

Decision-making Behaviour of Sericultural Households in Mulberry Cultivation

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Received: 19-12-2022

Revised: 26-02-2023

Accepted: 04-03-2023

ABSTRACT

The present study was conducted in ten villages of Ramanagar and Kanakapura taluks of Ramanagar district in Karnataka state during 2021-22 to analyze the decision-making behaviour of sericulture households in mulberry cultivation. Ten villages were selected for the study from the sampled two taluks. Sixty sericulture households formed the sample of the study and from each of the sixty sericulture households, the head of the family and her spouse were interviewed for the study. Data was collected using a pre-tested interview schedule. There was a highly significant difference at one per cent level in respect of the mean decision-making score between the farm men and women with regard to the mulberry cultivation practices. Further, it was found that age, education, experience in sericulture, innovativeness, achievement motivation, management orientation, risk orientation, economic motivation, cosmopolitaness, attitude towards sericulture, farming commitment, mass media exposure, training in sericulture, extension agency contact, farm scientist contact and extension participation of farm men and women had significantly contributed for making better decisions in mulberry cultivation practices

Keywords: Sericulture, Households, Decision, Mulberry cultivation

India is the second-largest producer of raw silk in the world next to China. India produced 34900 MT of raw silk during the year 2020-21 and it is the world's largest consumer of raw silk as well as it is a greatest importer. Majority of the country's silk is produced in Karnataka, Andhra Pradesh, Assam, Bodoland, West Bengal, Jharkhand, and Tamil Nadu. In all these states mulberry sericulture is primarily practised by the people. Sericulture is a high-yielding and highly profitable enterprise which offers regular and all-year-round attractive returns in the country's tropical states. When a farmer has one acre of mulberry plantation and uses family labour, the net returns are projected to be around ₹ 48,000/-. This is significantly more than that of other tropical crops.

Women are generally favoured in sericulture because of their work ethics. They work on a grainage, a silkworm farm, or a mulberry garden. Women are heavily active in agriculture as co-owners, employees, family farm workers, and female farm managers. Women make up about 38 per cent of the family workers in agriculture. The core of our nation's agricultural labour force are what are known as "invisible farmers." They carry out the most laborious tasks in agricultural production and actively participate as partners in almost all

How to cite this article: Shivananadagowda, G.R., Lakshminarayan, M.T., Banuprakash, K.G., Kumar, R.V. and Vinoda, K.S. (2023). Decision-making Behaviour of Sericultural Households in Mulberry Cultivation. *Agro Economist - An International Journal*, 10(01): 11-15.

Source of Support: None; **Conflict of Interest:** None



unit operations, splitting the work between them in the range of 20 to 80 percent. They help with most agricultural tasks, such as fertilizing, preparing the land, sowing/ transplanting, weeding, applying fertilizer, harvesting, and so on. The contribution produced by farm women is largely what determines whether a farm succeeds or fails. However, despite the fact that they make a considerable contribution to local and community development, they still play a minor part in decision-making and share different jobs and obligations in both on and off-farm activities. In this backdrop, the present study was carried out with the following specific objectives:

- ♦ To analyse the decision-making behaviour of farm men and women in mulberry cultivation
- ♦ To know the extent of contribution of profile characteristics of farm men and women on the decision-making behaviour in mulberry cultivation

Methodology

The study was carried out in Ramanagara district of Karnataka during 2021-22. Mulberry was grown in 9528, 3609, 2691 and 311 ha of Kanakapura, Channapatna, Ramanagara and Magadi taluks of Ramanagara district, respectively during the year 2019-20 (Anonymous, 2020). The study was purposively conducted in Kanakapura (9525 ha) and Channapatna (3609 ha) *taluks* since mulberry was cultivated in more areas among the four taluks of Ramanagara district. Ten villages were selected for the study from the sampled two *taluks*. Marginal and small farmers practising sericulture were selected for the study since the farm women from these categories are actively involved in making decision and also they participate in most of the sericulture activities. Six sericulture households from each village were chosen randomly. Data was collected from the husband and wife of each of the sampled farm household. Sixty farm men and 60 farm women formed the sample from Kanakapura and Channapatna *taluks* of Ramanagara district in Karnataka state.

Decision making behavior

Decision-making behavior refers to the 'extent of involvement of farm men and women in deciding

various mulberry cultivation practices that needs to be performed'. A total of 14 mulberry cultivation practices were included in the research study to know the decision-making pattern of farm men and women. A score of 2, 0 and 0 for decisions taken by 'farm women alone', 'farm men alone' and both/ together with family members, respectively, were assigned to know the extent of decision-making of farm women. The minimum score and maximum score one could get was 0 and 28, respectively. Based on the total score obtained for all the 14 mulberry cultivation practices of the respondents, they were grouped into low, medium and high considering the mean and half standard deviation.

Information in respect of 19 profile characteristics of farm men and women were collected using a structured schedule with suitable scales/procedure. The collected data was scored, tabulated and analyzed using frequency, percentage, mean, standard deviation and student 't' test.

RESULTS AND DISCUSSION

Decision-making pattern of farm men and women in mulberry cultivation practices

Decision-making behaviour of farm men and women in specific mulberry cultivation practices

A glance at Table 1 reveals that cent per cent of the decision on land preparation (100.00%) was taken up by farm men alone, while the decisions on the recommended mulberry cultivation practices, such as soil testing (86.66%, 3.34% and 10.00%), pruning (86.66%, 6.67% and 6.67%), spacing (80.00%, 10.00% and 10.00%), planting method (83.34%, 3.33% and 13.33%), preparation of mulberry cuttings (90.00%, 5.00% and 5.00%), mulberry variety (90.00%, 6.66% and 3.34%), application of organic manure (83.34%, 13.33% and 3.33%), application of chemical fertilizers (86.66%, 10.00% and 3.34%), application of micronutrients (80.00%, 10.00% and 10.00%), irrigation (80.00%, 8.34% and 11.66%), weeding/ inter-cultivation (70.00%, 20.00% and 10.00%), integrated pest management practices (83.34%, 6.66% and 10.00%) and leaf harvesting (86.66%, 11.66% and 1.68%) were done by farm men alone, farm women alone and by both/together with family members,

respectively. It is observed from the above findings that the decisions on all the mulberry cultivation practices were taken by a vast majority of farm men.

Category	Criteria	Farm men	Farm women
Low	< (Mean – ½ SD)	<11.67	<3.06
Medium	(Mean ± ½SD)	11.67 to 14.28	3.06 to 4.27
High	> (Mean + ½ SD)	> 14.28	> 4.27
Mean		12.98	3.67
Standard deviation		2.61	1.21

On the whole, it could be seen that farm women are not considered in the forefront when it comes to decision-making with respect to the mulberry cultivation practices. In some cases, farm women deliberately do not take part in decision-making because men put blame on them if something goes wrong. Lack of knowledge on the mulberry cultivation practices among farm women and other members of the family might also be the reason for the farm men for not involving farm women and other members of the family in making decisions on mulberry cultivation practices. Similar findings were reported by Bharath Kumar (2010) and Biradar (2021).

Overall decision-making behaviour of farm men and women in mulberry cultivation practices

The results in Table 2 revealed that a majority of the farm men were belonging to the high decision-making category (65.00%), while 20.00 per cent and 15.00 per cent of the farm men were belonging to medium and low decision-making category, respectively. On the other hand, 65.00 per cent of the farm women were belonging to low decision-making category, whereas one-fourth (25.00%) and ten per cent of the farm women were belonging to the medium and high decision-making category, respectively. The 't' value (4.89) was found to be highly significant at one per cent level indicating that there exists a highly significant difference in the mean decision-making score between the farm men (12.98) and women (3.67) in respect of the mulberry cultivation practices/technologies. Lack of knowledge on mulberry cultivation practices and hesitance to make decisions on the sericulture technologies among farm women are the probable reasons for the significant difference in the mean decision-making score between the farm men and women. Similar findings were reported by Nishitha (2016), Archana (2019) and Nataraju *et al.* (2019).

Table 1: Decision-making behavior of farm men and women in mulberry cultivation (n= 60)

Sl. No.	Mulberry cultivation practices	Decision-making pattern					
		Farm men alone		Farm women alone		Both/together with family members	
		No.	%	No.	%	No.	%
1	Soil testing	52	86.66	2	3.34	6	10.00
2	Pruning	52	86.66	4	6.67	4	6.67
3	Land preparation	60	100.00	0	0.00	0	0.00
4	Spacing	48	80.00	6	10.00	6	10.00
5	Planting method	50	83.34	2	3.33	8	13.33
6	Preparation of mulberry cuttings	54	90.00	3	5.00	3	5.00
7	Mulberry variety	54	90.00	4	6.66	2	3.34
8	Application of organic manure	50	83.34	8	13.33	2	3.33
9	Application of chemical fertilizers	52	86.66	6	10.00	2	3.34
10	Application of micro-nutrients	48	80.00	6	10.00	6	10.00
11	Irrigation	48	80.00	5	8.34	7	11.66
12	Weeding/intercultivation	42	70.00	12	20.00	6	10.00
13	Integrated pest management practices	50	83.34	4	6.66	6	10.00
14	Leaf harvesting	52	86.66	7	11.66	1	1.68

Table 2: Overall decision-making behaviour of farm men and women in mulberry cultivation

Sl. No.	Decision-making category	Number	Per cent	Standard deviation	Mean decision-making score	't' value
(A)	Farm men ($n_1 = 60$)					
1	Low (<11.67 score)	9	15.00	2.61	12.98	4.89**
2	Medium (11.67 to 14.28 score)	12	20.00			
3	High (>14.28 score)	39	65.00			
Total		60	100.00			
(B)	Farm women ($n_2 = 60$)					
1	Low (<3.06 score)	39	65.00	1.21	3.67	
2	Medium (3.06 to 4.27 score)	15	25.00			
3	High (>4.27 score)	06	10.00			
Total		60	100.00			

**Significant at 1%.

Table 3: Extent of contribution of profile characteristics of farm men and women on the decision-making behavior in mulberry cultivation

Sl. No.	Profile characteristics	*Farm men ($n_1 = 60$)			**Farm women ($n_2 = 60$)		
		RE	SE	't' value	RE	SE	't' value
1	Age	0.138	0.289	2.098*	0.188	0.491	2.611*
2	Education	0.184	0.399	2.168*	0.299	0.691	2.318*
3	Experience in sericulture	0.189	0.398	2.212*	0.213	0.515	2.419*
4	Innovativeness	0.178	0.414	2.318*	0.195	0.499	2.561*
5	Achievement motivation	0.338	0.816	2.418*	0.246	0.618	2.516*
6	Management orientation	0.339	0.712	2.098*	0.389	0.386	2.092*
7	Risk orientation	0.600	0.666	2.311 *	0.198	0.468	2.366*
8	Economic motivation	0.172	0.415	2.399*	0.293	0.616	2.098*
9	Credit orientation	0.961	0.589	0.612 ^{NS}	0.745	0.492	0.660 ^{NS}
10	Social participation	0.612	0.596	0.973 ^{NS}	0.155	0.297	1.916 ^{NS}
11	Cosmopolitaness	0.912	0.818	2.496*	0.213	0.515	2.414*
12	Deferred gratification	0.375	0.417	1.112 ^{NS}	0.103	0.102	0.116 ^{NS}
13	Attitude towards sericulture	0.161	0.400	2.481*	0.116	0.313	2.691*
14	Farming commitment	0.236	0.518	2.199*	0.245	0.517	2.111*
15	Mass media exposure	0.298	0.618	2.068*	0.257	0.618	2.398*
16	Training in sericulture	0.283	0.681	2.398*	0.70	0.215	3.07**
17	Extension agency contact	0.327	0.792	2.418*	0.303	0.777	2.561*
18	Farm scientist contact	0.59	0.211	3.57**	0.74	0.216	2.911**
19	Extension participation	0.317	0.812	2.561*	0.172	0.418	2.419*

NS = Non-significant, * = Significant at 5% level, ** = Significant at 1% level; RE = Regression co-efficient; SE = Standard Error; $R^2 = 0.812$; $R^2 = 0.822$.

Extent of contribution of profile characteristics of farm men and women on the decision-making behaviour in mulberry cultivation practices

The result of multiple regression analysis revealed that profile characteristics viz., age, education, experience in sericulture, innovativeness, achievement

motivation, management orientation, risk orientation, economic motivation, cosmopolitaness, attitude towards sericulture, farming commitment, mass media exposure, training in sericulture, extension agency contact, farm scientist contact and extension participation of farm men and women had significantly contributed for making decisions on

mulberry cultivation practices. Whereas, variables such as credit orientation, social participation and deferred gratification had not significantly contributed for making decisions in mulberry cultivation practices. All the 19 profile characteristics of farm men and women had contributed to the tune of 81.20 and 82.20 towards making decisions on mulberry cultivation practices, respectively (Table 3).

It can be concluded from the results that age, education, experience in sericulture, innovativeness, achievement motivation, management orientation, risk orientation, economic motivation, cosmopolitaness, attitude towards sericulture, farming commitment, mass media exposure, training in sericulture, extension agency contact, farm scientist contact and extension participation of farm men and women have synergic effect to one another leading to significantly contributing in helping to make decisions in mulberry cultivation practices among farm men and women.

CONCLUSION

The findings revealed that a larger proportion of farm men were belonging to high and medium category of making decisions, while farm women were belonging to medium and low category of making decisions on mulberry cultivation practices. Adequate opportunities need to be given for the farm women to participate in the extension activities (discussion, demonstrations, meetings, training programmes, field days, farm schools, farmer field schools, exposure visit to progressive sericulturists farm, etc.) and frequent contacts of farm women with farm scientists and formal sericulture extension personnel (Demonstrator, Sericulture Officer and

Assistant Director of Sericulture) will aid the farm women in gaining good knowledge for improving self-esteem, self-perception, and confidence to help them for actively contributing in making better decisions and increased participation in respect of mulberry cultivation practices. Print and electronic media would publish/broadcast/telecast need based messages in local languages on improved sericulture technologies aiding both sexes to increase their knowledge on improved sericulture technologies for making better decisions and induce participation in sericulture activities.

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