

## **ANALYSIS OF ROLE PERFORMANCE OF WOMEN FARMERS IN PRE AND POST HARVEST AGRICULTURAL OPERATIONS**

**Pooja Kumari\***

**Swiny Sandhvi\***

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### **Abstract**

Women play a significant and crucial role in agricultural development and allied fields. It is most unfortunate that the role of women in agriculture has not highlighted. By and large they have remained invisible workers. Therefore, efforts were made to analyze the work performed by women in agriculture. The study was undertaken in Samastipur district of Bihar. A total of 100 farm women selected as respondents through proportionate random sampling. The selected respondents were interviewed personally using pre-tested well structured interview schedule. The data were analysed using appropriate statistical tool. The findings showed that preservation of grains, preservation of seeds, winnowing and harvesting were the major post-harvest farm operations mainly performed by farm women. Women farmer participated least in pre-harvest agricultural operations and mostly in wedding.

**Keywords: Participation of farm women, Role performance, Pre-harvest activities, Post-harvest activities.**

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\* **Ex-M.Sc Student, Department of Home Science Extension and Communication Management, College of Home Science**

## 1. Introduction (10pt)

It is not an exaggeration, that women in India are the backbone of food security. Women are playing a significant and crucial role in agricultural development and allied fields including crop production, livestock production, horticulture, post harvest operation, agro/ social forestry, fisheries etc. Agriculture is a predominant sector, which provides employment in rural areas. The female population constitutes nearly half of the total population. It is a well recognised fact that more than 60 % of agricultural operations have been traditionally handled by women. In hilly areas where men migrate to agricultural operations including crop planning and marketing of produce. In other area men are reluctant to share control with women. There is a greater involvement of women under various agricultural operations along with house arrangement. Out of the total 329 million hectares geographical area of the country, net shown area is 142 million hectare. It is estimated that women are responsible for 70 percent of actual farm work and constitute up to 60 percent of the farming population. But it is most unfortunate that the role of women in agriculture has not highlighted. By and large they have remained invisible workers. Over the years women cultivators are typically and wrongly characterized as economically inactive and women cultivator play only a supportive role in agriculture as farmers' wives (*Samanta; 1994*). Keeping the above background in mind an attempt was made to analyze the participation of women in farming operations. Farm women play a vital role within home as housewives in managing the domestic affairs and they work as co-partners in the farming profession. No operation in field is beyond them. They are best in sowing, transplanting, weeding, manuring, harvesting, winnowing, threshing, storing, marketing and rearing livestock etc. Besides they are the manager to the household activities. They take important decision in home and outside the home. Scientific achievements and modernization are yet to make an impact on them. The contribution of women to the farm sector has largely been ignored and inadequately understood in the Indian context. Though women play different roles in their home activities as wives, as mothers and as homemakers, they also play a pivotal role in agriculture and livestock management. They still continued to share number of farm operations with men from early ages of invention of agriculture to the present day of modern agriculture.

## 2. Research Method (10pt)

The study was undertaken in Samastipur district of Bihar, to analyse the participation of women in agriculture. The population of study consisted of farm women involved in agriculture and allied activities. A sample of 100 farm women was selected through proportionate random sampling. Selected respondents were interviewed personally using well structured pre tested interview schedule.

## 3. Results and Analysis (10pt)

**Socio-economic characteristics of the respondents:** Table 1, revealed that majority of the women who participate in home farm and allied activities were belonged to middle age group (68%). This age was regarded as the most active and potential for different farm and allied activities. This was supported with the similar study conducted by Puneetha (1989). Table 1, also depicted that maximum respondents(86%) were married and the respondents of forward caste showed least participation (9%) while the respondents of backward caste (63%) followed by SC/ST (28%) showed more participation in all agricultural activities. Most of the women farmer (52%) were illiterate & belong to low income group (38%). Most of the respondent have joint type of family & have no social participation (88%). Land is regarded as an income generating assets in the rural areas. The findings about land distribution depicted in table 1, found that rural women belonging to small, marginal or landless agricultural labourers household bore a disproportionately large share of the family's work plus there proportion in agricultural activities was also higher.

**Table 1: Socio-economic indicators.**

Independent Variables	Frequency
Age	
Young (20-30) yrs	19
Middle Age (30-50) yrs	68
Old (>50) yrs	13
Marital Status	
Married	86
Unmarried	0

Divorce/Widow	14
Caste	
Forward	9
Backward	53
SC/ST	27
Education	
Illiterate	52
Read & Write	14
Primary	23
Middle	7
High school	2
Graduate & above	2
Family type	
Joint	63
Nuclear	37
Size of land holding	
Landless	33
Marginal	45
Small	11
Medium	11
Family Income	
Low (<25000)	38
Medium (25001-50000)	30
Medium high (50001-75000)	18
High (>75001)	14
Social Participation	
No participation	88
Member of one organization	12

The participation of selected respondents in farm activities was analyzed and presented in Table 2. The participation were found as physical participation, supervision or both.

**Involvement of women in pre-harvest agricultural activities** :The findings revealed that the maximum physical participation was of landless labourers in pre harvest activities (42.42%), while medium land holding category of women had no physical participation followed by 32.77 percent physical participation of marginal farmers and 1.13 percent physical participation of small farmers. The data further indicated that 17.04 percent medium land holding category of farmers supervised the pre-harvest agricultural activities while landless labourers do not supervised the activities. The data showed that 11.38 percent marginal farmers and 26.13 percent small farmers supervised the pre-harvest agricultural activities. It is obvious that the medium and small farmers involved maximum in supervising the activities while the landless and marginal in physical participation. However, by 15.90 percent of small farmers, 14.43 percent of marginal farmers, 6.06 percent of landless and 4.54 percent of medium woman farmers participated jointly in agricultural activities.

**Table 20: Percentage participation score of involvement of different categories of women farmers in pre- harvest agricultural activities**

A	Pre-harvest operations	Landless (N=33)			Marginal (N=45)			Small (N=11)			Medium (N=11)		
		Pp	Su	Both	Pp	Su	Both	Pp	Su	Both	Pp	Su	Both
1.	Cleaning of field	48.48	0.00	15.15	40.00	6.66	17.77	0.00	36.36	0.00	0.00	18.18	0.00
2.	Preparation of field	48.48	0.00	15.15	40.00	6.66	17.77	0.00	45.45	0.00	0.00	18.18	0.00
3.	Ploughing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.	Sowing	48.48	0.00	0.00	42.22	8.88	35.55	9.09	63.63	27.27	0.00	45.45	36.36
5.	Irrigation	54.54	0.00	6.06	40.00	17.77	17.77	0.00	36.36	18.18	0.00	0.00	0.00

6.	Weeding	100	0.	0.0	86.6	4.44	8.88	0.0	27.2	45.4	0.	54.5	0.0
			0		6				7	5	0	4	
7.	Fertilizer application	39.3	0.	12.1	13.3	46.6	17.7	0.0	0.0	36.3	0.	0.0	0.0
		9	0	2	3	6	7			6	0		
8.	Pesticide application	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.0	0.0
			0								0		
	Mean Score	42.4	0.	6.06	32.7	11.3	14.4	1.1	26.1	15.9	0.	17.0	4.54
		2	0		7	8	3	3	3	0	0	4	

**Involvement of rural women in post-harvest activities:** The distribution of women on the basis of involvement has been presented in Table 20 and illustrated in Fig 4. Table 20 indicated that 32.46 percent of landless labourers had physical participation followed by 59.67 percent of marginal woman farmers, 10.38 percent of small woman farmers in post-harvest agricultural activities while medium land holding category of woman farmers had no physical participation in post-harvest agricultural activities. The table 21 further revealed that 42.85 percent of medium farmers had supervision in post harvest agricultural activities followed by 12.98 percent small farmers, 3.17 percent marginal farmers. Landless woman labourers had no supervision. The data presented in the table further indicated that 27.27 percent of small farmers, 9.09 percent of medium land holding category of farmers, 3.17 percent of marginal farmers participated jointly in post-harvest agricultural activities.

**Table 21: Percentage participation score of involvement of different categories of women farmers in post-harvest agricultural activities**

B .	Post-harvest activities	Landless(N=33)			Marginal(N=45)			Small(N=11)			Medium(N=11)		
		Pp	Su	Both	Pp	Su	Both	Pp	Su	Both	Pp	Su	Both
1.	Harvesting	100.	0.	0.0	64.4	0.0	17.7	0.0	18.1	36.3	0.	54.5	0.0

	of crops	0	0		4		7		8	6	0	4	
2.	Bringing crops to home	48.4 8	0. 0	0.0	66.6 6	11.1 1	24.4 4	0.0	45.4 5	27.2 7	0. 0	54.5 4	0.0
3.	Threshing	0.0	0. 0	0.0	0.0	4.44	15.5 5	0.0	0.0	0.0	0. 0	0.0	0.0
4.	Winnowing	78.7 8	0. 0	0.0	86.6 6	0.0	13.3 3	0.0	27.2 7	54.5 4	0. 0	54.5 4	0.0
5.	Preservation of grains	0.0	0. 0	0.0	80.0	0.0	20.0	36.3 6	0.0	36.3 6	0. 0	45.4 5	36.3 6
6.	Preservation of seeds	0.0	0. 0	0.0	62.2 2	0.0	8.88	36.3 6	0.0	36.3 6	0. 0	45.4 5	27.2 7
7.	Marketing	0.0	0. 0	0.0	57.7 7	6.66	13.3 3	0.0	0.0	0.0	0. 0	0.0	0.0
	Mean score	32.4 6	0. 0	0.0	59.6 7	3.17	16.1 8	10.3 8	12.9 8	27.2 7	0. 0	42.8 5	9.09

## Discussion

Size of land holding is related with economic condition of rural women and played an important role in their involvement in different agricultural activities. For economic return and maintenance of their family members they work in the field in various agricultural operations. This might be the reasons for the maximum physical involvement of marginal woman farmers and landless woman folk in agricultural activities in comparison to small and medium category of woman farmers. In supervision the case is just reverse. The landless labourers and marginal farm women poorly supervised the agricultural operations whereas medium category of woman farmers had maximum supervision in different farm operations followed by small rural woman farmers. The findings were in line with Singh and Verma (1997).

The participation of women varies in pre-harvest and post-harvest agricultural activities. The maximum involvement of woman farmers both in terms of physical participation and supervision was of the marginal woman farmers in post harvest activities. The pre-harvest activities are mainly seen as men's activity and hence less number of women as compared to men were involved in pre-harvest agricultural activities except the operation of weeding where more number of women are involved. The findings were supported by Singh and Verma (1997), Kumari, M. (2003) and Chayal and Dhaka (2010).

#### **4. Conclusion (10pt)**

The present study concludes that the women play a significant and crucial role in agriculture and allied fields. Research showed that farm women's participation were maximum in preservation of grains, preservation of seeds, winnowing, harvesting. Farm women also participated in other post-harvest activities like bringing of crops to home, threshing and marketing. Women farmer participated least in pre-harvest agricultural operations and mostly in weeding. Women farmer do not participate in pesticides application and ploughing. . The maximum involvement of woman farmers both in terms of physical participation and supervision was of the marginal woman farmers in post harvest activities. The pre-harvest activities are mainly seen as men's activity and hence less number of women as compared to men were involved in pre-harvest agricultural activities except the operation of weeding where more number of women are involved.

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