

## **Participation of Farm Women in Agricultural Activities in Tiruvallur District, Tamil Nadu, India**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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### **ABSTRACT**

Women play a significant role in agricultural development and allied activities. More than 70% of farm work is being performed by women. The present study analyzed the extent of participation of farm women in different farm operations and allied activities, constraints faced by the farm women involving in farm operations and reported the contribution of women in agriculture in Tiruvallur district is extremely significant. Women participation was the maximum in sowing, transplanting (34%) and intercultural operations (49%). Women actively involved in cattle management including Harvesting of fodder, Feeding, Watering, Milking, and Cleaning (85 to 100%). Drudgery for farm women was recorded high in transplanting (29.30%), harvesting (26.66%) and carrying fertilizer (35.66%). Farm women spend more time in transplanting, weeding and harvesting (08 hrs/day) followed by sowing (06 hrs/day), cattle management (04 hrs/day). Hence reduction in drudgery will lead to increase in participation of farm work. The study indicated that there is still a wide gender gap in the involvement in major filed operations which may be addressed properly for overall involvement of farm women and development.

**Keywords:** *Women participation in agricultural activities; Tiruvallur; Tamilnadu.*

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## 1. INTRODUCTION

Farm women are being considered as invisible work force in agriculture even though they participate in most of the agricultural operations. They constitute so significant part of the working women population in our country that fuller understanding of their contribution becomes necessary. Women play multidimensional role in sustainable development of economy through their contribution in household and agricultural activities [1]. Their participation in agriculture is substantial but till now it has remained under counted and undervalued. Mun Mun and Arindham [2], analyzed the women participation in India Agriculture and explained the part of female workers across Indian states and reported 9.30 percent of female workers in Agriculture and 40.70 percent female workers in Non-Agricultural activities. Singh and Vinay [3] analysed the significance of female labour in agriculture and allied activities and reported that the role of women in agriculture as female labour is not highlighted and despite of their participation in sowing, transplanting and post harvest operations are considered as an invisible workers. Hence it is proposed to study the productive participation of women in agriculture in Tiruvallur district of Tamil Nadu with the following objectives.

## 2. OBJECTIVES

- To study the profile of women involving in agriculture and activities
- To study the extent of participation of farm women in different farm operations and allied activities
- To find out the relationship between the profile characteristics and extent of participation in agriculture and allied activities
- To identify the constraints faced by the farm women involving in farm operations
- To study the time utilization pattern of farm women in agriculture, allied and other activities

## 3. METHODOLOGY

The study was conducted in Tiruvallur district during the year 2013-14. In Tiruvallur district, paddy, pulses, groundnut, sugarcane, mango and vegetables are the major crops and animal husbandry is a subsidiary and common

enterprise. To analyze the role of farm women in paddy cultivation and cattle enterprise, four blocks viz., Ekkadu, Ellapuram, Minjur, Poonamallee and Kadambathur were purposively selected based on the area under paddy cultivation and accessibility. From each block 60 women were selected randomly, thus making the total sample to 300. An interview schedule was constructed, pre – tested and finalized and used for collecting data from the beneficiaries. Relevant data collected pertaining to the study was analyzed, interpreted and meaningful conclusions were drawn.

## 3. RESULTS AND DISCUSSION

The present study deals with the analysis of role of farm women participation in agricultural and cattle enterprises. Independent variables viz., Age, Education, Nature of family type and farm size were documented and the data revealed that 46 percent of respondents were old aged (>40years) followed by middle (28%) and young age (26%). Regarding education 36 percent of the farmwomen have education up to middle school followed by primary (25%), high school (17%), illiterate (12%) and collegiate (10%). Majority of the farm women are big farmers (60%) followed by small farmers Table 1. Singh Krishna, Priyanka and Ahmad [4] reported that female literacy rate as 51.50% and indicated that the role of female literacy and population share is good sign of socioeconomic growth of the society.

Participation of women in various farm activities from land preparation to harvest and in cattle management was studied and recorded. A perusal of Table 2 revealed that farm women found to involve in all the activities from land preparation to storage except marketing of the produce. Regarding land preparation women were involved in stubble collection alone. In land preparation category 56 percent of women were doing supervisory role rather than self doing or jointly doing Table 2.

## 4. PARTICIPATION OF FARM WOMEN IN FARM ACTIVITIES

### 4.1 Seeds and Sowing

In case of seeds and sowing farm women involved in two activities viz., sowing and transplanting as self doers, jointly doing and supervisory role. Sowing and transplanting in

areas where rice grown as major crop is invariably done by engaging labourers. Hence, these results showed that majority of the farm women were found to perform mainly supervisory role than self doing or jointly doing with others.

**4.1.1 Manures and manuring**

All the works under manure and manuring are men oriented and hence the participation of women was not observed.

**4.1.2 Intercultural operations**

Jointly doing and supervisory role was noticed in case of thinning and gap filling and weeding. Majority of the farm women (49%) preferred to do thinning and gap filling jointly and followed by supervisory role (47%). From the above findings, it is inferred that majority of the farm women preferred the supervisory role. The reason attributed may be irrigation and cleaning the irrigation channels are difficult jobs and also the majority of the farm women are big farmers.

**4.1.3 Harvesting**

Supervision role (83%) was found in harvesting. The reason was nowadays farmers depend on combine harvester for harvesting and in this study majority of the farmers used harvester for

reaping the crops, hence, majority of the farmwomen involved in supervisory role.

**4.1.4 Marketing**

The farmers mostly sell paddy immediately after harvest. Hence, the involvement of farm women in marketing was not observed.

**4.1.5 Wage distribution**

Majority of the women (95%) involved themselves by self doing followed by supervisory role. It could be stated that women are actively involved in distribution of wages to the laborers.

**4.1.6 Cattle management**

In cattle management selection of breed (79%), harvesting and chaffing of fodder (88%), feeding (100%), watering (100%), milking (95%), sale of milk(95%), cleaning cattle(85%) and cattle shed(92%) and care of sick animals(98%) farm women involved as self doers or supervisors. The reason attributed for the above finding may be due to the possession of small size of the herd with only 2-5 animals per family. Findings were in corroboration with the study of Singh Krishna, Priyanka and Ahmad [4] who reported the participation of women labour in harvesting of crops as 14.56% followed by sowing of crops (11.36%) and overall participation in all the farming operations was assessed to be 35.94%.

**Table 1. Profile characteristics of farm women**

n=300			
Sl. No	Variables	Classification	Percentage
1.	Age	Old( >40 )	46
		Middle(35-40)	28
		Young(17-34)	26
2.	Education	Illiterate	12
		Primary	25
		Middle school	36
		High school	17
		Collegiate	10
3.	Nature of family	Family type	
		Nuclear	83
		Joint	17
		Family size	
		Small	60
		Medium	31
4.	Farm size	Large	4
		Small	27
		Medium	13
		Large	60

Data on distribution of respondents based on farm holdings and their participation in farm related activities revealed that women small farmers participation as self doing is 84% followed by 33% by medium farmers and only 6% by Large farmers. Maximum of 83% as supervision is by large farmers followed by medium farmers (28%) and small farmers (6%). Hence with the increase in size of land holdings participation of women farmers in farm activities was found decreasing Fig. 1.

Analysis on the relationship between personal characteristics and extent of participation indicated that education of the respondents found to be significantly correlated with extent of participation. With the increase in level of education the extent of participation in agriculture

and allied activities was less, because with increase level of education the respondents prefer to go for other jobs viz., teaching and government and other jobs in private companies Table 3.

It is known from the Table 4 that most of the female perceived drudgery in the tasks like transplanting (29.30%), harvesting (26.66%), carrying fertilizer (35.66%), carrying heavy weight implements (34.66). The extent of drudgery varies widely with the nature of work, type of work, size of farm and many other factors. Reduction in drudgery will lead to increase in participation of farm work.

Time utilization pattern of farm women in agriculture and allied activities was recorded and

**Table 2. Distribution of the respondents according to their participation in farm related activities**

Sl. No	Farm activities	n=300					
		Self doing		Jointly doing		Supervision	
		No	%	No	%	No	%
1.	Land preparation	54	18	78	25.8	168	56
2.	Stubble collection	18	6	57	19	225	75
	Seeds and sowing			45	15	255	85
	Sowing						
3.	Transplanting	12	4	147	49	141	47
	Intercultural activities	12	4	147	49	141	47
	Thinning and gap filling						
	Weeding						
4.	Harvesting			51	17	249	83
	Reaping the crops						
5.	Storage	9	3	75	25	216	72
	Transporting for storage	285	95			15	5
6.	Wage distribution						
	Allied activities(cattle management)						
1.	Selection of breed	63	21	-	-	237	79
2.	Harvesting of fodder	264	88	-	-	36	12
3.	Chaffing of fodder	264	88	-	-	36	12
4.	Feeding of animals	300	100	-	-	0	0
5.	Watering of animals	300	100	-	-	0	0
6.	Milking of animals	15	5	-	-	285	95
7.	Sale of milk	15	5	-	-	285	95
8.	Cleaning cattle	255	85	-	-	45	15
9.	Cleaning cattle shed	276	92	-	-	24	8
10.	Care of sick animals	294	98	-	-	06	2

**Table 3. Relationship between personal characteristics and extent of participation**

Sl. No	Parameter	'r' value
1.	Age	0.164
2.	Education	-0.241
3.	Family type	0.008
4.	Family size	0.005
5.	Farm size	0.158*

it was observed that in transplanting, weeding and harvesting women spent more time (08 hrs/day) followed by sowing (06 hrs/day), stubble collection (03 hrs/day) and wages distribution (02 hrs/day). They consumed more time harvesting

of fodder and care taking of sick animals (04 hrs/day) in cattle management. Feeding, watering and milking required one hour per day Fig. 2.

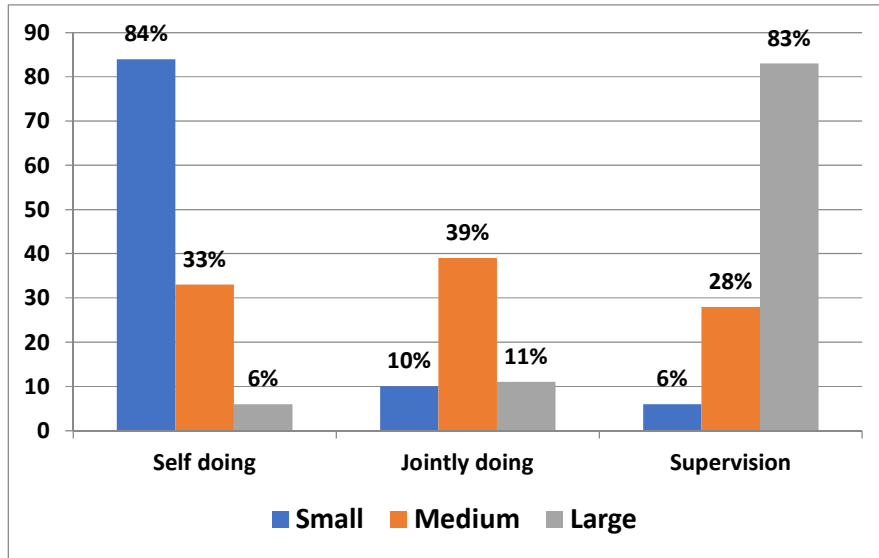
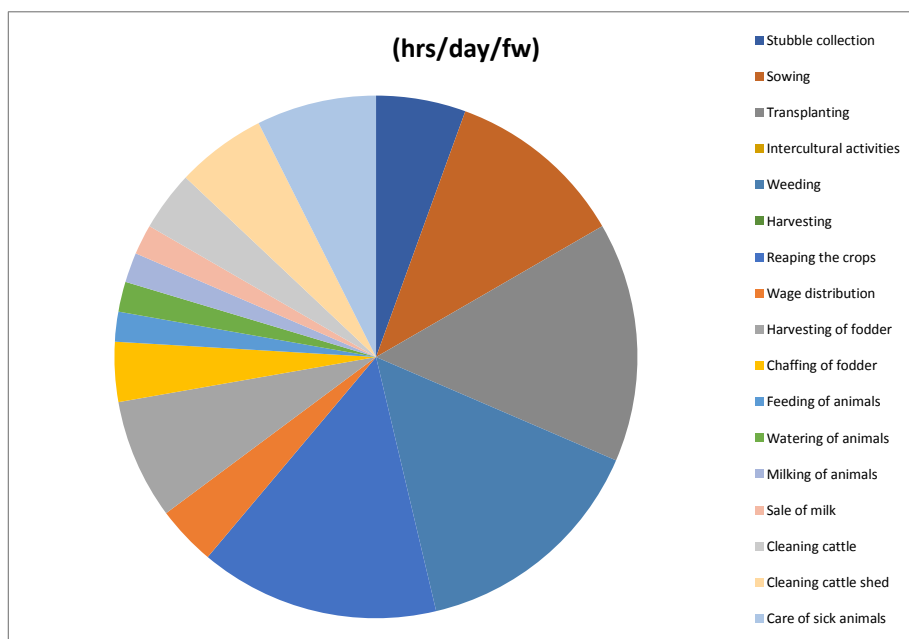


Fig. 1. Distribution of the respondents based on their farm holdings and their participation in farm related activities

Table 4. Constraints/drudgery faced by the farm women

Items	%
<b>I. Backache</b>	
1.Field Preparation	19.00
2.Transplanting	29.30
3.Weeding	25.00
4.Harvesting	26.66
<b>II.Neck Pain</b>	
1.Carrying FYM	32.66
2.Carrying Fertilizer	35.66
3.Carrying Harvested Crops	31.66
<b>III.Blister/Lesion</b>	
1.Field Preparation	18.33
2.Weeding	21.00
3.Harvesting	23.66
4.Spraying of chemicals	20.00
5.Spraying of weedicides	17.00
<b>IV.Eye Irritation</b>	
1.Seed treatment	26.00
2.Spraying of chemicals	31.00
3.Dusting of chemicals	21.66
4. Spraying of weedicide	21.33
<b>V.Pain</b>	
1.Shape of implements	33.00
2.Size of implements	32.33
3.Weight of implements	34.66



**Fig. 2. Time utilization pattern of farm women in agriculture and allied activities**  
*Fw-farm women*

## 5. CONCLUSION

The study concluded that the female's participation was more in harvesting the fodder, feeding and watering, milking and health care. Meena et al. [5] reported that despite low resources at their disposal women headed households performed all the agricultural operations including taking crucial managerial decisions.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Singh RKP, Singh KM, Jha AK. Effect of migration on agricultural productivity and women empowerment in Bihar. *Political Economy: International Political Economy eJournal*. 2012;6(109).
2. Mun Mun Ghosh, Arindam Ghosh. Analysis of Women Participation in Indian Agriculture, *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*. 2014; 19(5)Ver. IV:01-06.
3. Singh, Vinay, Gender participation in Indian agriculture: An ergonomic evaluation of occupational hazard of farm and allied activities. *International Journal of Agriculture, Environment & Biotechnology*. 2013;6(1):157-168.
4. Singh, Krishna M, Kumari, Priyanka, Ahmad, Nasim, An Analysis of Women's Participation in Agriculture in Bihar; 2020. Available:SSRN: <https://ssrn.com/abstract=3517153> or <http://dx.doi.org/10.2139/ssrn.3517153>
5. Meena MS, Singh KM, Meena HM. Participation and Perception Towards Changing Farming Practices in Eastern India: A Study of Women Headed Households. *National Academy Science Letters*.2018;41(4):203–205.

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