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Extent of participation of women in selected farm and non-farm activities

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Abstract

The study entitled “Extent of Participation of Women in Selected Farm and Non-Farm Activities” was undertaken to assess the level, nature, and determinants of women’s engagement in various livelihood activities in the rural context of Maharashtra. Women play an indispensable role in sustaining agricultural and allied sectors, yet their contributions often remain undervalued and under-documented. The research was conducted during 2024-25 in Parbhani district using an ex-post facto research design. A total of 150 farm women were selected through a multistage random sampling procedure from six villages across Jintur and Selu tehsils. Primary data were collected through personal interviews using a structured and pre-tested schedule, and analyzed using frequency, percentage, mean, standard deviation, and correlation coefficients.

Results revealed that women’s participation was highest in labor-intensive and traditionally assigned farm activities such as weeding (90%), harvesting (70%), and winnowing (60%). Moderate participation was recorded in land preparation (38.67%) and cattle care (40%), while minimal involvement was observed in technically demanding or male-dominated activities such as fertilizer application (14%), irrigation (15%), and pesticide use (7%). In the non-farm sector, women were most active in home-based enterprises like pickle making (70%) and sweets/snacks preparation (74.67%), whereas participation in weaving (10.67%), tailoring (20%), and handicrafts (5.33%) remained limited. Only 10% and 3% of respondents participated in marketing of farm and non-farm products respectively, indicating restricted access to markets and decision-making domains.

Overall, the findings underscore that while rural women contribute substantially to agricultural productivity and household sustenance, their engagement remains confined to supportive and low-remunerative roles. Addressing these disparities through gender-sensitive policies, capacity building, and enhanced access to productive resources and markets is essential for realizing their full economic potential and fostering inclusive rural development.

Keywords: Women participation, farm and non-farm activities, rural livelihoods, gender roles, Maharashtra, agricultural empowerment

Introduction

India, often described as a land of villages, continues to rely heavily on its rural economy, where agriculture serves as the principal source of livelihood for a majority of the population. Despite decades of economic transformation, nearly 70 percent of Indians still reside in rural areas, and more than 60 percent depend directly on agriculture for sustenance. Agriculture in India is not merely an occupation but a way of life, shaping the cultural ethos, traditions, and socio-economic fabric of rural communities. Within this context, women constitute the backbone of the rural economy, contributing significantly to both farm and non-farm sectors (Kumar & Arya, 2019; Gupta, 2025) ^[2, 1]. Their involvement ranges from crop cultivation, livestock management, and food processing to entrepreneurship,

trade, and family care. Indeed, while 63 per cent of economically active men engage in agriculture, the figure is as high as 78 per cent for women, underscoring their central role in sustaining rural livelihoods.

Historically, women have functioned as cultivators, co-farmers, laborers, and even farm managers (Shah, Lahiri-Dutt & Pattnaik, 2022) ^[5], performing arduous tasks from sowing seeds to harvesting crops, while also balancing domestic responsibilities. Yet, despite their heavier workload and indispensable role in food production, they are often marginalized, underpaid, and denied equal access to resources such as land, credit, and technology. Their multiple roles in agricultural production, household management, and rural enterprises remain largely unrecognized in a male-dominated society (Discover

Sustainability Review, 2024)^[6], leaving them excluded from many mainstream development initiatives. Consequently, rural women emerge as one of the most vulnerable groups, disproportionately affected by poverty, resource constraints, and socio-cultural barriers.

Participation of women in farm and non-farm activities is shaped by both push and pull factors (Renu, 2023)^[3]. Financial necessity frequently pushes women from low-income families into labor markets to supplement household earnings, whereas education, skills, and entrepreneurial opportunities act as pull factors, attracting women towards income-generating activities beyond agriculture. Notably, studies show that women with higher education and better economic standing are more likely to participate in non-farm enterprises and contribute to decision-making processes. However, across both domains, women encounter persistent gender inequalities manifested in wage disparities, unequal workload distribution, limited mobility, and restricted access to institutional support (Gupta, 2025; Godara & Varsha, 2021)^[1, 7].

As India progresses towards rural transformation, the need to acknowledge and strengthen women's participation in both farm and non-farm sectors becomes increasingly urgent. Their involvement not only ensures household survival but also contributes to community resilience, poverty reduction, and national development. Recognizing this potential requires dismantling structural barriers through inclusive policies, targeted capacity building, and improved access to productive resources. Furthermore, global evidence highlights that bridging the gender gap in agriculture and allied activities could significantly enhance productivity and food security.

In this light, the present study, titled "*Extent of Participation of Women in Selected Farm and Non-Farm Activities*," has been undertaken to examine the nature, level, and determinants of women's engagement in diverse livelihood avenues. The study also seeks to understand their role in household decision-making and the constraints that limit their participation. Findings from this research will serve as a valuable input for designing gender-sensitive rural development strategies and for empowering women as equal economic agents in the ongoing journey of India's inclusive growth.

Materials and Methods

The present study entitled "*Extent of Participation of Women in Selected Farm and Non-Farm Activities*" was conducted during 2024-25 in Parbhani district of Maharashtra, selected purposively as no earlier work had been reported in this specific area. A multistage sampling technique was adopted wherein Jintur and Selu tehsils were randomly chosen, followed by the random selection of three villages from each tehsil, making a total of six villages. From each village, twenty-five respondents were selected, constituting a total sample size of 150 farm women. An Ex-post facto research design was employed, as the independent variables had already exerted their influence. Data were collected during March-April 2025 using a structured and pre-tested interview schedule developed in consultation with experts, reviewed literature, and pre-tested on 25 non-sampled respondents to ensure clarity and reliability. The interviews, conducted personally in Marathi, lasted for about 20-30 minutes each. Collected data were classified, tabulated, and coded, with qualitative responses converted into quantitative scores. The study considered independent variables such as age, education, landholding, occupation, household income, caste, marital status, family type, and housing type, while the dependent variable was the extent of participation of women in selected farm and non-farm activities. Statistical tools like frequency, percentage, mean, standard deviation, and correlation coefficient were employed to describe the characteristics of respondents and to analyze the relationship between independent variables and women's participation.

Results and Discussion

Extent of Participation of Women in Selected Farm and Non-Farm Activities

The participation of women in farm and non-farm activities is a crucial aspect of rural livelihoods. This study aims to investigate the extent of women's involvement in selected agricultural and allied activities. The following table presents the findings, categorizing women's participation into "always," "sometimes," and "never" for various farm and non-farm activities. Table 1 presents the extent of participation of women in selected farm and non-farm activities.

Table 1: Extent of participation of women in selected farm and non-farm activities

Sr. No.	Item of Operation	Always (f)/(%)	Sometimes (f)/(%)	Never (f)/(%)	Total
I) Farm Activities					
1.	Land Preparation	58 (38.67%)	81 (54%)	11 (7.33%)	150 (100%)
2.	Applying Measure and Fertilizer	21 (14%)	22 (14.67%)	107 (71.33%)	150 (100%)
3.	Nursery raising	30 (20%)	15 (10%)	105 (70%)	150 (100%)
4.	Transplanting	31 (20.67%)	22 (14.67%)	97 (64.67%)	150 (100%)
5.	Applying insecticides	10 (6.67%)	2 (1.33%)	138 (92%)	150 (100%)
6.	Weeding	135 (90%)	8 (5.33%)	7 (4.67%)	150 (100%)
7.	Irrigation or water management	22 (14.67%)	36 (24%)	92 (61.33%)	150 (100%)
8.	Harvesting	105 (70%)	30 (20%)	15 (10%)	150 (100%)
9.	Winnowing	90 (60%)	35 (23.33%)	25 (16.67%)	150 (100%)
10.	Storage of grain	45 (30%)	30 (20%)	75 (50%)	150 (100%)
11.	Care and maintenance of poultry	22 (14.67%)	15 (10%)	113 (75.33%)	150 (100%)
12.	Cleaning of poultry shed	2 (16.67%)	15 (10%)	110. (73.33%)	150 (100%)
13.	Care and maintenance of cattle	60 (40%)	38 (25.33%)	52 (34.67%)	150 (100%)
14.	Cleaning of farm shed	45 (30%)	45 (30%)	60 (40%)	150 (100%)
15.	Marketing of Farm product	15 (10%)	38 (25.33%)	97 (64.67%)	150 (100%)

II) Non- farm Activities					
16.	Weaving	16 (10.67%)	18 (12%)	116 (77.33%)	150 (100%)
17.	Tailoring	30 (20%)	45 (30%)	75 (50%)	150 (100%)
18.	Pickle making	105 (70%)	30 (20%)	15 (10%)	150 (100%)
19.	Handicraft product making	8 (5.33%)	37 (24.66%)	105 (70%)	150 (100%)
20.	Sweet and snacks preparation	112 (74.67%)	27 (18%)	11 (7.33%)	150 (100%)
21.	Marketing of non- farm products	5 (3.33%)	15 (10%)	130 (86.67%)	150 (100%)

The data are expressed in terms of percentage distribution of respondents under three categories - “Always”, “Sometimes”, and “Never” - based on their self-reported frequency of involvement during the reference period. “Always” refers to consistent and regular participation in the activity, “Sometimes” denotes occasional or seasonal involvement and “Never” indicates complete non-involvement.

1.1. Farm Activities

1. Land Preparation

Findings indicate that 38.67 per cent of respondents consistently engaged in land preparation, 54 per cent participated occasionally, and only 7.33 per cent reported no involvement. This suggests a relatively high level of participation, with over nine out of ten women contributing at some point. High involvement is likely because land preparation requires significant labour input at the start of the agricultural season, compelling households to mobilize all members. Comparable trends are noted in other rural studies, where women actively assist in preparatory farm operations-often alongside male family members-though their input in related decision-making is less visible.

2. Application of Measure and Fertilizer

Participation was low only 14 per cent always and 14.67 per cent sometimes applied manure and fertilizer, while 71.33 per cent had no involvement. This may result from a division of labour in which men or external service providers typically handle nutrient management or from restricted access to agricultural inputs, knowledge, and financial resources. Such limitations are well-documented, with women’s participation shaped by their access to resources, extension services, and decision-making rights.

3. Nursery Raising

Only 20 per cent of respondents were regularly involved in nursery raising, 10% occasionally, and 70 per cent not at all. This low engagement could be due to the technical requirements of nursery management, seasonality, and the need for specific skills or capital investment. Nursery activities may thus be concentrated in households with the necessary resources or prior experience.

4. Transplanting

Transplanting saw 20.67 per cent regular and 14.67 per cent occasional participation, with 64.67 per cent not involved. While transplanting is often performed by women for certain crops in smallholder systems, the moderate figures here could be due to mechanization, outsourcing to hired labour, or gendered work divisions where men take on this role.

5. Application of Insecticides

Insecticide application had the lowest engagement, with 92 per cent never participating and only (6.67%) involved regularly. This is likely due to health concerns, lack of training, limited access to protective gear, and cultural norms assigning pesticide handling to men. The potential risks associated with chemical use may further discourage women’s participation.

6. Weeding

Weeding recorded highest regular participation, Weeding recorded the highest regular participation, with 90 per cent of women always engaged (Singh, Gautam & Singh, 2022) [4]. This confirms literature identifying it as a labor-intensive, routine task typically performed by women. Its repetitive nature and necessity for crop maintenance explain its dominance in women’s workloads, though it can contribute to seasonal time pressures and even affect women’s nutritional status.

7. Irrigation and Water Management

Only 14.67 per cent always and 25.5 sometimes participated in irrigation, while 61.33 per cent involvement. This may be due to gender norms, infrastructure requirements, and institutional barriers that restrict women’s access to water-related decision-making. Control of irrigation systems is often male-dominated, limiting women’s direct participation.

8. Harvesting

Harvesting had high female participation, with 70 per cent always and 20 per cent sometimes involved. This is expected, as harvesting is time-sensitive and requires high labor mobilization, with women playing a key role in ensuring timely crop collection.

9. Winnowing

Sixty per cent always and 23.66 per cent sometimes engaged in winnowing. Post-harvest processing is traditionally a women’s domain, providing critical contributions to household food security and income generation. This high involvement is due to the skill-based nature of winnowing and its importance in value addition.

10. Grain Storage

Thirty per cent always stored grain, 20 per cent sometimes, and 50 per cent never participated. This may be influenced by household role divisions, access to proper storage facilities, and knowledge of storage methods. Grain storage reduces post-harvest losses, but women’s involvement may be higher in households where they control stored

11. Poultry Care and Maintenance

Only 16.67 per cent regularly cared for poultry, 10.33 per cent occasionally, and 75.33 per cent never. This contrasts with many studies where poultry is a common women-led activity. Low engagement here may be due to limited poultry ownership, low profitability perceptions, or alternative livelihood preferences.

12. Cleaning Poultry Sheds

Participation was similarly low, with 16.67 per cent always and 10 per cent sometimes cleaning sheds. This may be due to smaller poultry flock sizes or household role allocation, despite the critical importance of hygiene for livestock health.

13. Cattle Care and Maintenance

Cattle care had higher participation 40 per cent always and 25.33 per cent sometimes-highlighting livestock's role in providing manure, draft power, a However, in many cases, control over cattle benefits remains with me.

14. Cleaning Farm Sheds

Thirty percent always and 30 per cent sometimes cleaned farm sheds, with 40 per cent not involved. This likely reflects shared or rotational maintenance responsibilities within households.

15. Marketing Farm Products

Only 10 per cent regularly marketed farm products, 25.33 per cent occasionally, and 64.67 per cent never. Limited mobility, low bargaining power, and inadequate market access are key constraints to women's market participation

1.2. Non-farm Activities

16. Weaving (Non-farm)

Weaving was rare, with 77.33 per cent never involved. This low rate may be due to declining traditional skills, difficulty sourcing raw materials, and poor market access.

17. Tailoring

Tailoring had moderate engagement 20 per cent regular, 30 per cent occasional-offering a flexible and skill-based income opportunity for women.

18. Pickle Making

Seventy percent always participated in pickle making, highlighting its role in home-based food preservation and income generation. Such activities form part of women's livelihood diversification strategies.

19. Handicrafts

Only 5.33 per cent always and 24.66 per cent sometimes engaged in handicraft production, possibly due to low demand, lack of training, or minimal linkage with buyers.

20. Sweets and Snacks Preparation

Three-quarters of respondents always prepared sweets/snacks, an activity that supports both household nutrition and small-scale commercialization.

21. Marketing Non-farm Products

Only 3.33 per cent regularly marketed non-farm products,

while 86.67 per cent never participated. Barriers include mobility restrictions, lack of buyer contacts, and absence of market. The results show that women are heavily involved in labour-intensive, routine farm tasks (weeding, harvesting, winnowing) and home-based processing (pickle making, sweets/snacks), but less engaged in activities requiring technical inputs, capital, or market access (fertilizer application, irrigation, marketing). This reflects a broader gender division of labour documented in agricultural research, where women's execution-level roles are strong, but their decision-making and control over productive resources remain limited (Shah *et al.*, 2022; Godara & Varsha, 2021)^[5, 7].

Conclusion

The study on the extent of participation of women in selected farm and non-farm activities revealed that rural women play a crucial yet varied role across different domains of agricultural and allied work. Their participation was found to be highest in labor-intensive and traditionally assigned tasks such as weeding (90%), harvesting (70%), winnowing (60%), and pickle/sweet preparation (70-75%). These activities highlight women's central role in ensuring household food security and contributing to farm productivity. However, their involvement was limited in technically demanding or male-dominated areas such as fertilizer application (14%), insecticide use (7%), irrigation (15%), and marketing of farm (10%) and non-farm produce (3%), indicating restricted access to resources, decision-making, and exposure to external markets.

In non-farm activities, women showed considerable engagement in home-based enterprises like tailoring (20%), pickle making (70%), and sweet/snack preparation (75%), reflecting both cultural familiarity and income-generation potential. Conversely, participation in handicrafts (5%) and weaving (10%) was minimal, pointing to a lack of skills, resources, or economic incentives.

Overall, the findings suggest that women are indispensable contributors in agriculture and allied activities, but their involvement remains concentrated in supportive and household-oriented roles rather than in decision-making, market-oriented, or technically intensive activities. Strengthening women's access to knowledge, training, technology, and markets can significantly enhance their contributions (Discover Sustainability Review, 2024; Gupta, 2025)^[6, 1], leading to improved livelihoods and socio-economic empowerment.

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