



GENDER AND DEVELOPMENT IN AGRICULTURE

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Introduction

In the vast fields of rural India, where crops sway with the seasons, it is often the silent strength of women that sustains agriculture. From planting seeds to harvesting grains, women are involved in nearly every stage of farming. Yet, their contributions often go unrecognized, unpaid, and unsupported. Despite forming nearly 50 per cent of the agricultural workforce, women still face limited access to land, credit, training, and decision-making roles. As the agricultural landscape shifts due to climate change, mechanization, and migration, the need to integrate gender equity into rural development has become more urgent than ever. Empowering women in agriculture is no longer just about fairness it's about enhancing productivity, ensuring food security, and driving inclusive growth. This article explores the vital connection between gender and development in agriculture, uncovering challenges, celebrating successes, and spotlighting pathways to a more equitable and sustainable rural future.

Women: The Invisible Backbone of Indian Agriculture

In the heartlands of India, where farming is not just a livelihood but a way of life, women form the quiet yet essential foundation of agriculture. They are the first to rise and the last to rest, engaging in every stage of farming from seed selection and sowing to weeding, harvesting, and post-harvest processing. According to estimates, women contribute to over 60–80 per cent of agricultural labour in India. Yet, their work is often labelled as “help” rather than “work,” leading to chronic underreporting and invisibility in agricultural statistics. Most women

farmers remain without land titles, pushing them to the margins when it comes to accessing government schemes, credit, and resources. What makes this imbalance even more striking is that, while their hands till the soil and feed the nation, women are rarely part of decision-making be it on the farm or in policy circles. The feminization of agriculture, triggered by male migration to urban areas, has increased their workload but not their authority. Despite these challenges, many women are now stepping into leadership roles through self-help groups, farmer producer organizations, and agri-entrepreneurship ventures. Recognizing and investing in their potential is no longer optional it is crucial for building a resilient and inclusive agricultural economy.

Gender Gap in Land Ownership and Decision-Making

Land is the most valuable asset in agriculture, yet for millions of women farmers in India, it remains out of reach. Despite their significant role in farming activities, only around 13% of women own land a disparity rooted in legal, social, and cultural barriers. Inheritance laws, male-dominated family structures, and lack of awareness prevent women from claiming their rightful ownership. Without legal land titles, women are often excluded from accessing institutional credit, crop insurance, and government subsidies, leaving them dependent and economically insecure. This lack of ownership also affects women's voices in agricultural decision-making. Whether it's choosing crops to plant, investing in inputs, or adopting new technologies, women are frequently left out of crucial conversations. The

result is not only gender injustice but also inefficiency studies show that empowering women with land rights and decision-making power can significantly boost agricultural productivity and family welfare. Bridging this gap calls for gender-sensitive land reforms, legal literacy campaigns, and policy measures that recognize women as farmers in their own right not just as farm workers or helpers.

Empowering Women Farmers Through Technology

In an era where technology is transforming every aspect of life, it holds immense potential to uplift women farmers and bridge the gender gap in agriculture. Mobile phones, agricultural apps, and digital platforms are increasingly reaching rural women, enabling them to access weather forecasts, market prices, expert advice, and government schemes right at their fingertips. Initiatives like mKisan, Kisan Call Centres (KCC), and regional-language agro-advisory services are helping women make informed decisions about crop planning, pest control, and resource management. With digital literacy slowly improving, many women are now using WhatsApp groups and YouTube videos to learn modern farming practices and share local innovations. Beyond information access, technology is also enhancing women's productivity and reducing drudgery through gender-friendly farm tools. Light-weight weeders, seeders, and harvesters designed for women's use are gaining popularity in some states. Moreover, women-led startups and Farmer Producer Organizations (FPOs) are leveraging e-commerce platforms to market organic and value-added products. However, to make tech truly inclusive, there is a need for targeted training, digital infrastructure, and local language content tailored to women's contexts. When empowered with the right tools and knowledge, women farmers can become agents of innovation and drivers of rural transformation.

Women in Agri-Entrepreneurship

Across rural India, a quiet revolution is underway led by women who are transforming from agricultural labourers to agri-entrepreneurs. Whether it's running small dairy units, processing

millet, cultivating mushrooms, or managing organic farms, women are increasingly stepping into roles that generate income, create jobs, and add value to the farming economy. With support from self-help groups (SHGs), Farmer Producer Organizations (FPOs), and government schemes like the Mahila Kisan Sashaktikaran Pariyojana (MKSP), women are building enterprises that go beyond survival to sustainability. These ventures not only empower women economically but also build their confidence and social standing in communities. Despite the progress, women agri-entrepreneurs still face unique challenges limited access to capital, lack of training in business management, poor market linkages, and gender bias. However, success stories are growing: from rural women marketing traditional pickles through online platforms to tribal women exporting organic turmeric, examples abound of resilience and innovation. Creating a supportive ecosystem with financial literacy, market access, mentorship, and gender-sensitive policies can help thousands more women turn their skills and ideas into thriving agricultural businesses. Empowering women in agri-entrepreneurship isn't just a gender issue it's a rural development strategy with lasting impact.

Role of SHGs and Women-Led Cooperatives in Rural Development

Self-Help Groups (SHGs) and women-led cooperatives have emerged as powerful engines of rural transformation in India. By bringing women together around shared economic goals, these groups provide not just financial support but also a platform for collective action and empowerment. Through regular savings, internal lending, and access to microcredit, SHGs enable women to invest in income-generating activities such as farming, poultry, tailoring, food processing, and agri-allied enterprises. They also serve as important channels for delivering government schemes, skill training, and health and sanitation awareness, thereby contributing to overall rural development. Women-led cooperatives and federations are taking this impact further by helping members scale up their activities, access bulk inputs, and reach wider markets. These

collective enterprises foster leadership, negotiation skills, and economic independence among rural women. For instance, dairy cooperatives run by women in Gujarat and Maharashtra have significantly boosted family incomes and nutrition. Similarly, women's collectives in Tamil Nadu and Odisha are successfully managing seed banks, watershed projects, and agro-processing units. By strengthening the social fabric and promoting inclusive development, SHGs and cooperatives are not only empowering women they are reshaping the future of rural India.

Bridging the Gender Gap in Agricultural Education and Extension

Agricultural education and extension services are vital tools for modernizing farming practices and improving productivity. Yet, women who form a significant part of the farming workforce remain largely underrepresented in these areas. Enrolment of women in agricultural universities and training institutions is still relatively low, especially in rural and tribal regions. Extension services often fail to reach women due to social norms, mobility constraints, or the assumption that men are the primary farmers. As a result, women are left out of key advancements in technology, best practices, and schemes that could directly benefit their work in the fields. To truly bridge this gender gap, extension systems need a more inclusive approach. This includes recruiting more female extension workers, organizing women-only training sessions, offering flexible timings, and using local languages and women-friendly communication channels like community radio or mobile apps. Integrating gender modules into agricultural curricula and training programs can also sensitize future professionals to the needs of women farmers. Empowering women through education and information is not just about equity it equips an entire generation of farmers to innovate, adapt, and thrive in an evolving agricultural landscape.

Conclusion

Women have always been the silent strength behind Indian agriculture working tirelessly in fields, managing households, and

nurturing communities. Yet, their roles have often gone unrecognized and unsupported. As the sector faces new challenges like climate change, resource scarcity, and market volatility, empowering women is not just a moral imperative it is a smart strategy for sustainable development. Bridging the gender gap in land rights, education, technology, and decision-making is essential to unlock the full potential of India's agricultural economy. By investing in women farmers, promoting gender-responsive policies, supporting agri-entrepreneurship, and strengthening women-led collectives, we can create a more inclusive and resilient rural landscape. The future of Indian agriculture will be brighter and more equitable when women are not just participants but leaders and innovators in shaping its course. It's time to turn recognition into action and ensure that the hands that feed the nation are given their rightful place at the centre of its development.