Progressive Research – An International Journal
Vol. 3 (Special Issue) : 366-370 (2008), ISSN : 0973-6417

Society for Scientific Development in Agriculture and Technology, Meerut (U.P.) INDIA

FARM ACTIVITIES AND WOMEN PARTICIPATION – A STUDY IN PATNA, BIHAR

Anita Kumari[1], Madan Singh[2] and Yanendra Kumar Singh[3*]

[1]*Krishi Vigyan Kendra, Sabour, Bhagalpur, Bihar*

[2]*Directorate of Extension Education, R.A.U., Pusa, Samastipur, Bihar*

[3]*Department of Soil Science and Agricultural Chemistry, B.A.C., Sabour, Bhagalpur, Bihar*

***Correspondence author** (Yanendra Kumar Singh) **Email :** yanendrakumar@yahoo.com*

ABSTRACT

Women not only constitute half of population but also influence the rest half of population. Today there are several fields where women's role seems to be much significance among them one is farm activities. The present study was conducted to examine the physical (work participation) and mental (decision-making) involvement of rural women in farm activities in Phulwarishrif Block of Patna district of Bihar, study revealed that women physically participate in almost all farm activities and their work participation is almost equal to man. But man had an upper hand in the matters related with farm decision-making. correlation analysis reflected that six independent variables; namely family size, family educational status, size of holding, social participation, exposure of extension contact and innovation proneness were found to be significantly and positively associated with decision-making. However family size and social participation emerged as significant contributor towards role of rural women in farm decision-making.

Key words : *Farm activities and women participation, profile of rural women.*

Women's attachment to farming dates even an era back when the very foundation stone of the human civilization as a consequence of the knowledge that food can be grown was laid, "Some historians believe that it was women who first domesticated crop plants and thereby initiated the art and science of farming. While man went out for hunting in search of food, women started gathering seeds from native flora and began cultivating those of interest from the point of view of food, feed, fodder, fiber and fuel"(Swaminathan, 1988). When projects are planned, women and their work are not included in the statistics used for planning. Agriculture development programme are planned by men and are aimed for men. The multiple roles of women in agriculture, allied occupations and household decision-making roles are generally, under estimated. Decision related to farming are vital and success of farm business and well being of farm family largely depends on these decisions and their interaction. Hence the present investigation entitled "Farm activities and women participation: A study in Patna, Bihar" was taken with the objectives to analyse the pattern of work participation and role in decision-making of rural women in various farm activities and relationship of selected socio-economic variables with rural women's participation in farm decision-making

RESEARCH METHODOLOGY

The present study was conducted in two randomly selected villages in purposively selected Phulwarisarif block of Patna district, Bihar. The sample of the study was consist of 50 rural women i.e. 25 from each village and was selected by proportionate stratified random sampling technique on the basis of their size of holdings. The data were collected by structured interview schedule .through personally visiting the respondents. Participation of rural women's in farm activities and farm decision-making was measured through a pre-tested schedule developed for this study by combining the schedules developed by Puri (1972) and Acharya and Benett I1982) with necessary modification. A score of (1.0) was given to women for taking decision in respect of a specific item under decision-making independently. A score of half (0.5) was given to women for taking decision jointly in respect of a particular item The total decision-making scores of respondents were computed by adding the scores of the individual items under a given area of farm activities.

RESULTS AND DISCUSSION

Profile of Rural Women : The data regarding profile of rural women have been presented in Table 1. On the basis of age, respondents have been categorised in

Table-1 : Profile of rural women.

S. No.	Characteristics	Freq-uency	Percent-age
1.	Age		
	Young (up to 25 years)	07	14
	Middle (25 - 45 years)	35	70
	Old (above 45 years)	08	16
2.	Self education		
	Illiterate	10	20
	Literate	24	48
	Educated	1{)	32
3.	Caste		
	Forward caste	25	50
	Backward caste	15	30
	Schedule caste	10	20
4.	Family size		
	up to 5 members	27	54
	More than 5 members	23	46
5.	Family educational status		
	Low (up to 2–0)	14	28
	Medium (2.0–5.0)	32	64
	High (above 5.0)	04	08
6.	Size of holding		
	Land less	06	12
	Up to 5 acres	36	72
	Above 5 acres	08	16
7.	Social participation		
	Low (up to 1)	27	54
	Medium (1-3)	19	38
	High (Above 3)	04	08
8.	Innovation proneness		
	Low (0 - 0.2)	13	26
	Medium (2.5 - 7.0)	30	60
	High (above 7)	07	14
9.	Exposure of extension contact		
	Low (0-5)	14	28
	Medium (5 - 10)	34	68
	High (Above (10)	02	04

three categories. A perusal of the data in table revealed that the comparatively larger proportion of the respondents (70%) was found under the middle age group (26-45 years). Further data indicate that 16 per cent of respondents were old and 14 per cent young. The table indicates that 50 per cent of respondents belonged to forward caste followed by 30 per cent of backward caste and 20 per cent of schedule caste. As it is clear form the table that 12, 72 and 16 per cent of respondents were landless, small (having land up to 5 acres) and medium (above 5 acres). It may be inferred from the table that the more than half of respondents (54 %) had family size up to 5 members and 46 per cent had family size more than 5 members. The table further reveals that the majority of respondents were in medium level innovation proneness group followed by 26 per cent in low level and 14 per cent in high level of innovation proneness. The data indicates that 28, 68 and 4 per cent of the respondents were in low, medium and high level of exposure of extension contact, respectively. About half (54%) of respondents had low level of social participation, and 38 per cent of respondents had a medium social participation and only 8 per cent had higher level of social participation. It is clear form the table that majority of respondents had medium level of family educational status and 28 per cent of respondents belonged to low level, of family educational status followed by 8 per cent high level of family educational status and 20 per cent of respondents were illiterate, 48 per cent were literate and 32 per cent educated.

Participation in Farm activities : The percentage distribution of men and women participated in various farm activities are presented in Table 2. As it appeared from the table that rural women used to participate in all activities independently or jointly with other members of their families except in some operations namely: ploughing; spading and puddling harvest operations (like cleaning, grading and grains drying were performed by the women quickly as they were traditionally involved in these activities and by nature these jobs are more suited to women than men. Collecting weeds during land preparation, transplanting, inter-culturing and harvesting were mainly performed by the women as the laborious, tedious, hazardous, repetitive and low prestigious jobs have been assigned to women therefore, their participation in these activities was higher than those of men. On the other hand, men dominated women in work participation in land preparation, seeding and transplanting, irrigation, and application of fertilizer and manure and plant protection operations. Irrigation, land preparation and plant protection are arduous and complex in nature. The hard, strenuous, prestigious and time bound activity and works required adequate skill and knowledge have been assigned to males; therefore, men's participation in these activities was higher than those of women. The table further revealed that women dominated men in kitchen gardening. The findings indicated that rural women participate in more

Table-2 : Extent of work participation of rural women in farm activities.

S. No.	Tasks	Frequency (n = 50)		
		Men	**Women**	**Jointly**
(A)	Crop production tasks			
1.	Land preparation	25.2 (50.4	15.5 (31.0)	9.2 (18.4)
2.	Seeding	21.5 (43)	4 (8)	24.5 (49)
3.	Transplanting & puddling	7.5 (15)	33.5 (67.9	9(18)
4.	Inter culturing	3.3 (6.6)	42.3 (84.6)	4.3 (8.6)
5.	Irrigation	20 (40))	4 (8)	26 (52)
6.	Application of fertilizers and manures	28 (56	4 (8)	18 (36)
7.	Plant protection measures	43 (86)	2 (4)	5'(10)
8.	Harvesting	4 (8)	41 (82)	5 (10)
9.	Post-harvest operations	10.83 (21.66)	19.16 (38.32)	20 (4.0)
(B)	Kitchen gardening	10 (20)	20 (40)	20 (40)
(C)	Livestock related Tasks	24.14 (48.28)	24.15 (48.30)	1.71 (3.42)
	Over all farm activities	19.30 (38.60)	18.08 (36.16)	12.59 (25.18)

Figures in parentheses represent percentage

or less all crop production activities except ploughing, spading and puddling.

Under live stock related tasks the participation of women in fodder collection, care and feeding of live stock and cleaning animal shed were much higher than those of men. Activities like castration/breeding were performed by male members only. Participation of men in cattle bathing, milking, sell and purchase of live stock was much higher than those of women. Further data revealed that on the whole men and women both were found to be involved almost equally in livestock related task. These findings confirm that women contribute significantly to live stock related tasks. Nearest of animal shed to their places of residence (as observed in the locale of research) facilitated women in carrying out these activities. This might be the reason for equal involvement of women in live stock related task. The study further revealed that men and women both were found to be involved almost equally in livestock related tasks. These findings confirm that women contribute significantly in livestock related tasks. Nearness of animal shed to their places of residence facilitated women in maintenance of their cattle and carrying out related activities this might be the reason for equal involvement of women in livestock related task.

Nature and extent of farm-related decisions : The areas of decision-making in farm activities have been sub-divided into three areas namely; crop production, labour allocation and livestock related decisions. Table-3. reflects the fact that decisions concerning Crop production related activities were mostly dominated by male folk. It revealed that despite the break through in agricultural technology in the recent past still the decisions were taken by the male in most of the situations. It further testified that women were by and large marginalised lot so far as major decisions were concerned because about 81 per cent of decisions were taken by male .folk. As it appeared from the table that only 7.4 per cent of all decisions were taken by women and 11.6 per cent, jointly. Table 3 also reveals the decisions with respect to labour allocations. The majority of decisions regarding labour allocation in farm-related activities were taken by male. But in the era of equal opportunity for both sexes, rural women were yet far behind in this area and participated only in 13.6 pe! cent of decisions. A perusal of data presented in the table also revealed that 73.2 and 13.2 per cent of all labour allocation decisions were taken by men and jointly, respectively.

As it appeared from the table, decisions concerning livestock related activities were mostly dominated by male folk. It can be further seen from the table that 76.2, 14.4 and 9.4 per cent of all livestock related decisions were taken by men, women and jointly respectively. Although most of the work was conducted inside home periphery, involvement of women as decision maker was at very low level. However the data of over all farm related decisions showed that 76.2, 11.66 and12.12 per cent of decisions were taken by women, man and jointly respectively. The findings presented in the preceding paragraphs indicated that men dominated women in

Table-3 : Participation of rural women rural in decision-making in Farm activities.

S. No.	Farm-related decisions	Frequency (n = 50)		
		Men	Women	Jointly
A.	**Crop production decision**			
(i)	Plant protection	42 (84)	5 (10)	3 (6)
(ii)	Selection of land and area under crop	40 (80)	3 (6)	7 (14)
(iii)	Land preparation	40 (80)	3 (6)	7 (14)
(iv)	Use of seed	41 (82)	3 (6)	6 (12)
(v)	Time and frequency of irrigation	42 (84)	3 (6)	5 (10)
(vi)	Inter-culturing (time and frequency)	42 (84)	3 (6)	5 (10)
(vii)	Use of fertilizer (type and time)	43 (86)	2 (4)	5 (10)
(vii)	Post-harvest operation including harvesting	39 (78)	5 (10)	6 (12)
	Decisions			
(ix)	Crop to be plant	36 (72)	7 (14)	7 (14)
	All Crop production related decisions	40.5 (81)	3.7(7.4)	5.8 (11.6)
(B)	**Labour allocation**			
(i)	Arranging wage labour	37(74)	6(12)	7 (14)
(ii)	Arranging exchange labour	41 (82)	4 (8)	5 (IO)
(iii)	Family labour	32 (64)	10 (20)	8 (16)
	Al11abour allocation decisions	36.6 (73.2)	6.8 (13.6)	6.6 (13.2)
(C)	**Livestock related decisions**			
(i)	Number and Type of livestock keeping	40 (80)	8 (16)	2 (4)
(ii)	Sale or purchase of cattle	40 (80)	8 (16)	2 (4)
(iii)	Feeding/grazing to livestock	35 (70)	10 (20)	5(10)
(iv)	Take care of animals	37 (74)	5(10)	8(16)
(v)	Castration and vaccination	39 (78)	5 (10)	6 (12)
(vi)	Deworming	33 (66)	13 (26)	4 (8)
(vii)	Maintenance of animal sheets	38 (76)	6 (12)	6 (12)
(viii)	Treatment of sick animals	41 (82)	4 (8)	5(10)
(ix)	Artificial insemination of animals	40 (80)	6 (12)	4 (8)
	All livestock related decisions	38.1(76.2)	7.2(14.4)	4.7(9.4)
	All farm-related decisions (ABC)	38.11 (76.22)	5.83 (11.66)	6.06 (12.121)

Figures in parentheses represent percentage.

making independent decisions related to all the three sub-areas of farm-related decisions. This may be probably due to the reason that rural women as a whole not exposed to the changes taking place in the field of farm-related science. Moreover, their nature of work in home-related activities also do not permit sufficient time for their involvement in decision -making. It suggests making concerted efforts in this front to mobilize the resources for convincing the women to participate in decision-making process.

Correlation analysis : Table shows that out of the nine, six independent variables, namely, family size, size of holding, family educational status, social participation, exposures of extension contact and innovation proneness had positive and significant correlation with decision-making process. This signified that with the increase in the level of these six

Table-4 : Correlation coefficient of rural women's farm-decision-making, scores and selected independent variables under study.

S. No.	Variables	Coefficient of correlation
1.	Age	-0.0199
2.	Caste	0.2326
3.	Family size	0.8225**
4.	Family educational status	0.8147**
5.	Self-education	0.2248
6.	Size of holding	0.7884**
7.	Social participation	0.8609**
8.	Exposure of extension contact	0.5766**
9.	'Innovation proneness	0.7872**

** Significant at 1% level of probability.

Table-5 : Multiple regression coefficient of farm-related decisions scores of rural women with selected independent variables under study.

Sl. No.	Variables	Multiple Regression Coefficient	T-value	Standardized regression Coefficient	Ranking
1.	Age	0.0498	1.85	0.12192	V
2.	Caste	0.4103.	1.33	0.19821	IV
3.	Family size	0.6546	2.22*	0.30463	II
4.	Family educational status	0.1526	0.63	0.08756	VII
5.	Self-education	0.4198	1.77	0.12151	VI
6.	Size of holding	-0.7127	-1.97	-0.23675	IX
7.	Social participation	1.0730	4.07**	0.48616	I
8.	Exposure of extension contact	0.0021	0.03	0.00213	VIII
9.	Innovation proneness	0.2322	1.70	0.22355	III

*Significant at 5% level of probability,
**Significant at 1% level of probability R2 = 0.8731

independent variables there may be corresponding increase in women's participation in farm-related decision-making. The table further indicated that the association of rural women's caste and self-education with their involvement in farm related decisions had positive but non-significant. However, age of Women had shown negative and non-significant association with women's farm-related decision-making.

Regression analysis : Table-5 presents the result of regression analysis showing the prediction potency of the in dependent variables towards the role of rural women in farm decision- making along with co-efficient of determinate on (R^2).

A glance over the figures appeared in the table brings to sharp focus the out of nine independent variables, only family size and social participation turned out to be significant contributor towards the farms decision-making of rural women.

It can he suggested therefore that farm women having higher social participation and large Family size had tendency to hold greater intensity towards the farm decisions. The other variables namely; age, caste, family educational status, self-education, size of holding, exposure of extension contact emerge to produce perceptible influence on the dependent variable, however except size of holding all are positively associated. All the variables taken together explained 87.31 per cent variability towards dependent variables.

CONCLUSION

It can be concluded that women are almost equally involved to men in farm activities but yet men dominated women in the field of farm related decision-making. The study also leads to conclude that involvement of women in farm decision is influenced by variety of factors. Hence, these factors deserved to be looked into while planning any strategy for development of rural women, owing to fact that women's participation in farm activities is vital and we can not achieve the all round speedy development with neglecting the half of population.

REFERENCES

1. Acharya, M.and Bennett, L. (1982). Women and the subsistence sector: Economic Participation and household decision-making in Nepal. *World Bank staff working paper No. 526,* Washington, D.C. U.S.A.
2. Puri, S. (1972). Work roles and decision-making pattern of farm wife and husbands. *Ph.D.* Thesis. *Indian Agricultural Research Institute,* New Delhi.
3. Swaminathan, M.S. (1988). Review of research studies on Women in Agriculture India. Implication for research and extension by C. Prasad *et al.* ICAR, Publication.