

Participation of farm women involved in chilli cultivation

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ABSTRACT : Women comprise about 43 per cent of the global agricultural labour force. Their participation in agriculture and rural economies, vary considerably between and within regions. Even within regions their participation varies based on land holding status of farm/household and the crop cultivated by them. The present investigation was undertaken to study the socio- personal characteristics and participation level of women involved in chilli cultivation. This study was conducted in Kundgol taluk of Dharwad district in Karnataka purposively as it is the highest chilli growing area. Five villages were selected randomly and from each village 30 farm women were selected making a sample of 150. Personal interview method was used to collect the data and suitable statistical tools were used for analyzing the data. The study revealed that majority if the respondents were growing ByadagiKaddi variety of chilli. The respondents were mainly between the ages of 36-50 with low level of education. They were from joint and medium sized families. Their average land holding was less than five acres with an annual family income of less than Rs. 1,32,000. The extension participation was low while social participation was high. The participation index for pre sowing and sowing operations was 62.69, for inter culture operations it was 61.63 and for harvesting and post harvesting operation it was 72.49. The overall index was 65.88 meaning that nearly 66 per cent of all activities are carried out by women, it being higher in post-harvest activities than other activities. A high participation implies that there is increasing feminization of agriculture. The programmes and policies of government often biased in favour of men should target farm women.

KEY WORDS : Participation, Farm women, Chilli cultivation

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INTRODUCTION

It is believed that during the gathering and hunting stage of civilization while the men went out to hunt women settled down at a place, collected seeds from nature and began to sow and grow crops. The

participation of women in agriculture and allied sectors therefore has been there since time immemorial. Women comprise about 43 per cent of the global agricultural labour force and their participation in agriculture and rural economies, vary considerably between and within regions. Even within regions their participation varies

based on land holding status of farm/household and the crop cultivated by them. Women's participation rate in the agricultural sectors is about 47 per cent in tea plantations, 46.84 per cent in cotton cultivation, 45.43 per cent growing oil seeds and 39.13 per cent in vegetable production. While these crops require labor-intensive work, the work is considered quite unskilled [FAO].

Chilli is the "Universal Spice in India" and grown almost throughout the country. India is the largest producer of chillies in the world. Its production level hovers around 1.1 million tons annually. It is cultivated in all the states and union territories of the country. Andhra Pradesh stands first in the list of chilli producing states in India with the maximum acreage under chilli cultivation in the country. Karnataka follows Andhra Pradesh contributing 14 per cent of the country's production. There are many studies of the participation of women in agriculture across regions and crops Nath and Chowdhry (2008) in rice cultivation, Jethi (2008) in potato production, Mishra *et al.* (2009) in vegetable cultivation. However no study was in sight of the researcher regarding women's participation in chilli cultivation. Therefore the present study was taken up in Kundgol taluk of Dharwad district with the following specific objectives:

- To study socio –personal characteristics of women involved in chilli cultivation.
- To study the extent of participation of women in chilli cultivation.

METHODOLOGY

This study was carried out during the year 2014-15 in Dharwad district of Karnataka. Kundgol taluk of Dharwad district was purposively selected for the study since it is the highest chilli growing area. Five villages namely- Kundgol, Devanur, Kubhihal, Gudgeri and Saunshi were selected and from each village 30 respondents were randomly selected making a sample of 150. An interview schedule was prepared to collect the information and suitable statistical tools are used for the analysis of the data.

Participation measurement :

A list of various activities was prepared and participation was measured on a four point continuum *viz.*, Never participate, rarely participate, frequently participate and always participate. The scores of 4, 3, 2 and 1 were assigned, respectively for these responses. The respondents were grouped into three categories using

mean and standard deviation as measures of check. They were categorized into low, medium and high level of participation.

Participation index :

Based on the total score obtained by the respondents participation index was worked out using the following formula :

$$\text{Participation index} = \frac{\text{Scores obtained}}{\text{Obtainable scores}} \times 100$$

OBSERVATION AND ASSESSMENT

Table 1 shows the chilli varieties grown by the farm women of selected villages that is, 58.60 per cent of all the farm families have grown *Byadagi Kaddi* variety and 41.40 per cent have grown *Byadagi Dabbi* variety. Both varieties vary in their size, shape, colour and pungency. *Byadagi* chillies are local varieties of *Byadagi* in Haveri district of Karnataka state. *Byadagi Kaddi* (thin and long) and *Byadagi Dabbi* (fat and short) are the most common varieties which are very famous. Since many years *Byadagi* chillies have the second largest turnover among all chilli varieties of India. *Byadagi* chillies are mainly grown for the purpose of the extraction of oleoresin, a red oil from the fruits which is in demand in USA, Japan and European countries. While the *Kaddi* variety is gnarled thin and long with not many seeds. *Dabbi* is small and plum with more seeds. The pulp is used in the lipstick industry. Of all the varieties of chillies available in India, *Dabbi* variety has highest colour and lowest pungency. Both *Kaddi* and *Dabbi* variety find application in manufacturing of spice mixtures and pickle due to their rich red colour and low pungency. *Byadagi Kaddi* is grown by more number of the respondents because this variety has been preferred by the local people for culinary uses due its pungency.

Sr. No.	Varieties	Yes	
		F	%
1.	ByadagiKaddi	88	58.60
2.	ByadagiDabbi	62	41.40

Table 2 explains the socio-personal characteristics of women involved in chilli cultivation.

Age:

It is seen that 45.30 per cent of the farm women

involved in chilli cultivation belonged to middle age group (36-50 years). This age of an individual (36-50 years) was the most productive period in the life of an individual and so women in this age were actively involved in the farm activities. Usually women of this age range were enthusiastic and had more work efficiency. The above mentioned findings were in consonance with the findings of Singh and Sharma (2002) and Rayangoudar (2009) who found most women working on the farms to be from the middle age category

Education :

About 45 per cent of the farm women had education

upto primary school, 34.67 per cent of them are educated upto middle school, 6.67 per cent of them are illiterate, 12.66 per cent of them are educated upto high school level and only 0.67 per cent of the farm women have education upto PUC. Parental bias in giving education to girl child might be the strong reason for majority of the respondents being educated upto primary school and middle school. Other contributing reasons could be the rural social environment where in women's education was not considered so important as she could be married and sent off to her husband's house. At such times parents hesitate to send their daughters to the other villages or towns for education.

Table 2 : Socio-personal characteristics of women involved in chilli cultivation			(n=150)	
Sr. No.	Variables	Category	Frequency	Percentage
1.	Age			
		Young (18 – 35 years)	42	28.00
		Middle (36 – 50 years)	68	45.30
		Old (> 51 years)	40	26.70
2.	Education			
		Illiterate (0)	10	6.67
		Primary (class 1-4)	68	45.33
		Middle school (class 5 – 7)	52	34.67
		High school (class 8 -10)	19	12.66
		PUC (class 11 - 12)	1	0.67
		Degree (> 12)	-	-
3.	Type of family			
		Nuclear	65	43.30
		Joint	85	56.70
4.	Family size			
		Small (1 – 4 member)	6	4.00
		Medium (5 – 8 members)	120	80.00
		Large (9 and above)	24	16.00
5.	Annual income			
		Low uptoRs. 1,32,000	89	59.33
		Medium (Rs. 1,32,000 - Rs. 5,72,000)	60	40.00
		High (>Rs. 5,72,000)	1	0.67
6.	Family occupation			
		Agriculture	150	100.00
		Animal husbandry	-	-
		Service	-	-
		Business	-	-
		Agriculture + Wage labour	37*	24.67
7.	Land holding			
		Marginal farmers(<2.5 acre of dry land)	35	23.30
		Small farmers (2.5 – 5.0 acre of dry land)	54	36.00
		Medium farmers (5-10 acre of dry land)	36	24.00
		Big farmers (>10 acre of dry land)	25	16.70

Type and size of family :

Data of Table 1 also shows that, 56.70 per cent of the farm women belong to joint family and 80 per cent of them had an average family size of 5-8 members. In India since time immemorial joint family system has existed. Rural people were mostly traditional in their value system and had belief in co-operative living. The probable reason for finding medium to large families could be that the small family norm was not yet accepted to a large extent by rural people. The other reasons could be that agriculture which was the main occupation in majority of the families was labour intensive and needed team work, rural families do not consider more children as more mouths to feed but consider as more hands to work on the farm.

Annual income :

Regarding the income of the agricultural families, 59.33 per cent of the respondents have an annual family income upto Rs. 1,32,000 *i.e.* low category, 40 per cent of the farm women belong to medium income category (Rs. 1,32,000-Rs. 5,72,000) and only 0.67 per cent of them belong to high annual income category (>Rs. 5,72,000). This was probably because the respondents were from marginal and a small farming family with agriculture as their main occupation. They did not have any other source of income.

Family occupation and land holding :

Since the selection of sample is purposive, all women were from farming families with 24.67 per cent also working on other farms for wages apart from working on their own farms. Regarding land holding 36 per cent of the farm women belong to small land holding families with a land holding of 2.5 – 5 acres, 24 per cent of them belong to medium land holding families (5-10 acre) followed by 23.30 per cent who belonged to marginal land holding families (<2.50 acre) and only 16.70 per cent of the farm women belong to big land holding families (>10 acre). India is said to be a land of small land holders with nearly 80 per cent of agriculture families holding less than 5 acres of land. The present study follows the same trend with nearly 60 per cent respondents possessing less than 5 acres of land.

Extension participation :

The data in Table 3 revealed that 76.00 per cent of the respondents had low extension participation, 24.00

per cent had high participation and none were in the medium participation category. The low extension participation could be because women lack to participate in extension activities. They were not considered as farmers, but as home makers whose role after getting back from the farm is to take care of children and cook for the family. She therefore does not have the time nor inclination to participate in extension activities. Moreover there are very few women specific extension centric programme. The results are in line with the findings of Chethan (2002); Nukapur (2002) and Swetha *et al.* (2006) who found that majority of the respondents had low extension participation.

Contact with extension agency :

Extension contact results in purposeful action which is largely contingent upon an individual's belief in her ability to perform that action correctly and / or effectively. The farmer frequently contacts various departmental officials to seek more information and to clarify the doubt pertaining to the current cropping system. Data on this aspect indicates that, majority (67.30%) of the respondents had low contact with extension agency. The reason for low extension contact may be due to illiteracy of respondents and lack of decision making authority and lack of availability of female extension workers. It is said that all over the world only 15 per cent are women extension workers receiving 3 per cent extension services [FAO]. The reported results of this study go with the conclusions of Neelaveni *et al.* (2002).

Social participation :

The data presented in Table 3 also revealed that, 52.00 per cent of the respondents had high social participation while 48.00 per cent had less participation. The probable reason may be because more than half of the respondents were the members of Mahila Mandalas or the Self Help Groups (SHGs) in the village. Women as women have now come out of the four walls and are actively taking part in many social activities. The main advantage of which was availability of loan without collateral. Women become members of SHGs to borrow money for consumption purpose or for productive purposes for starting enterprise. The low participation (48%) could be because of social barriers or the lack of regular savings to join SHGs. Illiteracy could also be a reason for not participating in social activities.

Mass media participation :

The data presented in Table 3 revealed that, majority (90.60%) of the respondents had medium level of participation and only 9.40 per cent of them had high

participation. Television these days is a household item owned by almost all the respondents. Cent per cent of the women were using it for entertainment purpose only. They are probably unaware of the educated programmes

Sr. No.	Variables	Category	Frequency	Percentage
1.	Extension participation	Low	114	76.00
		Medium	-	-
		High	36	24.00
2.	Contact with extension agency	Low	101	67.30
		Medium	-	-
		High	49	32.70
3.	Social participation	Low	72	48.00
		Medium	-	-
		High	78	52.00
4.	Mass media participation	Low	-	-
		Medium	136	90.60
		High	14	9.40

Sr. No.	Activities	Participation				Index
		Never	Rarely	Frequently	Always	
Pre – sowing and sowing operations						
1.	Ploughing	73 (48.67)	48 (32.00)	29 (19.33)	-	42.60
2.	Land preparation	29 (19.30)	25 (16.60)	92 (61.40)	4 (2.70)	61.83
3.	Application of manure and fertilizer	13 (8.70)	87 (58.00)	46 (30.60)	4 (2.70)	56.83
4.	Seed treatment	8 (5.30)	59 (39.30)	73 (48.70)	10 (6.70)	64.16
5.	Preparing seed beds	-	39 (26.00)	90 (60.00)	21 (14.00)	72.00
6.	Transplanting	-	1 (0.70)	116 (77.30)	33 (22.00)	80.33
	Average					62.96
Inter culture operations						
1.	Irrigation	2 (1.33)	8 (5.33)	137 (91.34)	3 (2.00)	73.50
2.	Hoeing and weeding	5 (3.30)	45 (30.00)	72 (48.00)	28 (18.70)	70.50
3.	Fertilizer application	38 (25.33)	43 (28.67)	57 (38.00)	12 (8.00)	57.16
4.	Pesticides and weedicide application	61 (40.67)	56 (37.33)	33 (22.00)	-	45.37
	Average					61.63
Harvesting and post harvest operation						
1.	Harvesting	-	4 (2.67)	114 (76.00)	32 (21.33)	79.66
2.	Grading	-	37 (24.67)	88 (58.66)	25 (16.67)	73.00
3.	Drying	-	14 (9.33)	77 (51.33)	59 (39.34)	82.50
4.	Storage	1 (0.66)	29 (19.33)	70 (46.67)	50 (33.34)	78.16
5.	Marketing	32 (21.33)	91 (60.67)	27 (18.00)	-	49.16
	Average					72.49
	Over all participation index					65.78

Note: Figures in the parenthesis indicates percentage to the total

aired on the T.V. Only few possessed newspaper probably because illiteracy. No one is having radio at their home. These days the mobiles are an all-in-one gadget. Even though women have radios in their mobile phones they were not able to make use of radios.

Table 4 shows the participation of women involved in chilli cultivation. The overall participation index was 65.88 per cent. Among all the three categories of operations in chilli cultivation majority of the women participated in harvesting and post-harvesting operations (72.49 %), followed by pre-sowing and sowing operations (62.96%) and inter culture operations (61.63 %).

In “harvesting and post-harvesting operations”, 82.50 per cent of the farm women were involved in drying, 79.66 per cent were involved in harvesting, 78.16 per cent were engaged in storage, 73 per cent of them were involved in grading and only 49.16 were involved in marketing activities. Post-harvest activities have always being dominated by women because they are the preparers of food for the family. They know best how to take care grains after they have been harvested. About 60 per cent of agricultural operations like sowing of seeds, winnowing, storage of grains etc. are handled by women exclusively.

In “pre sowing and sowing operations” of chilli cultivation. Majority (80.33 %) of the farm women are involved in transplanting, 72.00 per cent of them participated in preparing seed beds, 64.16 per cent of them are involved in land preparation, 56.83 per cent of them are engaged in application of manure and fertilizer and only 42.66 per of the women participated in ploughing activities. While sowing, transplanting and preparation of seedbeds have traditionally been carried out by women, it is surprising that 42.66 per cent women are participating in ploughing which has always been the men’s job. This is what can be termed as feminization where women are increasing doing jobs which were exclusively carried out by women.

In “inter culture operations”, 73.50 per cent of the women were involved in irrigation, 70.50 per cent were involved in hoeing and weeding activities, followed by 57.16 per cent were participated in fertilizer application and only 45.37 per cent of them were engaged in pesticide and weedicide application. Here again an increasing number of women were taking part in male dominated activities. Though the numbers seen were relatively less as only 45.37 per cent were engaged in pesticide and weedicide application, these were never activities where

women were not earlier involved. Thus increasing feminization of agricultural activities is a significant finding of this study.

Table 5 depicts the categorization of women based on their participation level in chilli cultivation. The data indicated nearly 60 per cent of the women had medium to high participation whereas 40.60 per cent had low participation. Moktan *et al.* (2014) revealed that the mean participation level of farm women was more with the total mean of 10.42. A significant role played by women in agriculture and their participation have been reported by Monika and Sawhney (1999); Parvati *et al.* (1996), Elizabeth and Ingle (1995), Padmavathi (2002), Sowmya *et al.* (2009), Ojha *et al.* (2012) and Nath and Chowdhry (2008) in rice farming, Chauhan (2011), Chauhan and Thakor (2006) and Chayal and Dhaka (2010), also reported high participation in agriculture in general.

Sr. No.	Category	Frequency	Percentage
1.	Low (<37.5)	61	40.60
2.	Medium (37.5-41.5)	39	26.00
3.	High (>41.7)	50	33.40

Conclusion :

The findings revealed that women participated in most activities of chilli cultivation. Their knowledge is fairly good but their extension contact is less. So it is important that there should be more women extension agents to cater to the needs of women. As women take on more responsibility for agricultural production (65.80 participation index), policy makers should explore how to provide services and innovations that reduces the time and work involved in domestic tasks.

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