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Extent of Women's Participation in Decision Making in Peri-Urban Smallholder Integrated Farming Systems

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ABSTRACT

The present study was undertaken in peri-urban panchayats of Thiruvananthapuram city, the state capital of Kerala, India. The objective was to find out the extent of women's participation in decision making in peri-urban smallholder integrated farming systems and factor influencing their participation. The study utilized ex-post facto research design and data collection was done through interview schedule. The results revealed that the majority of farm women took decisions jointly with other male household members. The extent of women's participation in decision making was medium. Independent variables such as economic motivation, market orientation, experience in integrated farming systems, social participation, material possession, annual income, and education level were crucial factors in women's participation in decision making in peri-urban smallholder integrated farming systems.

Keywords: *Decision; Farming system; Participation; Peri-urban Participation; Women; Kerala*

INTRODUCTION

Peri-urban smallholder integrated farming systems are a planned combination of farm enterprises such as crops and livestock, complementary and supplementary activities, operating in small farms near the city limits, that sustain livelihood of farm households and contribute to local food systems. Such smallholder integrated farming systems supply fresh food for home consumption and the market, aid in poverty alleviation, and promote social inclusion of women and underprivileged in peri-urban areas. An integrated farming system with a judicious combination of farm enterprises can result in a significant and sustained increase in agricultural production, ensuring the livelihood of farm households (Ravisankar et al., 2007; Singh et al., 2010). According to Singh et al. (2015), decision making is the process of consciously choosing courses of action from available alternatives and integrating them for the purpose of achieving the desired goal. The success of integrated farming systems depends on effective participation of women in decision making in farm household in order to manage resources efficiently in a complex and dynamic environment to optimize yields, reduce costs, and minimize risks.

Kerala has 1084 women for every 1000 men, which is the highest gender ratio in India. The literacy rate of women in Kerala is relatively high 95.2%, compared to national average of 87.7% in urban India. Farm women exert their decision-making authority and tend to take

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over management of the farm (Behera & France, 2016); Farm women perform a variety of tasks ranging from child care to crop cultivation, family dietary consideration to post harvesting labour (Mohanty et al., 2015). Women's participation is crucial to effective decision making in peri-urban smallholder integrated farming systems of Kerala since women in Kerala are well educated and have access to reliable information, the ability to analyse this information, and the capacity to use it to make informed decisions. In our efforts to develop and improve upon existing technologies in farming systems, it is essential to take into account involvement of farm household members, particularly women in decision making. However, the woman in farm families in Kerala had never been the focus of research in farming systems, which lead to poor understanding of the issue of effective resource management for sustainable agriculture that integrated faming systems seek to address.

Keeping this in view, the present study was undertaken to analyse the extent of women's participation in decision making in peri-urban smallholder integrated farming systems and to examine the factors influencing women's participation in decision making. The study of women's participation in decision making in integrated farming systems could help in establishment of a set of resource development and utilization practices, leading to substantial and sustained increase in agricultural production.

METHODOLOGY

The study was conducted in Southern Coastal Plains Agro Ecological Unit (AEU) of Kerala during 2018-19. Ex-post facto research design was followed in the study. Thiruvananthapuram district was purposively selected since it included Thiruvananthapuram city, the state capital of Kerala. A list of peri-urban smallholders, owning below one hectare land, and operating integrated farming systems was prepared with the help of Agricultural Officers from the Department of Agriculture Development and Farmers' welfare, Kerala. Random sampling methods were used to select 10 numbers of peri-urban panchayats and 20 respondents from each panchayat. Thus, a total of 200 respondents were chosen for the study. The data were collected through interview schedule developed by the technical programme committee of the All India Coordinated Research Project on Integrated Farming Systems (AICRP on IFS) at the Indian Council of Agricultural Research-Indian Institute of Farming Systems Research (ICAR-IIFSR). The statistical measures such as mean, percent, standard deviation, coefficient of variation, standard error and correlation coefficient were used to present data in tables and draw inferences.

FINDINGS AND DISCUSSION

Extent of Women's Participation

The farm household operating integrated farming system is considered an important decision-making unit due to the large number of decisions taken on a daily basis by the individuals that comprise the farm household as part of operating the integrated farming system. A cursory look at data in Table 1 revealed that a large majority of farm women's decisions were considered jointly with other male household members in case of agricultural operations to be done (94.5%), followed by laborers to be hired (93%), means of irrigation (91%), storage and marketing of farm produce (84%), purchase and sale of farm animals (82%), and crops to be sown (80%).

It can be observed from Table 1 that more percentage of women's decisions were considered independently of other male household members on borrowing and repayment of farm loans (66%) and was followed by construction of farm buildings (58.5%). In order to raise money, gold jewellery is pawned to

secure agriculture gold loans. These loans were essential for injecting capital into agricultural production and promoting diversification towards high value farm enterprises. Many farm households in the study area avail themselves of the agriculture gold loans offered by nationalized banks. In these farm households, women own gold jewellery. It was also found that there exists intense land use competition in peri-urban areas for domestic housing, which is largely maintained by women, and the construction of farm buildings for agriculture. These could serve to explain why women's decisions were considered independently from that of the other male household members. This finding contradicted with study by Sujeetha and Palaniswamy (2015) that found that farm women in tribal areas had the least participation in decisions making related to building construction, and borrowing and repayment of loans.

The data in Table 1 indicated that women's decisions were not considered when choosing fertilizers and pesticides (48%), followed by choice of seeds and varieties (46%), since they required more scientific knowledge and skill. Farm households are influenced by the prior experiences of their fellow farmers as well as local traditions in their choice of fertilizers and pesticides, and choice of seeds and varieties. It is common for farm households in the study area to be influenced by input dealers in their choice of fertilizers and pesticides, and choice of seeds and varieties. While this increased production, farm households became increasingly dependent on input dealers. As a result, the farm women were left out of the decision-making process in farm households regarding their choice of fertilizers and pesticides, and choice of seeds and varieties. Therefore, there is a critical need for extension functionaries to work more closely with farmers in order to promote best agricultural practices, including choice of fertilizers and pesticides, as well as the choice of seeds and varieties that are best suited for the local conditions, so that well informed decisions with high level of women's participation can be taken. Raahalya and Sreedaya (2021) had reported that majority of Agricultural Officers in Department of Agriculture Development and Farmers' welfare, Kerala working at Thiruvananthapuram require training to improve their job performance and face significant constraints such as lack of time for extension activities, and lack of incentives and reward system for better performance.

Table 1. Extent of Women's Participation in Decision Making in Peri-Urban Smallholder Integrated Farming Systems (N=200)

Sl. No.	Decision making areas	Decision not considered		Decision considered jointly with others		Decision considered independently of others	
		No.	%	No.	%	No.	%
1	Agricultural operations to be done	2	1.00	189	94.50	9	4.50
2	Crops to be sown	7	3.50	160	80.00	33	16.50
3	Purchase and sale of farm animals	6	3.00	164	82.00	30	15.00
4	Storage and marketing of farm produce	5	2.50	168	84.00	27	13.50
5	Labourers to be hired	6	3.00	186	93.00	8	4.00

Sl. No.	Decision making areas	Decision not considered		Decision considered jointly with others		Decision considered independently of others	
		No.	%	No.	%	No.	%
6	Choice of seeds and varieties	92	46.00	89	44.50	19	9.50
7	Choice of fertilizers and pesticides	96	48.00	86	43.00	18	9.00
8	Means of irrigation	7	3.50	182	91.00	11	5.50
9	Construction of farm buildings	9	4.50	74	37.00	117	58.50
10	Borrowing and repayment of farm loans	6	3.00	62	31.00	132	66.00

Score: Decision not considered 0, Decision considered jointly with others 1, Decision considered independently of others 2.

Distribution of Women Respondents According to their Extent of Participation

The data presented in Table 2 indicate the distribution of women respondents according to their extent of participation in decision making. The farm women respondents were categorized into three categories according to their extent of participation in decision making. It was evident from the data that the vast majority of farm women (67%) had medium levels of participation in decision making in peri-urban smallholder integrated farming systems, followed by high (24.5%), and low (8.5%) levels of participation in decision making. The findings are in concordance with those of Singh et al. (2015) who reported that most of women had medium role in decision making. The finding that the majority of farm women had medium level of participation in decision making may be attributed to the traditional gender roles and power dynamics prevalent in farm households. Medium level of participation in decision making can lead to more sustainable and equitable agricultural practices. The prevalence of both high and low levels of participation suggests variability among farm women depending on factors influencing participation levels such as education, income, possession of material goods, social participation, economic motivation, market orientation, and experience in integrated farming systems. The finding showing low participation level in decision making highlights the need for targeted intervention efforts to enhance women's roles in decision making processes. Agarwal (1997) pointed out that women who participate in decision making concerning agricultural production or financial expenditure in the home have greater bargaining strength in contrast to women who are excluded from such decision making altogether.

Table 2. Distribution of Women Respondents According to the Extent of Women's Participation in Decision Making (N=200)

Category	No.	%
Low (below 9.45 score)	17	8.50
Medium (9.45 to 14.89 score)	134	67.00
High (above 14.89 score)	49	24.50

Mean=12.17, SD=2.72, CV=22.35%, SE=0.19

Socio-Economic Profile of Women Respondents

An overview of the findings revealed that majority of the farm women respondents had 'medium' socio-economic profile characteristics (Table 3). The results indicated that the majority of farm women (48.5%) were middle aged (36 to 55 years), and had education up to higher secondary (45%). Most of the farm women owned land holding between 0.32 to 0.57 hectares, earned annual income between ₹ 1.36 to 2.53 lakh, and had material possession worth ₹ 2.66 to 4.91 lakh. Around two thirds of the farm women respondents had medium levels of economic motivation (66.5%), and market orientation (65.5%). A little more than half of the farm women respondents had medium levels of experience in integrated farming system (57%), and social participation (52.5%).

Table 3. Socio-Economic Profile of Women Respondents in Peri-Urban Smallholder Integrated Farming Systems (N=200)

Variables	Category	No.	%
Age	Young (21 to 35 years) Middle (36 to 55 years) Old (above 55 years)	12 97 91	6.00 48.50 45.50
Education level	High school (8 to 10th) Higher secondary (11 to 12th) Under graduate (college)	43 90 67	21.50 45.00 33.50
Land owned$^{\#}$	Small (below 0.32 ha) Medium (0.32 to 0.57 ha) Large (above 0.57 ha)	19 96 85	9.50 48.00 42.50
Annual income	Low (below ₹ 1.36 lakh) Medium (₹ 1.36 to 2.53 lakh) High (above ₹ 2.53 lakh)	36 95 69	18.00 47.50 34.50
Material possession	Low (below ₹ 2.66 lakh) Medium (₹ 2.66 to 4.91 lakh) High (above ₹ 4.91 lakh)	41 93 66	20.50 46.50 33.00
Social participation	Low (below 6.17 score) Medium (6.17 to 12.25 score) High (above 12.25 score)	31 105 64	15.50 52.50 32.00
Economic motivation	Low (below 14.16 score) Medium (14.16 to 20.20 score) High (above 20.20 score)	16 133 51	8.00 66.50 25.50
Market orientation	Low (below 14.24 score) Medium (14.24 to 21.02 score) High (above 21.02 score)	18 131 51	9.00 65.50 25.50
Experience in integrated farming system	Low (below 17 years) Medium (17 to 29 years) High (above 29 years)	23 114 63	11.50 57.00 31.50

$^{\#}$Peri-urban smallholders owning below 1 ha land.

Relationship Between Attributes of Women and their Extent of Participation in Decision Making

The strength and direction of association between independent variables and the extent of women's participation in decision making was tested through correlation coefficient (r) values. It was revealed from the results in Table 4 that there exists a significant and positive association between the extent of women's participation in decision making in peri-urban smallholder integrated farming systems and the variables such as economic motivation (0.527), market orientation (0.518), experience in integrated farming system (0.349), and social participation (0.313), and the association was found to be significant at 1 percent level of probability. The education level of farm women significantly influencing their extent of decision making, was reported by Singh et al. (2015). According to Singh et al. (2015) and Das (2022), farm women's economic motivation and social participation significantly influence how much they participate in decision making.

Table 4. Relationship Between Attributes of Women and the Extent of Women's Participation in Decision Making

Variables	Correlation coefficient 'r'
Age	0.114^{NS}
Education level	0.178*
Land owned	0.118^{NS}
Annual income	0.184*
Material possession	0.196*
Social participation	0.313**
Economic motivation	0.527**
Market orientation	0.518**
Experience in integrated farming system	0.349**

*** and * indicate 0.01 and 0.05 significance levels, respectively; ^{NS} Non-significant.*

Similarly, material possession (0.196), annual income (0.184), and education level (0.178) of the farm women were positively correlated with extent of women's participation in decision making in peri-urban smallholder integrated farming systems, and the association was found to be significant at 5 percent level of probability (Table 4). The material procession and annual income of farm women playing a significant role in the extent of women's participation in decision making was reported by Singh et al. (2015). The correlation coefficient (r) values for the rest of the variables such as women's age, and their land owned showed no significant association. According to Singh et al. (2015), there is no association between women's age and the extent to which they participate in decision making.

Several agencies including the state, missionaries and social reformers reconstituted the traditional space of women in Kerala by advocating women's education, health and work participation albeit within a patriarchal framework since the early twentieth century. Ideal womanhood in contemporary Kerala is a fusion of the Victorian emphasis on women

being enlightened mothers and companions to men in their home, and the older Brahmanical values of *pativrata* such as wifely chastity and devoted service to one's husband (Devika, 2007). Altruism among family members is recognized to be important, as it influences intra-family resource allocation between family members, which determines the economics of the family (White, 2015). However economic self-interest in intra-family gender relations ensures disparity in resource positions maintained between women and men in the family (Agarwal, 1997). Gender conflicts in family over critical economic resources can arise when altruism loses out to selfishness. According to Agarwal (1997), women's intra-household bargaining power, which results from their ownership of economic assets, education, access to credit, land ownership, and participation in women's groups, can have a substantial beneficial impact on empowering women to exercise their rights in decision making within household. Greater participation of women in decision making in farm household improves resource allocation for agriculture, education, health and nutrition, which will have long term economic benefits for household and society.

The *Kudumbashree* initiative of the government of Kerala is a well-known women-oriented poverty eradication programme with women's empowerment as one of its major goals. It focuses on enhancing the financial status of the less privileged women through its thrift and credit programme. According to Devika and Thampi (2007), neither micro-credit nor micro-enterprise by themselves will necessarily lead to the empowerment of women. Empowerment requires a conscious intervention for which the economic activities play a facilitative role. Women empowerment in family is bound to succeed when women are given the opportunities to participate in and actively contribute to decision making that lead to economic activity (Sivaraman, 2017). Better educated women play a greater role in economic growth-related decision making, as opposed to a woman as a dependent member of family, her ability to make strategic choices in decision making is likely to be limited. Hence, economic growth and women's empowerment must go hand in hand (Duflo, 2012). It has been argued that conventional indicators used to monitor progress in women empowerment, such as education, employment, and political power, though can bring about changes in women's lives, they need not necessarily enable women empowerment, since women's role in decision making within the household may still be limited as before (Kabeer, 2005). It was pointed out that social relationships and family structure that restrict woman's access to education, employment and economic resources are often overlooked. Hence non-conventional indicators such as the power dynamics within the family, the role of women in decision making within a household and the power to translate resources into opportunities, would complement the conventional indicators to track the progress in women empowerment (Scaria, 2014).

CONCLUSION

The extent to which farm women participate in decision making process in farm household that operates integrated farming systems, is a critical factor in the success of peri-urban integrated farming systems. The study concluded that vast majority of farm women had participated in decision making to a medium extent. According to the study, a large majority of farm women's decisions were considered jointly with other male household members, such as agricultural operations to be done, laborers to be hired, means of irrigation, storage and marketing of farm produce, purchase and sale of farm animals, and crops to be sown. The areas where decisions of farm women were not considered were, choice

of fertilizers and pesticides, and choice of seeds and varieties, since they required more scientific knowledge and skill. The present findings could be explained as the higher the economic motivation, market orientation, experience in integrated farming system, social participation, material possession, annual income, and education level, the higher the extent of women's participation in decision making in peri-urban smallholder integrated farming systems. The results also suggest that the extent of women's participation in decision making in peri-urban smallholder integrated farming systems was independent of their age and land owned. Understanding that farm women often participate in joint decision making with male household members enables policymakers and organizations to design tailored interventions based on their income, education level, or access to resources to empower farm women through educational programmes, skill development, and awareness campaigns to enhance their role in decision making processes. Increased women's participation in decision making in integrated farming systems can lead to improved agricultural practices, better resource allocation, and potentially higher income for the household.

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