

Climate-Smart Agriculture: A Necessity for Indian Agribusiness

MD Sadik Pasha¹, A. Nirmala² and K. Nirosha³

¹M.Sc. (Hort.), Dept. of Vegetable Science, SKLTGHU, Mulugu

²Assistant Professor, Department of Horticulture, College of Agriculture, PJTAU, Hyderabad.

³Assistant Professor, Dept. of Vegetable Science, SKLTGHU, Hyderabad

SUMMARY

This article explores the critical role of women in agriculture and emphasizes why empowering them is essential for sustainable agricultural growth in India and globally. Women constitute over 73% of India's rural agricultural workforce but face systemic barriers such as lack of land ownership, limited access to credit and training, wage inequality, and exclusion from decision-making. Despite their contribution, they are often not officially recognized as "farmers," which prevents them from accessing key government resources. Government schemes like Mahila Kisan Sashaktikaran Pariyojana (MKSP) and community initiatives such as women-led Farmer Producer Organizations (FPOs) are beginning to bridge this gap. Empowering women with land rights, training, financial access, and leadership opportunities could significantly boost agricultural productivity and rural development. Empirical data from FAO suggests that equal access to resources could increase farm output by up to 30%, helping lift 100–150 million people out of hunger. The article concludes that gender equality in agriculture is not just a social imperative but an economic one, and the future of farming will increasingly depend on the empowerment of women.

INTRODUCTION

Agriculture is not only the backbone of the Indian economy but also the lifeline of rural communities across the country. With more than half of India's population directly or indirectly dependent on farming, the sector plays a critical role in ensuring food security, sustaining livelihoods, and driving socio-economic development. However, amidst this vast landscape of fields, tractors, and harvests, there is a force that remains largely unrecognized and underappreciated: the women who till the land, plant the seeds, and feed the nation. In India and many other developing countries, women form a silent majority of the agricultural workforce. According to the Food and Agriculture Organization (FAO), women contribute up to 43% of agricultural labor globally, and in India, this figure exceeds 73% among rural women. These women are engaged in nearly every facet of farming: sowing, weeding, harvesting, livestock care, and post-harvest processing yet they are rarely acknowledged as "farmers" in official records, policies, or public narratives. Instead, they are often relegated to the status of "farm laborers" or "helpers," despite bearing a disproportionate share of the physical and emotional burden of agricultural work.

The marginalization of women in agriculture is not due to a lack of capability or effort, but rather the result of deep-rooted gender inequalities. Land ownership remains elusive for most women, with only 13% of operational landholdings in India owned by women. This lack of legal entitlement has far-reaching consequences: it restricts access to institutional credit, agricultural subsidies, insurance schemes, and government welfare programs that are crucial for productive farming.

Moreover, agricultural extension services, which provide crucial training and knowledge to farmers, are often inaccessible to women. A report by the Indian Council of Agricultural Research (ICAR) found that fewer than 5% of women farmers receive formal training, despite their active participation in fieldwork. Combined with wage disparities where women are paid significantly less than men for similar work, this exclusion creates a cycle of dependency, underdevelopment, and missed opportunities.

Yet, change is both necessary and possible. There is growing recognition among policymakers, development agencies, and grassroots movements that empowering women in agriculture is not just a matter of social justice; it is a strategic imperative for economic growth and environmental sustainability. Studies show that closing the gender gap in access to resources could boost agricultural output and reduce hunger for millions. This article delves into the vital contributions of women in agriculture, examines the challenges they face, and outlines the policy shifts, grassroots innovations, and societal changes needed to fully realize their potential. The future of farming is not just about smarter tools or climate resilience—it is also about gender inclusion, equity, and recognizing women as equal partners in feeding the world.

Women in Agriculture: The Invisible Majority

Women form the backbone of Indian agriculture. According to the Food and Agriculture Organization (FAO), women comprise approximately 43% of the agricultural labour force in developing countries, and in India, over 73% of rural women participate in farming activities (FAO, 2011; Hindustan Times, 2022). Yet, despite their significant involvement, women are often classified as "farm labourers" rather than "farmers." This semantic difference has serious consequences: it bars them from receiving agricultural credit, extension services, and participation in decision-making processes at local and national levels.

Systemic Barriers to Empowerment

1. Lack of Land Ownership

Land ownership is central to agricultural development and social status. In India, women own only 13% of operational landholdings, as per the Agriculture Census 2015-16 (Ministry of Agriculture, GoI). Without legal titles to land, women are often excluded from institutional credit, insurance, and government schemes, despite doing the majority of the farming work.

2. Limited Access to Resources and Training

Women farmers are frequently marginalized in access to modern tools, improved seeds, fertilizers, irrigation facilities, and agricultural extension services. A 2017 report by the Indian Council of Agricultural Research (ICAR) noted that only 5% of women farmers receive agricultural training (ICAR Annual Report, 2017). This digital and knowledge divide not only affects productivity but also hampers innovation at the grassroots level.

3. Discrimination in Labor Wages

The **gender wage gap in agriculture** is persistent and significant. Women are paid 22–30% less than their male counterparts for the same work (Oxfam India, 2021). This economic disparity reduces their financial independence and ability to invest in farm-related activities.

4. Exclusion from Agricultural Decision-Making

Women's voices are often missing from agricultural policymaking, cooperatives, and local panchayats. Their exclusion from leadership positions reinforces systemic inequalities and limits the development of gender-sensitive agricultural policies.

The Case for Empowering Women in Agriculture

Empowering women in agriculture is not merely about correcting historical injustices—it's also smart economics. A landmark FAO study estimates that if women had the same access to productive resources as men, their farm yields could increase by 20–30%, raising total agricultural output in developing countries by 2.5–4% and potentially lifting 100–150 million people out of hunger (FAO, 2011).

Additionally, women tend to reinvest their earnings more in the health, education, and well-being of their families, creating a multiplier effect that strengthens entire communities.

Government Schemes and Institutional Support

To address these disparities, the Indian government and several non-governmental organizations have introduced targeted schemes and frameworks:

Mahila Kisan Sashaktikaran Pariyojana (MKSP): Launched under the National Rural Livelihoods Mission, this scheme aims to improve the status of women in agriculture by supporting women-centric interventions and promoting sustainable agriculture. It emphasizes collective farming, capacity building, and access to financial services (Ministry of Rural Development).

Deendayal Antyodaya Yojana – NRLM: Encourages the formation of women's Self-Help Groups (SHGs) and supports community-based organizations in linking rural women to credit and markets.

PM-KISAN & Kisan Credit Card (KCC): Although not women-specific, inclusion of women as direct beneficiaries in these schemes is gradually improving with targeted outreach.

However, implementation gaps, lack of gender disaggregated data, and patriarchal norms continue to impede the full potential of these initiatives.

The Role of Cooperatives and Farmer Producer Organizations (FPOs)

Farmer Producer Organizations (FPOs), especially those formed and managed by women, have shown promise in enabling better market access, enhancing bargaining power, and facilitating training. According to

NABARD, nearly **10% of registered FPOs are women-led**, but this number is growing with support from grassroots NGOs and government programs (NABARD Report, 2023).

Women in FPOs are increasingly engaging in:

- Organic farming and value-added product processing
- Direct marketing and e-commerce
- Agri-business entrepreneurship

These models show that when women are given space and resources, they don't just participate—they lead.

Looking Ahead: Policy Recommendations

To build a gender-equitable agricultural future, the following policy actions are essential:

Legal Reform and Enforcement: Strengthen women's land rights through joint land titles, inheritance law reforms, and awareness programs.

Capacity Building: Invest in gender-sensitive extension services and digital literacy programs to equip women with knowledge and tools.

Gender-Disaggregated Data Collection: Include gender metrics in all agricultural and rural development surveys to better inform policy.

Access to Finance: Expand microcredit, insurance, and subsidy schemes tailored to women's needs, backed by simplified documentation and community outreach.

Leadership Development: Encourage women's representation in cooperatives, panchayats, and agri-policy boards to amplify their voice in decision-making.

CONCLUSION

As the agriculture sector contends with climate variability, food insecurity, and a growing population, women's empowerment is no longer optional—it is central to resilience and sustainability. Breaking barriers for women in agriculture is not just about social justice; it's about ensuring food security, economic growth, and sustainable development. The future of farming is female, and investing in women farmers is investing in our shared future.

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