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Farm women participation in crop and animal husbandry activities in Bilaspur district of Himachal Pradesh

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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 been highlighted. By and large, they have remained invisible workers. Therefore, efforts were made to analyze the work performed by women in agriculture. The present study was conducted in Bilaspur district of Himachal Pradesh. A total of 120 farm women were 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 tools. The findings showed that cutting, cleaning the farm produce, threshing, drying the farm produce, storage, dehusking, weeding, winnowing were the major farm operations mainly performed by farm women. In case of animal husbandry milking the animals, preparation of milk products, cutting/ chopping and giving the fodder, care of pregnant animals and newly born calves, disposal of dung and preparing the feed for animals etc. were the major activities as performed by the farm women.

Keywords: Extent of participation, crop husbandry, animal husbandry.

Introduction

Women play the most vital role in crop and animal husbandry activities beside her role as a keeper of the home, caretaker of the livestock and that of the consistent helper to the farmer in farm related tasks. Cleaning and storage of grains have always been considered a part of the domestic chores, hence never acknowledged. Sandangi *et al.* (1996) reported that farm women spent 0.63 hours per week in post-harvest operations. The involvement in animal husbandry activities has also been a long standing tradition of Indian farm women, where in many cases, all the activities are also managed by them. But their such efforts and work performed remained, unnoticed, unrecognized and unrewarded. In the hilly rural areas of Himachal Pradesh, the involvement of rural women in the farm operations is relatively more than the plains rural areas of our country. The involvement of rural women varies from the actual physical farm operations to supervision, management and farm decision making. For effective work performance of these women, their active involvement in making the farm decisions is also basically important for which their involvement in such farm operation has not yet been given due consideration by their male partners. The effective farm work performance of the rural women largely depends upon their involvement in making the rational farm decisions. An effort has been made in this study to understand the role of women in various farm operations so as to know their present participation status.

Materials and Methods

The study was conducted in randomly selected two community development blocks namely Ghumarwin and Jhandutta of Bilaspur district of Himachal Pradesh, as a large majority of rural women in this district is also actively involved in the various farm operations. A list of all the villages falling in these blocks was obtained from their Block Development

Offices, and then five villages from each block were selected randomly. Out of the total farming households of the selected villages, a list of only those households which cultivated at least half an acre of land under major food crops and had maintained at least two milch animals for the last five years was prepared with the help of local Panchayat members. Then from such households, a sample of 120 farm women from these 10 villages who were actively participating in crop and animal husbandry farm operations was taken by using population proportionate random sampling procedure. Socio-personal characteristics like age, formal education, farm size, total agricultural experience, family income, family size, herd size, economic motivation, extension contact, exposure to mass media and scientific orientation of the rural women were considered as independent variables for this study. The involvement of farm women in various farm operations was considered as the dependent variable. The data were collected personally by using a well structured interview schedule. The data so recorded were arranged, classified, tabulated and analysed using appropriate mathematical and statistical tools like percentages, mean, cumulative frequency cube root technique and rank order.

Results and Discussion

Socio-personal profile of the farm women

It may be noted from the Table 1 that a majority (41.66%) of the farm women were in their age group of 43-60 years followed by 34.17 per cent who belonged to the age group of 25-43 years. About one fourth (24.17%) of them belonged to the age group of 60-80 years. Thus a majority of the farm women were of about middle age group which might be due to their natural & randomized selection in the study. Chayal and Dhaka (2010) also reported that majority of farm women were of middle age. The overall literacy level among the respondents was quite satisfactory. It is noted that about 54 per cent of the respondents belonged to primary and middle educational category and about 13.00 per cent were matric and above of their formal educational standards. The results indicated that in general, a majority of farm women were literate. It might be due to the reason that perhaps they were aware about the importance of formal education for in their life. The present finding is supported by Dayal and Pandey (1996) who reported that majority of farm women were literate. These findings are in disagreement to those reported by Monga (2004) who reported that a majority of the women were illiterate.

It is quite clear from the Table 1 that majority (51.66%) of the respondents were of marginal farm size followed by 34.17 per cent respondents who had small farm size. There were only 14.17 per cent respondents who had large farm size. On the whole, a majority of the farm women belonged to marginal land holding category. This may be due to per capita divisibility of the inherited land. These findings have also been supported by Bala *et al.*, (1996) who reported that majority of the farm women were marginal farmers. It is depicted that about 39 and 38 per cent of the farm women had agricultural experience of 22-40 and 5-22 years respectively and the remaining had comparatively more such experience of 40-65 years. The profile of the attributes of the respondents flashed that most of them had poor and average level of agricultural experience which might be due to the natural & randomized inclusion in sample of present study.

The data presented in Table 1 further revealed that 62.5 per cent of the families of the farm women had earned Rs 98,000 - 1, 32,000 per annum from all sources of their income whereas 23.33 and 14.17 per cent belonged to low (Rs 40,000 - 98,000) and high (Rs 1, 32,000 - 1, 90,000) total family income group, respectively. An overwhelming majority of the respondents (85.83%) had low to medium level of total annual family income. This might be due to small sized operational land holdings and limited number of other sources of income. Almost similar income status trend was also observed by Monga (2004) among Kangra farm women families.

It is clear from the Table 1 that 48.33 per cent of the farm women belonged to small size families of 1-5 members followed by 42.50 per cent with medium

Table 1. Distribution of farm women according to their selected socio- personal characteristics **N=120**

Sr. No.	Characteristics	Category	Score range	Frequency	Percentage
1.	Age(Years)	Young	25 – 43	41	34.17
		Middle	43 – 60	50	41.66
		Old	60 – 80	29	24.17
2.	FormalEducation	Illiterate	0	40	33.33
		Primary	1 – 5	37	30.84
		Middle	6 – 8	28	23.33
		Metric & above	9 – 14	15	12.50
3.	Farm Size(acres)	Marginal	< 2.5 acre	62	51.66
		Small	2.5 - 5.0 acre	41	34.17
		Large	> 5.0 acre	17	14.17
4.	Total Agri. Experience(Years)	Poor	5 – 22	46	38.33
		Moderate	22 – 40	47	39.17
		More	40 -65	27	22.50
5.	Family Income(Rs)	Low	40000 – 98000	28	23.33
		Medium	98000 – 132000	75	62.50
		High	132000 – 190000	17	14.17
6.	Family Size (no.)	Small	1 – 5	58	48.33
		Medium	5 – 8	51	42.50
		Large	8 -12	11	9.17
7.	Herd Size (no.)	Small	2 – 4	86	71.67
		Medium	4 -5	24	20.00
		Large	5 – 8	10	8.33
8.	Economic Motivation	Poor	17 – 22	50	41.67
		Average	22 – 26	43	35.83
		High	26 – 30	27	22.50
9.	Extension Contacts	Poor	2 – 5	47	39.17
		Average	5 – 7	46	38.33
		High	7 -9	27	22.50
10.	Exposure to Mass Media	Poor	4 – 6	33	27.50
		Moderate	6 – 9	56	46.67
		High	9 – 10	31	25.83
11.	Scientific Orientation	Poor	8 – 12	30	25.00
		Moderate	12 – 16	67	55.83
		High	16 – 18	23	19.17

size (5-8 members) and only 9.17 per cent had large size (8-12 members) families. The data in Table 1 also depicted that 71.67 per cent of farm women households had about 2 to 4 farm animals followed by 20 and 8.33 per cent who maintained 4 to 5 and 5 to 8 farm animals respectively. It was observed that about 42.00 per cent of the study women had poor level of economic motivation and 35.83 per cent had average level of economic motivation, whereas, 22.50 per cent of them had high level of economic motivation. It is also observed that about seventy seven per cent of the farm women had poor to average level of extension contacts (2-7) with the extension personnel during last year regarding their agricultural problems. This might be either due to their poor knowledge, lack of time or inability to access them at one or the other time. It is quite evident from data given in Table 1 that majority of the farm women (46.67%) were moderately exposed to some accessible mass media. However, there were 27.50 per cent and 25.83 per cent of the respondents who had poor and high level of exposure to mass media, respectively. The women with moderate and high exposure to mass media might be well aware about the role and importance of mass media towards more farm productivity and production etc. These findings are similar to those reported by Sreenivasulu and Rao (2005) also observed that a majority of farm women had a medium level of mass media exposure.

Participation of farm women in crop husbandry activities

The extent of participation of farm women in all the crop husbandry activities has also been worked out and depicted in Table 2. In overall terms, it is quite clear from Table 2 that cleaning the farm produce was the most prioritized and top ranked activity with overall mean score of 2.98.

This was followed by the activities viz., drying of farm produce (2.97), manual weeding/plucking operations/grading the farm produce (2.96), grinding of cereals/pulses grains (2.95), storing of farm produce (2.94), cutting the crop/collecting the farm produce/ hoeing operations/earthing ups/winnowing (2.93) and were ranked overall at second, third, fourth, fifth and sixth place respectively. Further packing the farm produce (2.92), dehusking (2.90), seed bed preparation (2.88), threshing (2.87), preparation of field bunds (2.81) and marketing of farm produce (2.77) were also important activities in which the farm women participated more and ranked at appreciable ranks.

The Table 2 also flashed further that the farm women participated poorly in activities like ploughing the fields (1.01), seed treatment (1.04), purchase of insecticides/pesticides (1.04), application of insecticides/pesticides, (1.05), application of weedicides (1.05), purchase of weedicides (1.07), irrigation application (1.48) and preparation and maintenance of irrigation channels (1.83) and fell in the last six lowest ranks.

Level of participation of farm women in crop husbandry activities

The level of participation of farm women in all the major areas of crop husbandry was also assessed. Later on the levels were categorised as low, medium and high as worked out on the basis of total scores for all the participated activities for all the respondents, using cumulative frequency cube root technique.

It is clear from the data given in Table 3 that a considerable majority of (38.33 per cent) farm women was found in low level of participation followed by about 33 per cent under high level. There were about 28 per cent of the farm women who were bracketed in their medium level of overall participation in various crop husbandry activities.

Extent of participation of rural women in animal husbandry activities

The overall status of participation of farm women in various animal husbandry activities has been depicted through Table 4. The farm women participated highly in preparation of milk products like, ghee, cream, dahi, cheese and butter with their highest extent of participation score of 3.00. Further, it was followed by giving the feed to animals (2.97), milking the animals (2.94) , disposal of dung (2.93), chopping the fodder (2.92), care of pregnant animals (2.91) and

Table 2. Pooled extent of participation of farm women in crop husbandry activities **N=120**

Sr.No.	Activities	Mean	Rank	Extent
A).	**Pre-harvesting**			
1	Ploughing the fields	1.01	27	Low
2	Breaking of soil Clods	2.31	15	Medium
3	Puddling the field	2.00	20	Medium
4.	Application of FYM	2.92	7	High
5.	Seed bed preparation	2.88	9	High
6	Seed treatment	1.04	26	Low
7.	Sowing of Crop seed	2.22	16	Medium
8.	Uprooting the seedlings	2.70	13	Medium
9.	Transplanting of seedlings	2.70	13	Medium
10.	Purchase of chemical fertilizer	2.14	18	Medium
11.	Application of chemical fertilizer	2.70	13	Medium
12.	Purchase of insecticides/ pesticides/fungicides	1.04	26	Low
13.	Application of insecticides/ pesticides/ fungicides	1.05	25	Low
14.	Purchase of weedicides	1.07	24	Low
15.	Application of weedicides	1.05	25	Low
16.	Earthings up.	2.93	6	High
17.	Manual weeding.	2.96	3	High
18.	Hoeing operations.	2.93	6	High
19.	Irrigation application.	1.48	23	Low
B).	**During harvesting**			
20.	Cutting of crop	2.93	6	High
21.	Picking operations	2.95	4	High
22.	Plucking operations	2.96	3	High
23.	Collecting the farm produce.	2.93	6	High
C)	**Post-harvesting**			
24.	Threshing	2.87	10	High
25.	Cleaning the farm produce.	2.98	1	High
26.	Drying the farm produce.	2.97	2	High
27.	Grading the farm produce.	2.96	3	High
28.	Packing the farm produce	2.92	7	High
29.	Winnowing	2.93	6	High
30	Dehusking	2.90	8	High
31.	Grinding of cereals/ pulses grains	2.95	4	High
32.	Storing the farm produce	2.94	5	High
33.	Marketing of farm produce	2.77	12	High
D).	**Miscellaneous**			
34.	Preparing/ maintenance of irrigation channels	1.83	22	Low
35.	Preparation of field bunds	2.81	11	High
36.	Purchase of farm implements	2.10	19	Medium
37.	Keeping the farm records	2.15	17	Medium
38.	Purchase of farm input	1.95	21	Medium
39.	Supervision	2.40	14	Medium

Extent Level	Score range
Low	1.01-1.93
Medium	1.93-2.71
High	2.71-2.98

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Table 3. Frequency distribution of farm women under different levels of their participation in crop husbandry activities

N=120

Level	Score Range	Frequency	Percentage
Low	83-91	46	38.33
Medium	91-97	34	28.33
High	97-104	40	33.33

Table 4. Pooled extent of participation of farm women in animal husbandry activities **N=120**

Sr.No.	Activities	Mean score	Rank	Extent
A).	**Breeding**			
1.	Getting the natural service/ artificial insemination done in buffalo / cow.	1.93	18	Medium
2.	Getting the male animalsCastrated	1.00	24	Low
B).	**Feed and fodder**			
3.	Cutting the fodder	2.93	4	High
4.	Chopping the fodder	2.92	5	High
5.	Giving fodder to animals	2.87	7	High
6.	Preparing the feed	2.86	8	High
7.	Giving the feed to animals	2.97	2	High
8.	Preparation of silage/ hay making	2.77	10	High
9.	Purchase of feed/fodder.	1.24	22	Low
C).	**Health care**			
10.	Taking animals to health centre	2.48	14	High
11.	Getting the animals vaccinated	2.37	15	Medium
12.	Care of pregnant animals	2.91	6	High
13.	Care of newly born calves	2.93	4	High
14.	Deworming of calves	1.91	19	Medium
15.	Spraying of shed against animal ticks/mites.	1.89	20	Medium
D).	**Miscellaneous**			
16.	Bathing of milch animals	2.73	11	High
17.	Cleaning the shed	2.77	10	High
18.	Getting the dehorning	1.03	23	Low
19.	Giving water to animals	2.81	9	High
20.	Milking the animals.	2.94	3	High
21.	Taking the animals in/ out of shed	2.72	12	High
22.	Disposal of dung	2.93	4	High
23.	Preparation of milk products	3.00	1	High
24.	Marketing of milk.	2.65	13	High
25.	Marketing of milk products	2.34	16	Medium
26.	Sale/ purchase of animals.	2.33	17	Medium
27.	Keeping the stock records.	1.81	21	Low

Extent level	Score range
Low	1.00-1.85
Medium	1.85-2.41
High	2.41-3.00

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giving fodder to animals (2.87), preparation of feed (2.86), giving water to animals (2.81), preparation of hay/silage (2.77), bathing of milch animals (2.73), taking animals in/out of shed (2.72), marketing of milk (2.65) and taking animals to health centre (2.18) respectively and ranked second, third, fourth, fifth, sixth, seventh and upto fourteenth places respectively. However, average level of participation of these women was observed in some of the activities viz., getting the natural insemination/artificial insemination in buffalo/ cow (1.93), sale/purchase of animals (2.33), marketing of milk products (2.34), deworming of calves (1.91) and spraying of shed against animal ticks/mites (1.89).

The results revealed low/poor extent of participation of farm women in the activities viz., getting the male animals castrated (1.00), getting the dehorning (1.03), purchase of feed/ fodder (1.24), and keeping the stock records (1.81) and were awarded last /least ranks.

Level of participation of rural women in animal husbandry activities

It is clearly revealed from Table 5 that about 42 per cent of the farm women were in their medium level of participation in overall animal husbandry activities followed by about 37 per cent who fell in high level of such work participation. However, only 20 per cent of the farm women expressed low/ poor level of participation in the animal husbandry activities.

On the whole, a large majority of farm women was found in medium and high level of their participation. This might had been due to their skill, experience and traditional interest in rearing the farm /milch animals.

Conclusion

Majority of the farm women belonged to 43-60 year age group and nearly 54 per cent of them belonged to primary and middle educational categories whereas about 13 per cent possessed matric and above formal educational standards. Majority (51.66%) of the farm women were from marginal farmers families. There were about 23 per cent of the farm women who had 40-65 years of agricultural experience. Nearly 62 per cent of the farm women belonged to middle family income group with their total earning of about Rs. 98,000 - 1,32,000, per annum. It was found that 41.67, 35.83 and 22.50 per cent of the farm women were poorly, averagely and highly motivated economically.

It was further found that a large majority of the farm women maintained poor/average contacts with extension personnel/ agencies with respect to their crop as well as animal husbandry farm problems and almost half of them where moderately exposed to accessible mass media. The findings also revealed that 55.83 and 25 per cent of the farm women respectively were moderately and poorly oriented scientifically. In case of crop husbandry activities like cleaning and drying of farm produce, manual weeding, plucking operations, grading the farm produce, grinding of cereals/pulses grains, storing of farm produce, cutting the crop, collecting the farm produce, hoeing operations, earthing up, winnowing, packing the farm produce, dehusking, seed bed preparation, threshing, preparation of field bunds and marketing of farm produce were also important activities in which the farm women participated more. The findings further indicated that the farm women were involved poorly in the activities like ploughing the fields, seed

Table 5. Frequency distributions of farm women under different levels of their participation in animal husbandry activities

N=120

Level	Score Range	Frequency	Percentage
Low	52-64	24	20.00
Medium	64-70	51	42.50
High	70-75	45	37.50

treatment, and purchase of insecticides/pesticides, application of insecticides / pesticides and weedicides, purchase of weedicides, irrigation application and preparation and maintenance of irrigation channels. On the whole, more involvement of the farm women was noted in the major areas of during and post-harvesting crop husbandry activities.

In case of animal husbandry operations, the farm women participated highly in preparation of milk products, giving the feed to animals, milking the animals, disposal of dung, cutting the fodder, care of newly born calves, chopping the fodder, care of pregnant animals and giving fodder to animals, preparation of feed, giving water to animals, preparation of hay/silage, bathing the milch animals, taking animals in/out of shed, marketing of milk and taking animals to health centre. On the other side, low/poor extent of participation of farm women was observed in getting the male animals castrated, getting them dehorned, purchase of feed/ fodder and keeping the farm stock records.

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