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Women in Agriculture: Roles, Contributions and the Road to Empowerment

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Women are integral to agriculture and rural economies, contributing across crop production, livestock and dairy, horticulture, fisheries, allied activities, processing, value addition, and agricultural marketing. Despite their extensive involvement, much of their work remains under-recognized and inadequately reflected in formal employment statistics. Women's agricultural participation is shaped by limited access to land, credit, technology, extension services, markets, and productive resources, along with gender-based wage disparities and increasing climate-related risks. Strengthening women's access to resources, skills, technology, institutional support, and decision-making opportunities can transform them from largely invisible workers into agricultural entrepreneurs. Empowering women is essential for improving productivity, food security, rural livelihoods, resilience, and inclusive agricultural development.

Keywords: Agriculture, Crop Production, Fisheries, Value Addition, Women Empowerment, Rural Livelihoods

Introduction

Women are integral to agriculture and rural economies, contributing across the entire agricultural value chain, from production to processing, livestock management, and marketing. Their role extends well beyond conventional crop cultivation to include activities such as seed selection, sowing, transplanting, weeding, harvesting, livestock care, dairy management, horticulture, fisheries, food processing, value addition, and agricultural marketing. Despite the importance of these activities, a substantial share of women's agricultural work remains under-recognized or excluded from formal definitions of economically active employment, even though it contributes significantly to household food security, income, and rural well-being. The changing structure of rural economies, driven by urbanization, economic transformation, and increasing male migration, is further reshaping women's participation in agriculture. As men increasingly move away from rural areas for employment, women are taking greater responsibility for farm management and agricultural production. This growing involvement is often described as the "feminization of agriculture". In South Asia, agriculture provides employment to nearly 60% of the total female working population, demonstrating its importance as a livelihood source for rural women.

Women's roles, however, differ across agricultural activities and socioeconomic groups. While some women cultivate and manage their own farms, a large proportion depend on agricultural wage labour. In India, among approximately 97.5 million rural female workers, 37.3% are cultivators, while 62.7% are agricultural labourers. Wage-dependent women are particularly vulnerable because agricultural employment is often seasonal, resulting in irregular incomes and financial insecurity. Gender-based wage disparities further

reduce the economic returns to their labour. Despite these challenges, women continue to demonstrate remarkable resilience, knowledge, and adaptability across the agricultural sector. Their participation in crop production, livestock and dairy, horticulture, fisheries, processing, value addition, and marketing makes them indispensable contributors to rural economies. Increasing access to land, credit, technology, extension services, markets, and skill development can further strengthen their productive capacity and enable them to take greater leadership in agriculture. Recognizing women not merely as agricultural labourers but as farmers, producers, entrepreneurs, innovators, and decision-makers can unlock their full potential. Empowering women in agriculture can therefore contribute to higher productivity, stronger household livelihoods, improved food and nutritional security, and a more resilient and inclusive agricultural sector.

Women in Crop Production

Women play a vital role in crop production, contributing to almost every stage of the agricultural cycle, from seed selection to post-harvest management. In many rural households, women actively participate in selecting and preserving seeds, preparing nurseries, sowing and transplanting crops, and maintaining fields throughout the growing season. Their involvement is particularly significant in labour-intensive activities such as transplanting rice, weeding, intercultural operations, and harvesting, where women often constitute a substantial share of the agricultural workforce. During harvesting, women participate in cutting, collecting, threshing, winnowing, and cleaning crops. They also play an important role in post-harvest handling, including drying, grading, sorting, storage, and preservation of grains and other agricultural produce. These activities are crucial for reducing post-harvest losses and maintaining food quality. In addition, women's traditional knowledge of seeds, crop varieties, pest management, and food preservation contributes to the sustainability and resilience of farming systems.

Women in Livestock and Dairy

Women are central to livestock and dairy production, particularly in rural households where animal husbandry provides an important source of food, income, and livelihood security. Their contribution extends across the entire livestock management cycle, including feeding and watering animals, cleaning sheds, collecting fodder, caring for calves, maintaining animal health, and assisting with breeding and reproduction. Women are also actively involved in the management of cattle, buffaloes, goats, sheep, and poultry, often combining these responsibilities with household and farm activities. Dairy production is one of the most important areas of women's involvement. Women frequently undertake daily milking, milk handling, storage, and processing into products such as curd, butter, ghee, and other value-added products. In many rural communities, livestock also acts as a form of financial security, enabling households to generate regular income from the sale of milk, eggs, meat, and animals. Women's knowledge of animal feeding, indigenous healthcare practices, and livestock care further contributes to maintaining household livestock assets.

Women in Horticulture, Floriculture and Kitchen Gardens

Women make significant contributions to horticulture, particularly in vegetable cultivation, fruit production, floriculture, nursery raising, and kitchen gardening. These activities are often labour-intensive and closely linked with household food security and rural incomes. Women participate in preparing nursery beds, selecting and sowing seeds, transplanting seedlings, weeding, irrigation, harvesting, sorting, grading, and packing horticultural produce. Their involvement is especially visible in small-scale vegetable gardens and household plots, where they help ensure a regular supply of fresh and nutritious food for the family. Women also play an important role in floriculture, participating in planting, pruning, harvesting, flower sorting, and post-harvest handling. In nursery enterprises, their work includes raising seedlings and maintaining planting material, creating opportunities for income generation and small-scale entrepreneurship. Kitchen gardens are another important area where women

combine traditional knowledge with agricultural practices to produce vegetables, fruits, herbs, and medicinal plants. Beyond production, women contribute to value addition by processing fruits and vegetables into pickles, jams, juices, dried products, and other preserved foods. Such activities can increase the value and shelf life of agricultural produce while generating additional household income.

Women in Fisheries and Allied Agricultural Activities

Women play an important but often under-recognized role in fisheries and allied agricultural activities, contributing to household income, food security, and rural employment. While men are more commonly involved in fishing and physically intensive activities, women participate extensively in post-harvest operations such as sorting, cleaning, drying, processing, packaging, storage, and marketing of fish. In many fishing communities, these activities provide women with employment opportunities and help reduce post-harvest losses. Beyond fisheries, women make substantial contributions to several allied activities, including poultry, goat and sheep rearing, piggery, beekeeping, and sericulture. In poultry production, women are often responsible for feeding birds, maintaining sheds, collecting eggs, and caring for chicks. In beekeeping and sericulture, they participate in hive management, honey processing, silkworm rearing, cocoon harvesting, and related activities. These enterprises require relatively small investments and can provide regular supplementary income for rural households. Women's involvement in allied activities is also important for livelihood diversification. By combining crop production with livestock, fisheries, poultry, or other enterprises, rural households can reduce their dependence on a single source of income and become more resilient to agricultural and climatic risks.

Processing, Value Addition and Agricultural Marketing

Women's contribution to agriculture does not end with production; they play a crucial role in transforming raw agricultural produce into food products with greater value, longer shelf life, and better market potential. At the household and community levels, women are actively involved in cleaning, grading, sorting, drying, storing, and processing cereals, pulses, fruits, vegetables, milk, and other agricultural products. Traditional practices such as making pickles, jams, papad, spices, flour, dairy products, and dried foods represent important forms of value addition that can generate additional income while reducing post-harvest losses. Women are also increasingly participating in agricultural marketing. They sell milk, vegetables, fruits, eggs, processed foods, and other products through local markets, village shops, self-help groups, cooperatives, and farmer organizations. With the expansion of digital technologies, women entrepreneurs can potentially reach consumers through online platforms and digital marketplaces, reducing dependence on intermediaries and improving access to price information. Value addition and marketing can therefore provide women with opportunities to move beyond unpaid farm labour and become income earners, entrepreneurs, and decision-makers within rural households. However, limited access to finance, storage facilities, processing equipment, transportation, market information, and formal markets continues to restrict their participation.

Workers to Agricultural Entrepreneurship

Women are not merely participants in agriculture; they are farmers, livestock managers, processors, traders, and increasingly, agricultural entrepreneurs. Despite their extensive contribution across crop production, livestock, horticulture, fisheries, processing, and marketing, much of their work remains invisible in official statistics and household decision-making. Bridging this gap requires moving from simply recognizing women's participation to strengthening their ownership, agency, and economic independence. One of the major barriers is limited access to productive resources. Women often have weaker access to land ownership, institutional credit, modern machinery, quality inputs, extension services, technology, and markets. Gender-based wage disparities further reduce the economic returns to their labour. Climate change adds another layer of vulnerability, as women with fewer

resources and greater dependence on natural-resource-based livelihoods often have limited capacity to cope with droughts, floods, heat stress, and changing rainfall patterns. The way forward lies in creating an enabling environment where women can become active decision-makers and entrepreneurs. Secure land and property rights, equal wages, affordable credit, skill development, climate-smart technologies, digital services, and gender-responsive extension programmes can significantly enhance their productive capacity. Strengthening women's participation in self-help groups, cooperatives, Farmer Producer Organizations, and agricultural enterprises can also improve access to finance and markets.



Participation of women in agricultural practices (weed management)



Participation of women in Agricultural Entrepreneurship activities (Self Help Groups)

Conclusion

Women's contribution to agriculture extends far beyond field labour, encompassing livestock management, horticulture, fisheries, processing, value addition, marketing, and emerging agricultural enterprises. Yet, despite their central role, women continue to face unequal access to land, credit, technology, extension services, markets, and decision-making, while climate change further increases their vulnerability. Recognizing women as farmers, producers, entrepreneurs, and decision-makers is therefore essential for inclusive agricultural development. Policies that ensure secure resource rights, equal wages, affordable finance, skill development, climate-smart technologies, digital access, and stronger institutional participation can enhance their economic agency. Empowering women can ultimately strengthen agricultural productivity, household food security, rural incomes, resilience, and sustainable development. Empowering women in agriculture is therefore not only a matter of social justice; it is an investment in productivity, food security, resilient rural livelihoods, and inclusive agricultural development.

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