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## An Empirical Assessment of Participation and Decision Making by Rural Women in Agriculture and Livestock Activities

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### Abstract

Women make essential contributions to agriculture and rural economic activities in all developing countries. Even though women contribute 60 to 80% of the labour in agriculture and animal husbandry, their involvement in selection of suitable crops and adoption of innovative and good management practices is very low. The study reported that sampled women respondents have shown participation in all the selected agriculture and livestock activities excluding marketing and financial management. The study put forth that very less households witness female participation in agriculture and livestock activities related decision making. Some of the important reasons for their subdued role in decision making in agricultural production could be lack of awareness about new opportunities and modern technologies, inadequate facilities for training and capacity building and poor access to extension workers for consultation whenever needed.

**Keywords:** Agriculture, decision making, livestock, participation, women

### 1. Introduction

Women form the backbone of agricultural rural economy in the developing countries. Women produce over 50% of the world's food and account for 43% of the agricultural labor force in developing countries (FAO, 2011). Women play key role in agricultural production, as subsistence farmers, crop growers, food processors, and livestock caretaker. The rationale for paying attention to gender inequality in agriculture emanates from empirical evidence that demonstrates the ways in which women are essential to improvements in household agricultural productivity, food security and nutrition security. Women play a significant role in the sustainable development of the economy through their contribution in the household and through agricultural activities, often at par with men (Majumder and Shah, 2017). Considerable evidence also suggests that mothers' greater control over resources improves child outcomes—in particular, nutrition and education (Hallman, 2003 and Skoufias, 2005). Women's indigenous knowledge and skills are vitally necessary for food production and sustainable agriculture (Singh and Arora, 2010).

Empirical research has shown that empowering women can lead to improvements in their status both inside and outside the household including greater control over household resources; better mental health; reduced time constraints; and increased access to financial services, health care, skills

development, income-earning opportunities, information about markets and legal rights all of which may, in turn, positively impact agricultural productivity, nutrition and food security (Zereyesus, 2017; Ross et al., 2015; Smith et al., 2003). The UN's Food and Agriculture Organization viewed that if women had the same access to productive resources as men, they could increase yields on their farms by 20-30% raising total agricultural output in developing countries by up to 4%, which could in turn reduce the number of hungry people in the world by 12–17% (Munshi, 2017). Women empowerment is considered as the key to improve agriculture productivity through multiple roles in agriculture sector, as cultivators, entrepreneurs and labourers.

Women, although often not visible in national statistics, have an important role to play in the agricultural production and food security in light of continued population growth and the prevailing youth bulge. Despite women's important role in the agricultural sector in developing countries yet the irony is that they remain one of the most vulnerable groups. The constraints and opportunities that women face in agriculture today vary across regions and countries, depending on the socio-cultural and agro-ecological contexts. Gender norms, beliefs and behaviors limit women's decision-making power related to production, assets, resources, income, leadership and membership in groups, and how they spend their time. The women are found to lag behind men in respect of access to, control over and utilization of productive resources such



as land, livestock, labour, education, extension and financial services, and technology (Ahearn and Tempelman, 2010; Zereyesus, 2017; Kassie et al., 2015; Oseni et al., 2015).

The women's ability to generate income in the agricultural sector is severely constrained by their limited use, ownership, and control of productive physical and human capital. There is an average gender wage disparity in all activities, with women earning only 70% of men's wage. Additionally, many women participate in agricultural work as unpaid subsistence labor (Khyade and Khyade, 2016). The results of a study noted that women are disempowered in two major domains of agriculture-resources i.e. access and decision-making and leadership i.e. group membership (Gupta et al., 2017). In the context of a patriarchal gender biased culture women are less likely than men to define their activities as work, they are less likely to report themselves as being engaged in agriculture and they work, on average, longer hours than men (FAO, 2010-11). In this backdrop, present study was conducted to study the participation of rural women in decision making regarding agriculture operations and livestock management.

## 2. Materials and Methods

The study was conducted in four villages of District Shimla in Himachal Pradesh. The target population for the study comprised of farm women who are primary decision maker in the household. A total of 80 respondents were selected for the study and a systematic random sampling technique

was used to select 20 sample respondents from each village. Data were collected using pre-structured questionnaire developed by the researchers after reviewing some previous work. The extent of rural women participation in agriculture and livestock were assessed by using a three point continuum namely 'Regularly,' 'Occasionally' and 'Not at all' which was assigned scores of 2, 1 and 0, respectively. For the purpose of ranking of different activities performed by rural women, the frequency of responses from each of the three point continuum of a specific activity under major activity was tabulated and multiplied by concerned score. Then, they were added together to get the total score for each specific activity for the purpose of their ranking (Sailaja and Reddy, 2003). For analyzing the underlying pattern of decision making, percentage of households with male, female and joint decision making has been calculated for each decision area.

## 3. Results and Discussion

Distribution of the respondents according to the extent of participation in selected agriculture activities along with participation indices and rank order is depicted in Table 1. Analysis of the data reveals that substantial percentage (63.75%) of the respondents participated 'regularly' in hand weeding. Further analysis depicts that overwhelming percentage of respondents participate occasionally in irrigation (72.5%), storage (71.3%) and harvesting (70%). However, a

Table 1: Participation of farm women in selected agriculture activities

Activity	Extent of participation						Participation Indices	Rank order
	Regularly		Occasionally		Not at all			
	No.	%	No.	%	No.	%		
Land preparation	2	2.5	36	45	42	52.5	40	7
Preparation of seed beds	15	18.75	46	57.5	19	23.8	76	3
Sowing/planting	7	8.75	33	41.3	40	50	47	6
Application of ferti-lizers	5	6.25	25	31.3	50	62.5	35	8
Irrigation	14	17.5	58	72.5	8	10	86	2
Application of pesti-cides	3	3.8	19	23.8	58	72.5	25	9
Hand weeding	51	63.75	21	26.25	8	10	123	1
Harvesting	4	5	56	70	20	25	64	4
Storage	1	1.3	57	71.3	22	27.5	59	5
Marketing	1	1.3	12	15	67	83.8	14	10
Keeping accounts	1	1.3	8	10	71	88.75	10	11

large majority of the respondents were 'not at all' engaged in keeping accounts (88.75%), marketing (83.8%) and application of pesticides (72.5%). Perusal of the data reveals that overall the most prevalent activity performed by the respondents is hand weeding followed by irrigation, preparation of seed beds, harvesting and storage. However their participation in keeping accounts and marketing is minimal.

Table 2 shows the pattern of decision making for agriculture

activities. It is evident from the table that the decision of application of pesticides (91.3%), financial management (71.25%), marketing (58.8%) and purchase/sale of agricultural tools/equipments is taken predominantly by men alone whereas land selection (72.5%), crop selection (71.3%), fertilizer application (71.3%) and irrigation (68.8%) decisions are taken jointly by men and women in majority households. Further, it is clear from the table that very less households



Table 2: Decision making for selected agriculture activities

Activity	Decision makers					
	Men		Women		Joint	
	No.	%	No.	%	No.	%
Land Selection	20	25	2	2.5	58	72.5
Crop selection	21	26.3	2	2.5	57	71.3
Application of fertilizers	21	26.3	2	2.5	57	71.3
Application of Pesticides	73	91.3	0	0	7	8.8
Purchase/Sale of agricultural tools/equipments	44	55.0	1	1.3	35	43.8
Irrigation	24	30.0	1	1.3	55	68.8
Hiring labour	34	42.5	0	0	46	57.5
Marketing	47	58.8	2	2.5	31	38.8
Financial management	57	71.25	1	1.3	22	27.5

witness female participation in agriculture activities related decision making.

The extent of involvement of rural women participation in

various livestock related activities along with participation indices and rank order is depicted in Table 3. It is put forth that a large percentage of sampled women are regularly involved

Table 3: Participation of farm women in selected livestock activities

Activity	Extent of participation						Participation indices	Rank order
	Regularly		Occasionally		Not at all			
	No.	%	No.	%	No.	%		
Feeding (grazing)	57	71.3	5	6.3	18	22.5	119	3
Feeding (hand feeding)	49	61.3	29	36.3	2	2.5	127	2
Cleaning of animal sheds	33	41.3	45	56.3	2	2.5	111	4
Veterinary care/services	20	25	58	72.5	2	2.5	98	6
Milking	7	8.8	45	56.3	28	35	59	9
Processing – milk, cheese	5	6.3	71	88.8	4	5	81	7
Processing – shearing	28	35	48	60.0	4	5	104	5
Marketing/Selling of produce	2	2.5	3	3.8	75	93.8	7	10
Purchase/sale of animals	47	58.8	2	2.5	31	38.8	96	7
Arrangement of fodder	73	91.3	0	0	7x'	8.8	146	1

in arrangement of fodder (91.3%), grazing (71.3%) and feeding (61.3%) of animals. Rural sampled women occasionally participated in processing (88.8%) and veterinary care (72.5%). Astonishingly, 93.8% of sampled women do not participate at all in marketing/selling of produce. Further analysis of the data reveals that arrangement of fodder; feeding and cleaning of sheds have scored higher in rank order depicting higher women participation in these activities. However negligible women participate in selling/marketing of the produce as it was ranked last in rank order analysis.

The pattern of decision making for livestock related activities is presented in Table 4. A fair sizeable number of men alone take the decision of marketing (68.8%) and financial management (58.75%) decisions, whereas, feed supplements (76.3%), milk processing (72.5%), veterinary care (71.3%) and hiring labour

Table 4: Decision making for selected livestock activities

Activity	Decision makers					
	Men		Women		Joint	
	No.	%	No.	%	No.	%
Feeding animals	1	1.3	60	75	19	23.8
Grazing	0	0	53	66.3	27	33.8
Veterinary care	9	11.3	14	17.5	57	71.3
Feed supplements	19	23.8	0	0	61	76.3
Hiring labour	20	25	6	7.5	54	67.5
Milk processing	5	6.3	17	21.3	58	72.5
Marketing	55	68.8	3	3.8	22	27.5
Financial management	47	58.75	1	1.3	32	40.0

(67.5%) decisions are jointly taken by men and women in the household. A large majority of the sampled respondents takes the decision of feeding (75%) and grazing (66.3%) animals. Analysis of the table reveals that most of the decisions are either taken by men or jointly by men and women except for the decision of feeding and grazing.

#### 4. Conclusion

From the above study, it is suggested that the participation of women should also be increased in agricultural decision making. Results indicate that women were more engaged in livestock tasks and not participating in managing the agricultural income and marketing related matters. Women should move forward to make decisions and use of income they are earning. Conscious efforts are needed for training of rural female agricultural workers. Government should provide good facilities to poor rural women for land, agricultural and livestock extension services.

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