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Feminization and Its Impact on Indian Agriculture

Arun Kumar Panda, Ananta Sarkar, Mridula Devi Gayatri Moharana and Monalisha Patra

ICAR-Central Institute for Women in Agriculture, Bhubaneswar, Odisha, India

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Corresponding Author: Arun Kumar Panda

Abstract

Agriculture is a primary source of livelihood for a large portion of the Indian population, particularly in rural areas. The scenario of this sector has witnessed substantial changes, especially with the rise of feminization in agriculture during last decades. Feminization refers to the growing involvement of women in agricultural activities, whether in terms of labor force participation, decision-making roles, or leadership within farming households and communities. This also indicates to the increasing involvement of women in agricultural tasks, as they possess the inherent capacity to manage both domestic responsibilities and farm-related activities. Though their contribution is very much significant but till date they don't get proper recognition and hard work remain unpaid and their role was often undervalued or underreported. This underutilization of female potential can be seen as a significant factor contributing to the feminization of Indian agriculture. Women's increased involvement in agriculture has been shaped by factors such as male migration to urban areas for better employment opportunities, the breakdown of joint family systems, and the need for women to contribute economically. Their vast knowledge on traditional agricultural practices and conservation of natural resources often leads to more sustainable farming practices. The growing presence of women in agricultural decision-making roles challenges traditional gender norms and supports the advancement of gender equality in rural areas. The major challenges faced by women in agriculture are their limited access to and control over essential resources such as land, credit, technology, and training. Addressing these challenges and empowering women with the tools and resources they need will help unlock the potential of India's agricultural sector, leading to more sustainable, productive, and inclusive farming practices. By prioritizing gender equity in agriculture, India can foster long-term growth and development in its rural economy.

Keywords: Feminization, impact, Indian agriculture

Introduction

Agriculture has historically been the backbone of India's economy, with a significant portion of the population dependent on it for livelihood. In recent decades, however, the sector has witnessed substantial changes, especially with the rise of feminization in agriculture. Feminization refers to the growing involvement of women in agricultural activities, whether in terms of labor force participation, decision-making roles, or leadership within farming households and communities. These also indicate the increasing involvement of women in agricultural tasks, as they possess the inherent capacity to manage both domestic responsibilities and farm-related activities. This is due to the diverse range of duties they perform within their culturally prescribed and gendered roles (Government of India 2018; Siddiqui *et al.* 2017) ^[8, 22]. While gender dynamics in agriculture have been traditionally skewed, with men dominating most farming activities, the shift toward increased participation of women has sparked debate on its potential advantages and challenges. While women are playing an increasingly significant role in the agricultural sector, they continue to face numerous challenges, including limited access to land, resources, and decision-making power. Addressing these challenges and empowering women with the tools and resources they need will help unlock the potential of India's agricultural sector, leading to more sustainable, productive, and inclusive farming

practices. This review seeks to analyze the role of feminization in Indian agriculture, exploring both its benefits and challenges, and evaluating its overall impact on the sector.

Understanding Feminization in Indian Agriculture

Farmer suicides, diminishing land holdings, escalating food price inflation, a relative rise in agricultural incomes, and the inflationary pressures on production costs are among the myriad challenges confronting Indian agriculture. (Nair *et al.* 2015; Lal *et al.* 2014; Pritchard *et al.* 2014) ^[15, 111, 19]. In the context of Indian agriculture, feminization refers to the increased participation of women in farming activities, both as workers and in decision-making capacities. A variety of factors are driving the feminization of agriculture, including global and local labor migration, enhanced mobility of women, the commercialization of agriculture, conflicts, and climate adaptation (Doss *et al.* 2021) ^[6]. As agriculture becomes an increasingly unviable livelihood, men often migrate in pursuit of alternative economic opportunities, while women, with limited options to migrate, remain behind to manage agricultural tasks (Pattnaik *et al.* 2018) ^[18].

According to Periodic Labour Force Survey reports, the share of female workers among all workers (male & female) in agriculture is increasing every year from 2017-18 to 2023-24. 64.4% of total female workers as compared to

36.3% of total male workers in India (rural + urban) are involved in agriculture (PLFS 2023-24)^[3]. While male labor has traditionally been considered central to agricultural work, women have consistently been involved, albeit in informal and unpaid capacities. With rural migration trends and changing socio-economic factors, women have increasingly taken on formal and informal agricultural tasks, including sowing, weeding, harvesting, and managing household-level farm production. A report by the Food and Agriculture Organization (FAO)^[7] notes that rural women are responsible for up to 60% of the total agricultural labor in many developing countries, including India. However, despite their significant contribution, their access to resources like land, credit, technology, and education remains limited.

The Role of Women in Indian Agriculture

Micro-studies examining the gender distribution of agricultural tasks revealed that women are responsible for 60-75% of farm-related activities across the majority of regions in India (Seetha Lakshmi *et al.* 2017)^[20]. Women in rural India have always been central to agricultural activities, but their role was often undervalued or underreported. Women are involved in all aspects of farming, from sowing seeds to post-harvest processing and marketing. Additionally, women are actively engaged in managing livestock, household gardens, and ensuring food security for their families. Despite the heavy labor contribution, women have limited access to productive resources. This underutilization of female potential can be seen as a significant factor contributing to the feminization of Indian agriculture. Women's increased involvement in agriculture has been shaped by factors such as male migration to urban areas for better employment opportunities, the breakdown of joint family systems, and the need for women to contribute economically. With such migration trends, women often become the primary labor force on farms, which has led to shifts in the nature of farming and farming practices, particularly in the cultivation of crops, livestock management, and post-harvest activities.

Advantage of Feminization in Indian Agriculture

- **Increased Productivity and Efficiency:** The involvement of women in agriculture has shown positive outcomes, especially in terms of increasing productivity and efficiency. Women's deep knowledge of local agricultural practices and natural resources often leads to more sustainable farming practices. Women typically practice integrated farming methods, such as crop-livestock systems, agroforestry, and organic farming, which have been shown to improve soil fertility and biodiversity. Moreover, women are more likely to diversify crop production and engage in small-scale, organic farming that often leads to higher value-added products and reduced dependency on chemical inputs. A study by the International Food Policy Research Institute (IFPRI)^[9] indicated that when women had the same access to resources as men, agricultural output could increase by as much as 20-30%, leading to improved food security and higher household incomes. This suggests that empowering women in agriculture could lead to more sustainable

and productive farming systems.

- **Improved Food Security and Nutrition:** Women play a pivotal role in ensuring food security at the household level, particularly through food production, storage, and preparation. As primary caregivers and nurturers, women are more likely to prioritize the nutrition and well-being of their families. When women are more involved in farming and have control over income generated through agriculture, the household is more likely to experience improved food security and nutrition. Additionally, women often prioritize the production of diverse and nutritious crops, contributing to better health outcomes for their families. The United Nations Women's agency reported that women farmers are likely to engage in food production that supports family diets, especially when compared to men who may focus more on cash crops. Empowering women thus contributes directly to achieving broader national goals of reducing malnutrition and hunger.
- **Economic Empowerment and Social Mobility:** Women's increased participation in agriculture provides an opportunity for economic empowerment. Through the generation of income from agricultural activities, women are able to gain financial independence, which translates to more control over household decisions. This economic empowerment is linked to higher levels of social mobility, where women can invest in their children's education, healthcare, and other areas, creating a multiplier effect for the entire community. According to National Family Health Survey (NFHS)^[13] reports, women having a bank or savings account that they themselves use has increased from 15.1% (2005-06) to 78.6% (2019-21). The Indian government has also initiated various schemes to provide financial support to women farmers, including subsidies, loans, and grants. Programs like the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) and the National Rural Livelihood Mission (NRLM) have made strides in ensuring that women receive access to resources such as credit and land.
- **Advancement of Gender Equality:** The growing presence of women in agricultural decision-making roles challenges traditional gender norms and supports the advancement of gender equality in rural areas. Women's increased participation helps to break down patriarchal structures, offering them a platform to exercise leadership and influence. Rural women's involvement in farming has been seen to challenge gendered divisions of labor, allowing women to achieve greater economic and social recognition. International agencies, including the World Bank^[27] and the FAO^[7], have emphasized the importance of promoting gender equity in agriculture to improve overall productivity and rural livelihoods. Programs that focus on empowering women in agriculture are also linked to positive changes in gender relations, as women gain recognition for their contributions and exert more influence over agricultural practices and household decisions.

Challenges of Feminization in Indian Agriculture

- **Limited Access to Resources:** One of the biggest

challenges faced by women in agriculture is their limited access to essential resources such as land, credit, technology, and training. In many parts of rural India, land ownership is still predominantly held by men, and women often work on land that is owned by their male family members. The Indian Agriculture Census (2015-16) ^[2] revealed that a mere 13.87% of women in India possess land. Furthermore, the average landholding owned by women stands at 0.94 hectares, in contrast to 1.18 hectares for men. This lack of land ownership limits women's ability to make long-term investments in farming practices and hampers their ability to access credit facilities and insurance. Additionally, women often lack access to modern agricultural technologies, tools, and training. Despite their increasing participation in farming, women are often excluded from formal agricultural extension services and technological innovations that could improve their productivity and income.

- **Workload and Time Poverty:** While women's increasing participation in agriculture is beneficial in many ways, it also places a heavy burden on them. Rural women are often tasked with managing both agricultural work and domestic responsibilities, leading to what is known as "time poverty." According to Time Use Study (2019) data, on an average women spend 200 minutes extra time every day in unpaid work (domestic, caregiving, others) and about 50 minutes less time in learning, socializing and leisure activities as compared to men in rural India (Kumar *et al.* 2022) ^[10]. Women typically spend long hours on the farm and then return to household chores, leading to exhaustion and limited opportunities for personal development or leisure. This double burden of work can limit women's ability to fully participate in decision-making processes within their households or communities, restricting their economic and social empowerment. Studies have highlighted that the long hours of work result in a lack of time for self-care, education, and skill development, which further perpetuates gender inequality.
- **Gender Bias and Societal Barriers:** Women's economic output and productivity are disproportionately influenced by socio-economic and cultural determinants, including household income, age, marital status, education, religion, caste, and social standing (Pattnaik, Lahiri and Dutt, 2020) ^[17]. Despite the increasing feminization of agriculture, societal barriers persist, and gender biases continue to shape the way women's contributions are perceived. In many rural areas, women's work is still seen as an extension of their domestic roles, and their contributions to farming are often undervalued. This leads to limited recognition of their efforts, which affects their ability to influence policies and practices at the community and governmental levels. Moreover, women face cultural and societal resistance when it comes to taking on leadership roles in agriculture. In some areas, traditional attitudes towards women's roles in public life still hinder their participation in agricultural decision-making processes, despite their growing involvement in the sector. In contrast to non-agricultural industries or sectors, the agricultural sector

offers the lowest wages (Mahajan *et al.* 2017). Despite women farmers exerting strenuous labor under challenging conditions, they receive lower wage to that of their male counterparts (Agarwal *et al.* 2015) ^[1].

Opportunities and Solutions for Empowering Women in Agriculture

- **Increasing Access to Land and Resources:** One of the most effective ways to empower women in agriculture is to ensure they have access to land ownership and control over agricultural resources. Programs that facilitate joint land titles, legal reforms, and the provision of property rights to women could help reduce gender inequality in agriculture. Sultana *et al* (2024) ^[23] in their study revealed that land had a positive impact on income of households but the income of rural women did not increase significantly despite having access to land. The findings also highlighted that the government should design an appropriate land ownership policy that guarantees ownership as well as access for women to land.
- **Promoting Gender-Responsive Policies and Programs:** There is a need for government policies and agricultural schemes that are specifically designed to address the unique needs of women farmers. Gender-sensitive agricultural extension services, targeted training programs, and the provision of financial resources such as low-interest loans or subsidies would enable women to improve their productivity and economic security. Shaker S (2024) ^[21] highlighted the importance of gender responsive policies in health, education, agriculture, etc. sectors and explained that gender-sensitive labour laws can increase women's employment thus support strong and equitable economic development. He concluded that gender consideration must be methodically incorporated into policy-making to prevail over structural obstacles and accomplish long-term goals. Similarly Wolff (2024) ^[26] in his study, emphasized that local and international approaches should be encouraged for developing knowledge and capacities of women to maximize their benefits in the society.
- **Encouraging Women's Leadership in Agriculture:** Encouraging women to take on leadership roles within agricultural cooperatives, rural organizations, and community-level decision-making bodies is crucial. By fostering women's leadership, agricultural practices can become more inclusive, and women can have a greater say in shaping policies and practices that affect them directly. Similarly Valerio *et al* (2024) ^[25] studied the perceptions of women in agricultural research regarding women's leadership development programmes (WLDPs) which impact their career-advancement potential. The participants of this study were researchers working in agricultural research institutions in Southeast Asian and Pacific countries. The findings also revealed that the participants perceived significant improvements in their self-confidence, self-awareness, professional network and professional visibility. Mishra and Yadav (2021) ^[14] in their study revealed that emphasis should be given to women in accessing different facilities and services and a separate education

policy for women may be there. Women should be aware of their existing rights, access to judicial relief and redress, removing discrimination through legal reforms, assistance and counseling.

- **Climate-Smart Agriculture and Technology:** Introducing women farmers to climate-smart agriculture techniques and digital technologies can help them adapt to climate change and improve productivity. Mobile-based agricultural services, weather forecasting, and access to information about sustainable farming practices can help women make informed decisions and increase farm resilience. Barooah P *et al* (2023) ^[4] highlighted the constraints of getting information and access to extension services by Indian women farmers which will be helpful in adoption of Climate-Smart Agriculture practices. It will be helpful in designing gender-responsive policies and inclusive agricultural extension systems to promote adoption of Climate-Smart Agriculture practices among smallholder farmers.
- **Recognizing Women's Contributions:** The first step toward achieving gender equity in agriculture is recognizing the substantial contributions women already make to the sector. Public recognition, through awards or platforms that celebrate women in agriculture, can not only boost their confidence but also encourage more women to participate in farming and agricultural leadership. Devi and Nimbarte (2023) ^[5] emphasized that it is very much important to recognize and address the contributions of women farmers in India. This will lead in improvement of their livelihoods and also it can also contribute to food security, rural development, and the overall achievement of sustainable development goals.

Conclusion

The feminization of agriculture in India presents both significant opportunities and challenges. While increased female participation in agriculture can lead to higher productivity, better food security, economic empowerment, and advancements in gender equality, it is equally crucial to address the challenges faced by women farmers, including limited access to resources, gender biases, and the double burden of work. To fully realize the benefits of feminization, it is imperative that policy interventions focus on addressing these barriers and create an enabling environment for women to thrive in the agricultural sector. Empowering women in agriculture not only improves their own well-being but also contributes to broader national goals of economic growth, food security, and social equity. With the right investments in education, technology, land rights, and gender-inclusive policies, feminization can play a transformative role in Indian agriculture, fostering a more sustainable and inclusive agricultural future.

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