

## Farming has Lost the Ability to be a Source of Subsistence for Majority of Farmers in India

"If agriculture goes wrong, nothing else will have a chance to go right in the country"

— M. S. Swaminathan

India, a country with a rich agricultural heritage, has historically relied on farming as the backbone of its economy. The majority of the population, for centuries, have depended on agriculture for their livelihood. However, in recent decades, farming has increasingly lost its ability to provide subsistence for the majority of Indian farmers. Between 2004-05 and 2011-12, National Sample Survey Office data indicates that approximately 34 million farmers transitioned out of agriculture, representing a 2.04% annual rate of departure from the farming sector.

India's agricultural system has always been deeply rooted in its cultural and social framework. Traditional practices, often sustainable and eco-friendly, have evolved over thousands of years, adapting to local climates and resources. Farmers relied on **mixed cropping**, **crop rotation**, and **organic fertilizers**, which ensured **soil fertility** and **food security**.

The introduction of the **Green Revolution** in the **1960s** marked a significant turning point. **High-yield variety (HYV) seeds**, chemical fertilizers and pesticides were introduced to increase food production. While it initially succeeded in transforming India from a **food-deficit** to a **food-surplus nation**, the long-term consequences were detrimental. **Soil degradation**, **depletion of water resources**, and **increased dependency** on chemical inputs ensued, making farming more expensive and less sustainable.

The **fragmentation of land holdings is a critical issue** in Indian agriculture. With each generation, land is divided among heirs, resulting in smaller and smaller plots. These small plots are often economically unviable, preventing farmers from achieving economies of scale. According to the **Agricultural Census 2015-16**, the average size of land holdings in India is just **1.08 hectares**, which is insufficient for sustaining a family's livelihood.

The cost of agricultural inputs such as **seeds**, **fertilizers**, **pesticides**, and **machinery** has increased over the years. Farmers, particularly smallholders, find it increasingly difficult to afford these essentials. The dependence on HYV seeds and chemical fertilizers, a legacy of the Green Revolution, has exacerbated this issue. Additionally, the need for irrigation infrastructure, often privately funded through tube wells, adds to the financial burden.

Indian farmers face significant challenges in accessing markets. The **Agricultural Produce Market Committees (APMCs)**, intended to facilitate **fair trade**, often do the opposite due to inefficiency. Farmers receive only a **fraction of the final market price** for their produce, with middlemen taking substantial cuts. Moreover, **lack of infrastructure** such as storage facilities forces farmers to sell their produce immediately after harvest, often at lower prices.

Climate change has a profound impact on agriculture in India. Unpredictable weather patterns, increased frequency of extreme events like **droughts** and **floods**, and **temperature fluctuations** affect crop yields adversely. Farmers, especially those reliant on **rain-fed agriculture**, are particularly vulnerable. The traditional agricultural calendar, based on predictable monsoons, is now unreliable.

Intensive farming practices have led to severe soil degradation. The overuse of chemical fertilizers and pesticides has reduced soil fertility, leading to declining yields. Water scarcity is another pressing issue. **Groundwater levels** have plummeted due to **over-extraction** for irrigation, particularly in states like **Punjab** and **Haryana**. Contaminated water sources further exacerbate the problem, making water unsuitable for irrigation.

Farmers in India also grapple with significant social issues. **Indebtedness** is rampant, with many farmers taking loans at **exorbitant interest rates** from informal lenders. The inability to repay these loans leads to a vicious cycle of debt and despair, often resulting in **farmer suicides**. According to the **National Crime Records Bureau (NCRB)**, in **2022**, India saw 11,290 suicides in the farming sector, a **3.75% rise** from the **10,881 suicides** reported in **2021**.

The Indian government has implemented various policies to support farmers, including subsidies on fertilizers, seeds, and electricity, as well as **Minimum Support Prices (MSPs)** for certain crops. While MSPs aim to ensure farmers receive a fair price for their produce, in practice, they benefit only a small fraction of the farming community. The **procurement system** is riddled with **inefficiencies and corruption**, leaving many farmers out of its purview.

Loan waivers are another measure frequently employed by state governments to **alleviate farmers' financial distress**. However, these are **short-term solutions** that do not address the underlying issues. Moreover, **repeated loan waivers strain the financial resources** of state governments and discourage credit discipline among farmers.

Recent agricultural reforms, such as the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020, and the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020, aim to liberalize the agricultural market. These reforms seek to remove middlemen and allow farmers to sell their produce directly to buyers. However, they have been met with widespread protests from farmers who fear that the dismantling of APMCs and MSPs will leave them at the mercy of corporate buyers.

Diversification of crops can help reduce the dependency on a few staples like rice and wheat, which are water-intensive and prone to market fluctuations. Encouraging farmers to grow a variety of crops, including **fruits**, **vegetables**, and **pulses**, can enhance their income and nutritional security. Additionally, value addition through **food processing** and **agro-industries** can create new revenue streams and employment opportunities.

**Promoting organic farming** and sustainable practices such as **integrated pest management**, **agroforestry**, and **conservation agriculture** can restore **soil health** and reduce dependency on chemical inputs. Government incentives and training programs can help farmers transition to these practices. States like **Sikkim** have successfully adopted **organic farming** on a large scale, demonstrating its feasibility and benefits.

Technological advancements can play a crucial role in revitalizing Indian agriculture. **Precision farming**, using technologies like **GPS**, **remote sensing**, and **IoT**, can **optimize resource** use and increase productivity. Mobile apps and **digital** platforms can provide farmers with real-time information on weather, market prices, and best practices. Additionally, **developing drought-resistant** and **high-yield crop varieties** through **biotechnology** can help mitigate the impacts of climate change.

Farmer cooperatives can empower small and marginal farmers by providing collective bargaining power, access to credit, and shared resources. Successful models like the Amul dairy cooperative can be replicated in other sectors of agriculture. Cooperatives can also facilitate direct marketing, reducing dependency on middlemen and ensuring better prices for farmers.

Comprehensive policy and institutional reforms are essential to address the structural issues in Indian agriculture. Ensuring fair and transparent functioning of APMCs, expanding the reach of MSPs, and implementing land reforms to consolidate small holdings can improve the economic viability of farming. Strengthening rural infrastructure, including roads, storage facilities, and irrigation systems, is crucial for enhancing agricultural productivity and market access.

The decline of farming as a viable source of subsistence for the majority of Indian farmers is a complex issue with economic, social, and environmental dimensions. Addressing this crisis requires a multifaceted approach that includes policy reforms, technological innovation, and sustainable agricultural practices. By empowering farmers, diversifying agriculture, and ensuring fair market access, India can revitalize its agricultural sector and restore its role as a sustainable source of livelihood for millions. The path forward is challenging, but with concerted efforts from the government, private sector, and civil society, a resilient and prosperous agricultural future for India is attainable.

<u>"Jai Jawan, Jai Kisan"</u>

—Lal Bahadur Shastri

