

## Role of Women in Indian Agriculture (1950–2025): An Overview

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### Abstract

*Women play a central yet under acknowledged role in Indian agriculture. Over the last seven decades (1950–2025), structural changes in the agricultural sector, economic reforms, technology, migration, and education have reshaped their participation. This paper provides a comprehensive assessment of women’s contributions as cultivators and agricultural laborers, their educational progress, and implications for policy. Using historical data, national surveys, and projections, it charts trends in women’s agricultural participation, interprets shifts in roles, and analyzes key socio economic factors. The study also evaluates policy frameworks and recommends actionable measures to strengthen women’s position in Indian agriculture, emphasizing access to land, credit, mechanization, extension services, training, and social security. The findings underline that despite progress in education and empowerment, women continue to shoulder disproportionate unpaid work and face structural barriers that inhibit productivity, income, and agency in farming decisions.*

*Key words:* Women, Indian Agriculture, empowerment, agricultural sector, economic reforms

### Introduction

Agriculture has long been the backbone of the Indian economy, employing a significant share of the workforce and contributing to food security and rural livelihoods. Within this sector, women form a substantial, yet frequently invisible, component of the labor force. Historically, Indian women have engaged in sowing, weeding, harvesting, livestock care, post-harvest processing, and household food security tasks. However, patriarchal land ownership norms, limited access to resources, and measurement biases in official workforce statistics have often underreported their contributions.

Since India’s independence in 1947, the agricultural landscape has evolved through the Green Revolution, liberalization in the 1990s, and technological advancement in the 21st century. These transformations have had mixed impacts on

women’s roles. Mechanization reduced drudgery for certain operations but also displaced women in tasks like sowing and harvesting. Meanwhile, male out migration from rural areas increased women’s responsibilities on family farms.

Understanding women’s roles in agriculture is critical for designing gender responsive policies that enhance productivity, ensure equity, and promote rural development. This paper examines changes in women’s agricultural participation from 1950 to 2025, identifies trends, explores drivers of change, and offers policy recommendations.

### Objective

The primary objectives of this research are:

1. To document trends in women’s participation in Indian agriculture from 1950 to 2025.

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2. To analyze changes in roles as cultivators, laborers, and contributors to farm and allied activities.
3. To assess socio economic factors influencing women’s agricultural engagement, including education, mechanization, and migration.
4. To interpret implications of these trends for productivity, income, and gender equity in agriculture.
5. To propose policy recommendations for strengthening women’s participation and welfare in agricultural systems.

increased from 32% in 1950 to 44% in 2025, reflecting the growing feminization of agriculture. However, the proportion of women cultivators declined from 27% in the 1970s–1980s to 22% in 2025, indicating reduced land ownership and decision-making roles. In contrast, women agricultural laborers rose sharply from 35% to 46%, highlighting increasing dependence on wage labor. This trend underscores gender inequality in access to land, assets, and secure livelihoods within Indian agriculture.

**Methodology**

**Data Sources:**

- This research uses secondary data from:
- \* Census of India rural workforce statistics
- \* National Sample Survey Office (NSSO) employment surveys
- \* National Family Health Survey (NFHS)
- \* Ministry of Agriculture & Farmers Welfare reports
- \* FAO and World Bank gender and labor reports
- \* Published research articles and journals on gender in agriculture

**Time Frame:**

The study covers 1950–2025, divided into decadal intervals to capture long term trends.

**Indicators Used**

**Socio economic factors influencing women’s agricultural Food Production**

Table 2. highlights the strong influence of socio-economic factors particularly land ownership and education on women’s contribution to agricultural food production in India from 1950 to 2025. In 1950, women owned only 5% of land and rural female literacy was extremely low (8%), yet women already contributed 35% to food production, reflecting their heavy involvement as unpaid family labor. Over time, gradual improvements in women’s land ownership from 5% in 1950 to 15% in 2025 have enhanced their decision-making power, access to credit, and adoption of improved farming practices. A sharp rise in rural female literacy, especially after

Indicator	Definition
Female Share of Agricultural Workforce (%)	Proportion of female agricultural workers within total agricultural workforce
Women Cultivators (%)	Women engaged in land cultivation
Women Agricultural Laborers (%)	Women working as hired agricultural labor
Female Literacy in Rural Areas (%)	Percentage of rural women who can read and write

**Data Analysis**

Descriptive statistical techniques were used to analyze trends. A multibar graph was created to visually compare changes across key indicators over time. Interpretation focused on socio economic drivers, gender norms, and policy context.

**Results and Discussion**

**Trends in Women’s Participation (1950–2025)**

The table 1 shows a steady rise in women’s participation in Indian agriculture from 1950 to 2025. The female share of the agricultural workforce

1990, has further strengthened women’s skills, productivity, and awareness of modern agricultural techniques. Consequently, women’s contribution to food production steadily increased to 52% by 2025. Overall, the table shows that expanding women’s land rights and education are crucial for boosting agricultural productivity, food security, and inclusive rural development.

Table 1: Women in Indian Agriculture (1950–2025)

Year	Female Share of Agricultural Workforce (%)	Women Cultivators (%)	Women Agricultural Laborers (%)
1950	32	25	35
1960	34	26	36
1970	35	27	36
1980	36	27	37
1990	38	26	39
2000	40	25	41
2010	42	24	43
2020	43	23	45
2025*	44	22	46

Sources: Government reports and FAO

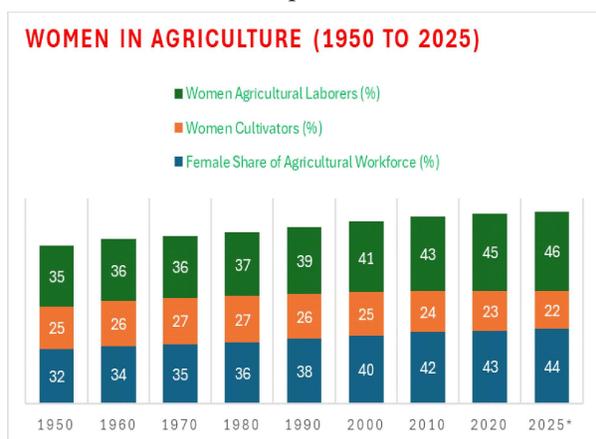


Figure: 1

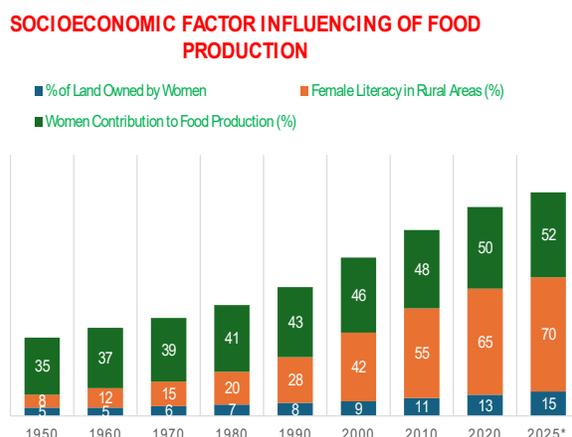


Figure: 2

Table 2: Socio economic factors influencing women’s agricultural Food Production, including education & land holding

Year	% of Land Owned by Women	Female Literacy in Rural Areas (%)	Women Contribution to Food Production (%)
1950	5	8	35
1960	5	12	37
1970	6	15	39
1980	7	20	41
1990	8	28	43
2000	9	42	46
2010	11	55	48
2020	13	65	50
2025*	15	70	52

Sources: Government reports, FAO & Census of India

\*Projections based on 2020 trends and national education goals

**Women’s participation in allied agricultural sectors**

The table 3 highlights the extensive participation of women across India’s agricultural and allied sectors, underscoring their central role in rural livelihoods. Women constitute about 65% of the agricultural workforce, reflecting their dominance in crop-related activities. Their involvement is even higher in dairy farming (70–85%) and livestock management (around 70%), where they handle daily animal care, feeding, and processing. In fisheries, women’s participation reaches about (44-72%), particularly in inland and post-harvest activities. Horticulture shows a variable but significant share (33–64%), indicating growing engagement in high-value crops. Overall, the data reveals women as the backbone of allied agriculture, though often under-recognized and under-supported.

Table 3: Women’s participation in allied agricultural sectors (India)

Sector	Approximate women’s share (%)
Agriculture	65%
Dairy farming	70–85%
Livestock (other)	70%
Fisheries	44-72%
Horticulture	33–64%

Sources: Government reports, FAO, Industry surveys & Census of India

*Policy and Recommendations*

**1. Land Rights and Ownership**

- \* Issue: Women often act as de facto farm managers but are not recorded as landowners.
- \* Recommendation: Reform land titling so spouses are joint landowners, thereby increasing access to credit and investments.

**2. Access to Credit and Inputs**

- \* Issue: Women face limited access to formal credit, mechanization, and quality inputs.
- \* Recommendation: Expand women centric credit schemes and subsidized access to machinery (e.g., seeders, transplanter) and climate resilient technologies.

**3. Agricultural Extension and Training**

- \* Issue: Extension services are male biased in delivery and timing.
- \* Recommendation: Recruit and train gender aware extension agents, provide flexible training schedules, and launch digital platforms targeting women farmers.

**4. Social Protection and Safety Nets**

- \* Issue: Women laborers lack social security and predictable incomes.
- \* Recommendation: Strengthen programs like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) with dedicated quotas for women and integrate pension and insurance benefits.

**5. Education and Skill Development**

- \* Issue: Though literacy is rising, technical agricultural education for women remains low.
- \* Recommendation: Promote agriculture vocational training centers for women, integrating business skills and market linkages.

**6. Recognition and Data Inclusion**

- \* Issue: Official data underreports women’s contribution, especially in unpaid work.
- \* Recommendation: Revise labor surveys to include time use data and recognize women as farm decision makers.

**Conclusion**

The role of women in Indian agriculture has evolved significantly from 1950 to 2025. While their share in the agricultural workforce has increased, the nature of participation reflects structural challenges. Women continue to be key contributors, especially as laborers and de facto managers, but have limited access to land, resources, and decision making authority. Improvements in literacy and education bring promise for future empowerment, yet institutional barriers persist.

Addressing these requires a gender responsive agricultural strategy that ensures equitable access to land, credit, technology, training, and social protections. Reimagining agriculture policy with gender at its core will not only improve women’s livelihoods but will enhance productivity and sustainability in Indian agriculture as a whole.

**References**

- Government of India, Ministry of Agriculture & Farmers Welfare. (Various Years). *Agricultural Statistics at a Glance*.
- Census of India, Workforce Participation Data (1951-2011).
- NSSO (National Sample Survey Office) Reports on Employment and Unemployment (Various Rounds).
- NFHS (National Family Health Survey) Reports - Women's Literacy and Education Levels.
- FAO. (2011). *The State of Food and Agriculture- Women in Agriculture*. Food and Agriculture Organization of the United Nations.
- World Bank. (2019). *World Development Report: The Changing Nature of Work*.
- Doss, C., et al. (2011). Gender inequalities in ownership and control of land in Africa-but frequently overlooked in India. *Journal of Development Studies*.
- Agarwal, B. (1994). *A Field of One's Own: Gender and Land Rights in South Asia*. Cambridge University Press.
- Kaur, N. (2018). "Women and Agricultural Work in India: A Review of Trends and Evidence." *Indian Journal of Agricultural Economics*.
- Singh, S. and Singh, G (2021). "Role of Women Labour in Indian Agriculture and Allied Sectors." *International Journal of Social Science and Economic Research*.