



# SOCIO-ECONOMIC CHALLENGES AND CONTRIBUTIONS OF WOMEN AGRICULTURAL LABOURERS IN NILGIRIS DISTRICT, TAMILNADU

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## ABSTRACT

Women plays a pivotal role in Indian agriculture and constitute a significant part of the agricultural labour force. This study explores the socio-economic conditions, work participation patterns and challenges faced by women agricultural labourers in Ooty, Nilgiris district. Primary data were collected from 51 women agricultural labours using structured questionnaires and interviews between December 2024 and February 2025. The findings reveal that the majority of women agricultural labours work in tea plantations, with limited participation in vegetable farming or both. Educational attainment varies across age groups, with older women being more likely to be illiterate. Key challenges include long working hours, health issues, adverse climatic conditions and difficulty balancing domestic responsibilities with agricultural work. Financial assistance emerged as the most critical factor for productivity, while access to technology remains minimal. The study underscores the need for gender-sensitive agricultural policies, improved technological access, and targeted support systems to enhance the well-being and productivity of women agricultural workers in hilly regions.

**KEY WORDS:** Women, Gender Disparity, Rural Labour, Wage Gap, Productivity, Socio-economic Challenges

## I. INTRODUCTION

Agriculture remains the backbone of India's economy, employing over 50% of the population and contributing around 15% to the national GDP. Within this sector, women play an indispensable role, particularly in rural areas where they make up 33 to 42 percent of the agricultural labour force, engaging in tasks such as sowing, weeding, planting, harvesting and post-harvest processing. States like Tamil Nadu, Kerala, and West Bengal see even higher female participation in rural economy. Despite their critical contributions, women agricultural labourers face systemic marginalization—including wage disparities, lack of land ownership and limited access to credit, technology, training and exclusion from decision-making. Their work remains largely informal and unorganized, reinforcing their economic vulnerability. With the ongoing changes in agriculture driven by mechanization, climate change, and migration, empowering women through inclusive policies, skill development and access to resources is essential for ensuring both gender equity and the sustainability of Indian agriculture.

## II. OBJECTIVES OF THE STUDY

1. To analyze the socio-economic condition of women agriculture labours in Nilgiris district, Tamilnadu with a focus on tea plantations and vegetable farming.
2. To identify the key challenges faced by women agriculture labours.

## III. METHODOLOGY

Random sampling technique was utilized to gather data from women agricultural labours. The study relies on primary data collected through a survey conducted among women agricultural labours in Ooty, Nilgiris district. Data collection took place from December 2024 to February 2025. A preliminary survey was conducted using a structured questionnaire and an interview schedule. A total of 51 samples were collected.



**Tools of Analysis**

- Mean
- Chi square
- ANOVA

**IV. REVIEW OF LITERATURE**

**Ritu Shah et. al., (2019)** A survey of 200 tribal farm women in Chamoli and Dehradun, Uttarakhand, found that 46% were young, 34.5% had primary education, and 73.5% depended on agriculture as their main occupation. Most (58.5%) belonged to nuclear families, 62% were marginal farmers with less than 2.48 acres, and 61% had small families. Farming was mainly chosen due to family occupation, with timely access to quality seeds and inputs adding appeal. Nearly half (48%) had low farming experience. **Hema Srikumar et. al., (2019)** The study aims to analyse the constraints faced by tribal women in agriculture operations and developmental programs in India. Tribal women, who make up half of the workforce, face discrimination, lack access to modern farm technologies, and traditional values. They play a vital role in agricultural management and production activities but are lagging most development indicators. The study suggests a strategic approach to improve living conditions for tribal farm women by exploring natural resources, mainstreaming women in agriculture to address income generation issues, and promoting information dissemination for increased production and self-reliance.

**V. RESULTS AND DISCUSSION**

**Table 1: Education Qualification of the Respondents**

Age	Educational Qualification				Total
	Illiterate	Primary	Secondary	Higher secondary	
<b>30-45</b>	0 (0.00) [0.00]	1 (10.00) [11.10]	3 (30.00) [15.00]	6 (60.0) [60.00]	10 (100.00) [20.00]
<b>46-60</b>	4 (15.40) [36.40]	8 (30.80) [88.90]	10 (38.50) [50.00]	4 (15.40) [40.00]	26 (100.00) [52.00]
<b>61-75</b>	7 (50.00) [63.60]	0 (0.00) [0.00]	7 (50.00) [35.00]	0 (0.000) [0.00]	14 (100.00) [28.00]
<b>Total</b>	11 (22.00) [100.00]	9 (18.00) [100.00]	20 (40.00) [100.00]	10 (20.00) [100.00]	50 (100.00) [100.00]
<b>Chi Square</b>	<b>24.629<sup>***</sup></b>				

**Source:** Primary survey

**Note:** \*\*\*1 percent level of significance, \*10 percent level of significance, <sup>NS</sup> not significant

Figures in ( ) parenthesis denotes row-wise percentage, [ ] parenthesis denotes column-wise percentage

Table 1 shows that most respondents aged 30–45 years had higher secondary education (60%), while those 46–60 years mainly had secondary education (38.5%). Illiteracy was highest among the 61–75 age group (50%), highlighting their educational vulnerability. A Chi-square value of 24.629, significant at the 1% level, confirms that education levels vary significantly with age, with the elderly being the most disadvantaged.

**Table 2: Type of Agricultural Works**

Age Group	Agricultural Work			Total
	Tea Plantation	Vegetable Farming	Both	
30 - 45	11 (100) [24.4]	0 (0) [0]	0 (0) [0]	11 (100) [21.6]
46 - 60	23 (88.5) [51.1]	1 (3.8) [100]	2 (7.7) [40]	26 (100) [51]
61 - 75	11 (78.6) [24.4]	0 (0) [0]	3 (21.4) [60]	14 (100) [27.5]
<b>Total</b>	45 (88.2) [100]	1 (2) [100]	5 (9.8) [100]	51 (100) [100]
<b>Chi Square</b>	<b>4.409<sup>NS</sup></b>			

*Source:* Primary survey

*Note:* \*\*\*1 percent level of significance, \*10 percent level of significance, <sup>NS</sup> not significant  
 Figures in ( ) parenthesis denotes row-wise percentage, [ ] parenthesis denotes column-wise percentage.

Table 2 examines the type of agricultural work performed by women agricultural laborers. It shows that most women across all age groups work in **tea plantations (88.2%)**, with minimal involvement in **vegetable farming (2%)** or **both (9.8%)**. Younger women (30–45) work exclusively in tea plantations, while older women (61–75) show more involvement in both activities (21.4%), indicating a heavier workload. The **Chi-square value (4.409)** is **not significant**, meaning there is no strong association between age and type of agricultural work, though older women tend to have more diverse roles.

**Table 3: Work Segregation and Wage Disparities by Women Agricultural Labourers**

Age Group	Segregation of Work		Total	Wage Discrimination		Total
	Alongside Men	Tasks Segregated		Yes	No	
30-45	1 (9.1) [20]	10 (90.9) [21.7]	11 (100) [41.7]	11 (100) [22]	0 (0) [0]	11 (100) [21.6]
46-60	3 (11.5) [60]	23 (88.5) [50]	26 (100) [51]	25 (96.2) [50]	1 (3.8) [100]	26 (100) [51]
61-75	1 (7.1) [20]	13 (92.9) [28.3]	14 (100) [48.3]	14 (100) [28]	0 (0) [0]	14 (100) [27.5]
<b>Total</b>	5 (9.8) [100]	46 (90.2) [100]	51 (100) [100]	50 (98) [100]	1 (2) [100]	51 (100) [100]
<b>Chi Square</b>	<b>.207<sup>NS</sup></b>			<b>.981<sup>NS</sup></b>		

*Source:* Primary survey

*Note:* \*\*\*1 percent level of significance, \*10 percent level of significance, <sup>NS</sup> not significant  
 Figures in ( ) parenthesis denotes row-wise percentage, [ ] parenthesis denotes column-wise percentage.

Table 3 indicates that tea plantation is the predominant agricultural work across all age groups, accounting for 88.2% of total respondents. The 30–45 age group is entirely engaged in tea plantations (100%), while the 46–60 age group also shows high involvement (88.5%), with minor participation in vegetable farming (3.8%) and both activities (7.7%). Notably, the 61–75 age group has 21.4% engaged in both types of work indicating a heavier



workload and possibly greater economic vulnerability. However, the Chi-square value (4.409) is not statistically significant, implying no strong association between age group and type of agricultural work, even though elderly respondents appear more burdened.

**Table 4: Problems Faced by Women Agricultural Labours**

Age Group	Physical Challenges in Agriculture			Total	Climatic Challenges			Total
	Heavy Workload	Long Working Hours	Health Issues		Unpredictable Rainfall	Soil Erosion	Frost or Cold Weather	
30-45	0 (0) [0]	7 (63.6) [29.2]	4 (36.4) [22.2]	11 (100) [21.6]	1 9.1 14.3	2 (18.2) [16.7]	8 (72.7) [25]	11 (100) [21.6]
46-60	6 (23.1) [66.7]	11 (42.3) [45.8]	9 (34.6) [50]	26 (100) [51]	2 7.7 28.6	5 (19.2) [41.7]	19 (73.1) [59.4]	26 (100) [51]
61-75	3 (21.4) [33.3]	6 (42.90) [25]	5 (35.7) [27.8]	14 (100) [27.5]	4 (28.6) [57.1]	5 (35.7) [41.7]	5 (35.7) [15.6]	14 (100) [27.5]
<b>Total</b>	9 (17.6) [100]	24 (47.1) [100]	18 (35.3) [100]	51 (100) [100]	7 13.7 100	12 (23.5) [100]	32 (62.7) [100]	51 (100) [100]
<b>Chi Square</b>	<b>3.316</b>				<b>0.16</b>			

Source: Primary survey

Note: \*\*\*1 percent level of significance, \*10 percent level of significance, <sup>NS</sup> not significant

Figures in ( ) parenthesis denotes row-wise percentage, [ ] parenthesis denotes column-wise percentage.

Table 4 highlights various challenges experienced by women agricultural labourers across different age groups. long working hours emerged as the most common physical challenge, while soil erosion and unpredictable rainfall were the leading climatic issues. Younger women (30–45) mainly faced long working hours and rainfall variability, the middle group (46–60) reported both heavy workload and soil erosion, and the elderly (61–75) struggled with health issues along with rainfall and frost. The Chi-square tests (3.316 for physical and 0.16 for climatic challenges) were non-significant, suggesting that challenges were broadly similar across age groups despite slight variations.

**Table 5: Productivity, Resource use Efficiency and Motivation to Stay in Agriculture by the Respondents**

Age Group	Resources for Improving Agricultural Productivity		Total	Motivation to Stay in Agriculture			Total
	Access to Technology	Financial Assistance		Tradition	Income Source	Lack of Alternatives	
30-45	0 (0) [0]	11 (100) [22]	11 (100) [21.6]	0 (0) [0]	9 (81.8) [23.1]	2 (18.2) [18.2]	11 (100) [21.6]
46-60	1 (3.8) [100]	25 (96.2) [50]	26 (100) [51]	1 (3.8) [100]	21 (80.8) [53.8]	4 (15.4) [36.4]	26 (100) [51]
61-75	0 (0) [0]	14 (100) [28]	14 (100) [27.5]	0 (0) [0]	9 (64.3) [23.1]	5 (35.7) [45.5]	14 (100) [27.5]
<b>Total</b>	1 (2) [100]	50 (98) [100]	51 (100) [100]	1 (2) [100]	39 (76.5) [100]	11 (21.6) [100]	51 (100) [100]
<b>Chi Square</b>	<b>.981<sup>NS</sup></b>			<b>3.156<sup>NS</sup></b>			

Source: Primary survey

Note: \*\*\*1 percent level of significance, \*10 percent level of significance, <sup>NS</sup> not significant

Figures in ( ) parenthesis denotes row-wise percentage, [ ] parenthesis denotes column-wise percentage.



Table 5 shows that financial assistance is the main support for women farmers, with 98% depending on it, while access to technology is almost absent. Older women (61–75) rely more on assistance due to fewer livelihood options, while the 46–60 group is most active and dependent on farming but remains vulnerable due to limited technology and job alternatives. Although Chi-square results are insignificant, the findings highlight heavy reliance on financial aid and weak technological support across all age groups.

**Table 6: Government Programs for Women Agricultural Labours**

Age Group	Effectiveness of Government Programs for Women in Agriculture		Total
	Yes	No	
30-45	0 (0) [0]	11 (100) [22.4]	11 (100) [21.6]
46-60	1 (3.8) [50]	25 (96.2) [51]	26 (100) [51]
61-75	1 (7.1) [50]	13 (92.9) [26.5]	14 (100) [27.5]
<b>Total</b>	2 (3.9) [100]	49 (96.1) [100]	51 (100) [100]
<b>Chi Square</b>	<b>.835<sup>NS</sup></b>		

*Source:* Primary survey

*Note:* \*\*\*1 percent level of significance, \*10 percent level of significance, <sup>NS</sup> not significant  
Figures in ( ) parenthesis denotes row-wise percentage, [ ] parenthesis denotes column-wise percentage.

Table 6 shows that the majority of respondents across all age groups perceive government programs for women in agriculture as ineffective, with 96.1% of total respondents answering "No." The 30–45 age group reports no positive responses, with 100% perceiving the programs as ineffective. The 46–60 age group has a small percentage (3.8%) responding positively, while the 61–75 age group shows a slightly higher percentage (7.1%) finding the programs effective. However, the Chi-Square value of 0.835 indicates that there is no statistically significant association between age group and the perceived effectiveness of government programs, suggesting that age does not influence perceptions of government program effectiveness, even though older respondents show a slightly higher tendency to view the programs as effective.

### Major Findings

1. A vast majority (88.2%) of women are engaged in **tea plantation work**, with minimal involvement in vegetable farming or both.
2. The **30–45 age group** is entirely engaged in tea plantations, while older women (61–75) show slightly more diversification, participating in both types of farming.
3. **Illiteracy is highest (50%)** among women aged 61–75, highlighting generational disparities in educational access.
4. The younger group (30–45 years) shows relatively better educational attainment, with 60% completing higher secondary education.
5. Although the majority (90.2%) reported **segregation of work** from men, only 2% acknowledged wage discrimination, suggesting limited awareness or acceptance of wage gaps.
6. **Physical challenges** like long working hours (47.1%) and health issues (35.3%) are common, especially among the 46–60 age group.
7. **Climatic challenges**, particularly frost and cold weather, affect **62.7%** of respondents.
8. **76.5% of respondents** experience difficulty balancing household and agricultural responsibilities.
9. **98% of women** rely on **financial assistance** to improve productivity, with very low access to technology (2%).



10. **Income generation (76.5%)** is the primary motivation for staying in agriculture, followed by lack of alternatives (21.6%).
11. A significant **96.1% of respondents** perceive **government programs** for women in agriculture as **ineffective**, showing a disconnect between policy intent and grassroots impact.

## CONCLUSION

The study underscores the critical role of women agricultural labourers in the Nilgiris. Despite their significant contributions, these women continue to face numerous socio-economic challenges, including low educational attainment, health-related issues, difficult working conditions and restricted access to technology and institutional support. The findings point to a strong reliance on financial assistance and widespread dissatisfaction with existing government schemes. Traditional gender roles and the absence of viable livelihood alternatives further exacerbate their socio-economic vulnerability.

To enhance the well-being and productivity of women in agriculture, there is an urgent need for targeted policy interventions. These should include gender-sensitive training programs, improved access to agricultural technologies, enhanced social security measures, and effective implementation of welfare schemes. Addressing these challenges is vital for ensuring gender equity and advancing sustainable agricultural development in rural and hilly regions like the Nilgiris.

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