apply enough fertilizer to their crops, and farmyard dung manure is not applied in sufficient quantities. In India, farmers are still using seeds of variable quality. They are unable to purchase high-yielding, high-quality seeds due to a lack of financial resources. Furthermore, HYV seeds are in short supply throughout the globe.

## DISCUSSION

Humans, or simply humans, are a race that stands out above all other living creatures in this vast world of variety. Not only does our sophisticated physiology as humans provide us with a unique social

personality, but it also endows us with cultural knowledge. Human civilizations have been developing from the beginning of time, and the bulk of their development has been focused on gathering and consuming food, making agricultural activities an essential element of their foundation. From a civilization of nomadic food gatherers and hunters to the current paradigm of organized agriculture, we've come a long way. Let's define agriculture before we go any further. Agriculture is a science, an art, and a profession that entails cultivating land to produce food as well as breeding and rearing animals. The decrease of nature's varied food chains and the redirection of resources for human and animal use is what it is all about. In India, agriculture has evolved into a way of life rather than a business. Agriculture has long played a significant part in the Indian economy, and it is increasingly becoming the backbone. Agriculture is the backbone of the Indian economy, and this is not an exaggeration.

## CONCLUSION

Agriculture is the most significant sector of India's economy, employing the majority of the country's population. With substantial changes in the legal, social, productive structural, and supply structure, the other sector of an economy is undergoing a transition to a market economy. As a consequence of these changes, most nations' agricultural output has dropped, affecting the region's national seed supply sectors. Meal insecurity has been a concern in the area, and only a few nations have mandated refugee and institutional development plan food service (IDPs). Due to the comparatively low future demographic pressure expected, the presence of some favorable types of climate, and other (+ve) factors, including a very large formal seeds supply market, it should be possible to solve the problem of food insecurity in the area as a whole, as well as use this area to supply food to the various food deficient areas. As a result, resources must be created in order to meet these objectives. The author of this article addressed the problems and goals for agriculture, as well as the factors that influence agriculture. The various kinds of difficulties encountered by farmers, the problems faced by agriculture in India, and the priority aspect of agriculture were also addressed in this review article. If agriculture grows at its goal rate and the excess is not absorbed by other productive activities, the farm rate will be unhappy and the primary growth will be unsustainable. The whole economy must grow at a rate that allows for the use of production surpluses. This requires the development of other industries, particularly agro-industries. If people do not find a solution soon, it will become a significant issue that will impact food quality and quantity.

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