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# From Fields to Futures: Women Farmers and Sustainable Food Systems

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## Abstract

Agriculture plays a vital role in India's economy and rural women form the most productive work force in the economy of a majority of the nations, including India. Agriculture including various sub-sectors employs 80 per cent of all economically active women; they comprise 33 per cent of the agricultural labour force and 48 per cent of self-employed farmers. Despite their significant contributions, women face discrimination in land ownership, pay, decision-making, and access to resources. This article explores their multifaceted roles, challenges, and initiatives aimed at empowerment. Historical contributions, ongoing barriers, and government efforts, such as self-help groups and gender-sensitive policies, are also discussed. Empowering women in agriculture is essential for sustainable development, food security, and equitable growth as emphasized by the UN's declaration of 2026 as the "International Year of the Woman Farmer."

## 1. Introduction

Agriculture and Allied Activities sector has long been the backbone of the Indian economy, playing a vital role in national income and employment. In recent years, the agriculture sector in India has shown robust growth, averaging 5 per cent annually from FY17 to FY23, demonstrating resilience despite challenges. In the second quarter of the 2024-25 fiscal year, the agriculture sector recorded a growth rate of 3.5 per cent. The Gross Value Added (GVA) of agriculture and related sectors has improved from 24.38 per cent in the fiscal year FY15 to an impressive 30.23 per cent by FY23. Consistent and stable growth of agriculture at around 5 per cent, with a 20 per cent share of overall GVA in the economy, will contribute 1 per cent growth to GVA (PIB, 2025). India's agricultural sector is sustained by women's labor, as they constitute 73% of the rural agricultural workforce (Agriculture Census, 2020) and perform nearly 70% of all agricultural activities (OXFAM International, 2022). On average, women work 14 hours a day,

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both at home and in the fields, increasing up to 16 hours during the harvesting season (National Commission for Women, 2005). Despite this extensive involvement, women are not officially recognized as farmers and lack independent decision-making power in agricultural and allied activities. This article delves into the multifaceted roles of women in agriculture, highlighting the challenges they face, and the initiatives aimed at their empowerment.

### 2. Role of Women in Agriculture

Historically, women have always been integral to agricultural communities, fulfilling various roles as farmers, wage earners, and entrepreneurs. In many developing nations, they account for 60-80% of food production (FAO, 2023). According to a research conducted by ICAR, women account for 75% of the labour force in major crop production, 79% in horticulture, 51% in post-harvest activities, and an astounding 95% in animal husbandry and fisheries (PIB, 2018). Their responsibilities on small farms include sowing seeds, weeding, harvesting, and selling agricultural and horticultural produce (Figure 1). Additionally,

women are tasked with collecting wood from forests, a primary fuel source for cooking, and fetching water from distant locations. They also manage livestock, engaging in activities such as milking, processing milk, and preparing ghee. Research indicates that rural women generate extra income through the sale of milk and animals, and they often collect and prepare dung cakes, which further contributes to their families' income. It is evident that the women are playing a dominant role in the livestock production and management activities. Poultry farming significantly contributes to the rural economy, with many women selling all eggs and poultry meat, leaving nothing for personal use. Besides, women in extension work help disseminate agricultural knowledge, implement community development projects, provide training, and empower rural women, thereby enhancing productivity and fostering sustainable development. They also possess traditional knowledge about crop varieties, soil management, and sustainable farming practices, which is invaluable for biodiversity conservation and climate resilience.



Figure 1: Various agricultural activities performed by women

### 3. Wonder Women of Agriculture in India

Over the last decade, India has witnessed “feminisation of the agriculture sector”, a trend that encapsulates the changing role of women in agriculture – now assuming roles of cultivators, labourers and entrepreneurs. It is predicted that women will play a pertinent role in significantly increasing food production – giving us a fighting chance against food insecurity. With equal access to resources, women farmers will also be able to preserve local agro-biodiversity and practice (and popularize) sustainable farming. Ms. Lahari Bai, known as “India’s Millet Ambassador,” from the Baiga tribe of Madhya Pradesh, dedicated the last 10 years to the conservation

and revitalization of her community’s traditional millet varieties. Through her relentless efforts, she is credited preserving as many as 150 indigenous millet species. Ms. R Pappammal, a centenarian from Tamil Nadu, was awarded the Padma Shri, India’s fourth-highest civilian honor, in 2021 for her work in organic farming over the past 70 years. Ms. Rahibai Soma Popere, known as the “Seed Mother” from Maharashtra, received the Padma Shri in 2020 for her efforts in conserving indigenous seeds and promoting traditional crops, while also advocating for organic farming and agro-biodiversity. Ms. Rajkumari Devi, recognized as the “Potato Queen of Bihar”, has made significant contributions to the potato industry and founded the women’s self-help group “Mahila Sabla Sangh” to empower rural women entrepreneurs, earning



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her the Padma Shri in 2019. Additionally, Ms. Kamala Pujari, a farmer and social activist, has been influential in promoting organic farming, receiving the Padma Shri in 2019 for her dedication to traditional agricultural practices learned at the MS Swaminathan Research Foundation, Jetpur.

### 4. Problems Faced by Women in Agriculture

Despite being a key contributor to sustainable livelihoods in rural areas, the female workforce remains largely unrecognized and encounters numerous obstacles. One of the primary challenges women face in agriculture is limited access to productive resources such as land, credit, and education. In many regions, women do not have formal rights to land ownership, which restricts their ability to make independent agricultural decisions or secure loans for farming activities. This lack of access not only hampers their productivity but also affects their families' food security and economic stability. Socio-cultural norms and gender roles also pose significant barriers to women's participation in agriculture. In many cultures, women are expected to prioritize household responsibilities and caregiving over agricultural work. This dual burden of domestic and farm work can lead to long working hours and increased physical and mental stress. Additionally, gender disparities in agriculture are pronounced. Women often work in unpaid or informal roles, which are not recognized in official labour statistics. This invisibility contributes to their marginalization in agricultural policy discussions and resource allocation. Furthermore, women are frequently overrepresented in labour-intensive, low-paying jobs, such as weeding and harvesting, while men dominate more lucrative roles in management and decision-making. Education is a critical factor in empowering women in agriculture, but unfortunately, many women in rural areas lack access to education and vocational training, with literacy rates among those engaged in agriculture ranging from a mere 25-50%, severely limiting their ability to adopt new agricultural technologies and practices, access information, and resources necessary for improving their farming practices.

### 5. Government Initiatives and Schemes for Women Farmers

Several initiatives are underway to empower women in

agriculture by enhancing their access to resources and education. One notable approach is the establishment of self-help groups (SHGs) in various regions, allowing women to combine resources, exchange knowledge, and secure credit. These groups have effectively improved women's economic status and contributed to community development. Technological innovations are crucial in empowering women farmers. The introduction of labour-saving devices and agricultural technologies helps alleviate the physical burden of farming while boosting productivity. Training programs focused on these technologies enable women to enhance their skills and agricultural output. In 2017-18, DAC&FW's MANAGE, EEI, SAMETI and other institutions have trained 5645 people through 222 programmes. Besides, more than 98.14 lakh women farmers have been trained so far under the ATMA scheme (PIB, 2018). Advocating for gender-sensitive agricultural policies is vital to overcoming systemic barriers faced by women. Policymakers are increasingly acknowledging the importance of integrating women into agricultural development strategies. Initiatives that promote women's land rights, access to credit, and gender-responsive agricultural research can significantly impact women's empowerment in the sector. In India, various government flagship schemes have been initiated since Independence to improve the status of rural women through livelihood opportunities and paid employment. The National Research Centre for Women in Agriculture (NRCWA) which established in 1996 (upgraded to ICAR-Central Institute for Women in Agriculture in 2014), focuses on developing methodologies to identify gender implications in farming and creating women-specific technologies. The Indian Council of Agricultural Research (ICAR) has established a network of 645 Krishi Vigyan Kendras (KVKs) across the country. In the 2015-16 period, these KVKs collaborated with 2708 women SHGs, involving 37920 women in various activities. The Department of Rural Development, Ministry of Rural Development launched a specific scheme namely "Mahila Kisan Sashaktikaran Pariyojana (MKSP)", as a subcomponent of DAY-NRLM (Deendayal Antyodaya Yojana - National Rural Livelihoods Mission) in 2011. Various other schemes, such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Prime Minister's Employment Generation Programme (PMEGP), Beti Bachao Beti Padhao, National Livelihoods Mission, Pradhan Mantri Matru Vandana Yojana (PMMVY), Deen

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Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) etc. have also significantly contributed to gender parity and women's socio-economic empowerment. The government recently approved the "Krishi Sakhi Convergence Program (KSCP)" and the "Namo Drone Didi" scheme, which aim to transform rural India by empowering women. Krishi Sakhis are trained para-extension professionals who provide essential information and skills to farmers at the grassroots level, focusing on natural farming and soil health management. The Namo Drone Didi Scheme aims to empower women by providing drones to 15,000 selected Women SHGs for agricultural purposes, such as applying fertilizers and pesticides. Similar to this, the Biotech-Krishi Innovation Science Application Network (Biotech-KISAN) Program was established to offer small and marginal women farmers in the northeastern region scientific agricultural solutions. Further, Innovative government programs such as the patta (land title) distribution programs in West Bengal, Maharashtra, and Andhra Pradesh highlight the importance of implementation-driven solutions. Under this program, land titles were given jointly to women and men in public ceremonies, to ensure that the women's land ownership rights were acknowledged both legally and socially. These initiatives aim to enhance women's access to land, credit, and markets, as well as to promote their participation in agricultural decision-making processes. By supporting women in leadership roles within farming communities, these policies help to ensure that women's voices are heard, and their contributions recognized. Empowering women in agriculture is not only a matter of social justice but also a crucial factor for sustainable development, food security, and equitable growth. The United Nations' declaration of 2026 as the "International Year of the Woman Farmer" underscores the global recognition of the vital role women play in agriculture. This declaration aims to raise awareness about

the challenges faced by women farmers and to promote initiatives that support their empowerment.

## 6. Conclusion

Addressing the discrimination and barriers faced by women in agriculture is essential for achieving sustainable and inclusive growth in India. By recognizing and supporting the contributions of women farmers, we can pave the way for a more equitable and food-secure future. The journey towards empowerment is ongoing, but with concerted efforts from governments, organizations, and communities, significant progress can be made in uplifting the status and livelihoods of women in agriculture.

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