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Gender Roles in Dominant Farming System of Western Plain Zone of Uttar Pradesh: A Case Study of Meerut District

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Abstract

Rural women constitute the most important productive work force in the Indian economy. Almost all the rural women in India can be considered as farmers in some senses as almost all of them are directly or indirectly engaged in some agricultural and allied activities such as agricultural labourers in others farms, dairying and animal husbandry etc. Despite their involvement in agricultural works in such a large magnitude, women have not been actively involved in the main stream of development and there is hardly any appreciation and recognition for their extensive contribution. Considering the importance of women in agriculture and allied activities, this study was conducted to examine the gender participation in farm (crop production and livestock rearing) and household activities and in decision-making process of farm families. The study raveled that 54 percent work in crop production is managed by men followed by joint participation (23 percent) and only 23 percent by women alone. Majority of women (68 percent) were found responsible for live stock management. The rural females were found to be engaged for 4.30 hrs in agriculture and animal care activities.

***Keywords**: , Gender roles, Farm activities, Household activities*

Introduction

Women play a significant and crucial role in agriculture and allied activities. Rural women are extensively involved in agriculture and allied activities which vary within agro-production systems. They are managers as well as labourers [7].Despite of their subordinate status, they often manage complex household responsibilities and pursue multiple livelihood strategies. They are involved in crop production, tending animals, fodder collection, firewood collection, fetching water, selling of produce, value addition and processing along with their domestic roles as home managers and caregivers. Many of these activities are not acknowledged as paid economic activities but they are indispensable for the well-being of the rural micro climate [1]. They are not regarded as equal partners in the development process [2] because of less visibility of their contributions. Less access to resources and control, less voice and low leadership skills further worsen the condition. Just because of the farmers' wives status and less recognition of their work, women are at times neglected and often un-reached in developmental programmes and policies. Women's work is complex and important because their engagement in both farm and household activities is necessary. In developing

economies, workers' combined multiple activities over different part of the year and participation in those activities is restricted by the caste and class category, education level and biasness of male about female working.

Activities, resources and opportunities of people are significantly influenced by gender- that is, by the socio-economic and cultural dimension of being male or female. The household constitutes a basic unit of production in all such societies where agricultural production depends almost entirely on use of family labour [8]. In a peasant household, agricultural activity is considered most important because it fetches a direct monetary reward for the household. The activities associated with agriculture such as the management and care of livestock are considered of secondary importance since they contribute to additional income or consumption for the household but are not the chief source of livelihood. A third area of work is household work, an activity where the labour of the individuals is not paid for if it is performed for one's own family. An understanding of these three roles can inform gender-sensitive planning that takes into account the differential impact of programmes and projects on women and men because of women's triple role.

Materials and Methods

The present study was conducted in Meerut district of Uttar Pradesh The soils in the region are alluvial and high in organic matter. According to agro-climatic zone classification, Meerut district is a part of north-western plains. Here about 70% lands is under agriculture and another 5% land is under forest cover. Tube wells are the predominant source of irrigation. It is one of the most populous and economically advanced and agriculturally very prosperous districts. Wheat is the most important crop followed by sugarcane and fodder.

The sample comprised of 60 farm women belonging to three randomly selected villages of Meerut district namely Andawali, Kishoripur and Alipur. From each village twenty farm women were selected randomly for the study. Figure 1 shows a clear description of the sampling plan for the present study.

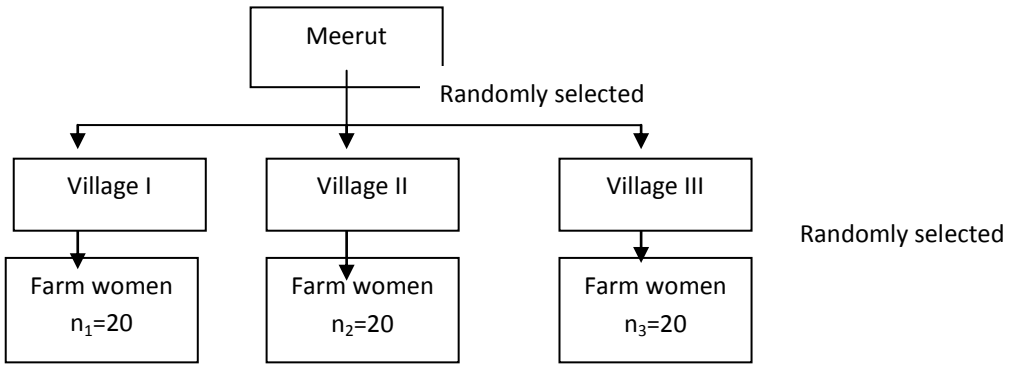

Fig 1 Sampling Plan

An extensive survey was conducted in these villages for collection of data. A well-structured interview schedule was used as a research instrument to elicit information on women participation in agriculture activities. Efforts were made to keep it simple and understandable so as to capture all the necessary information on family income, household composition, age groups, and participation of men and

women in agriculture. This interview schedule was pre-tested on non-sample farmers and modified for removing the redundancies. The primary data for this study were collected through household survey. The responses were tabulated and the data were analyzed using descriptive statistical tools like frequency and percentage.

Results and Discussion

Socio-personal profile of respondents

The socio-personal profile of the respondents was examined and information is presented in Table 1. The table shows that majority of the respondents (46%) were in the age group of 35-50 years followed by respondents having age less than 35 years (29%) and respondents having age more than 50 years (25%). Most of the respondents (40%) were illiterate followed by respondents educated up to elementary level (22%) and respondents educated up to primary level (20%). A few were qualified upto high school (10%), intermediate (6%) and graduation (2%).

Table 1 Socio-personal profile of respondents (N=60)

Age		
Categories	Frequency	Percentage
Less than 35	17	29
35-50	28	47
More than 50	15	25
Education level		
Illiterate	24	40
Primary	12	20
Elementary	13	22
High school	6	10
Intermediate	4	6
Graduates/other	1	2
Farming experience (in years)		
Nil	4	7
Upto 10 years	20	33
10 -20	13	22
21 -30	3	5
31-40	16	27
Above 40	4	6
Family type		
Nuclear	34	57
Joint	26	43
Household headship		
Male headed	58	97
Female headed	2	3
Landholding		
Less than 1 acre	16	26
1 acre	38	64
More than 1 acre	6	10

In case of farming experience, it was found that majority of the respondents (33%) were having experience upto 10 years, followed by women having experience of 31-40 years (27%). Some (22%) were having experience of 11-20 years and a few (6 %) was found to possess experience of above 40 years. The study also revealed that majority of the respondents (57%) were from nuclear families while the rest (43%) were from joint families. Among the total households, majority (97%) belonged to male headed households while only three per cent households were female headed. These households were female headed because of the absence of any male figure in the family. As per as the landholding is concerned, most of the respondents (64%) were having about one acre of land followed by respondents having less than one acre of land (26%) and more than one acre of land (10%).

Gender roles in dominant farming system of the selected area

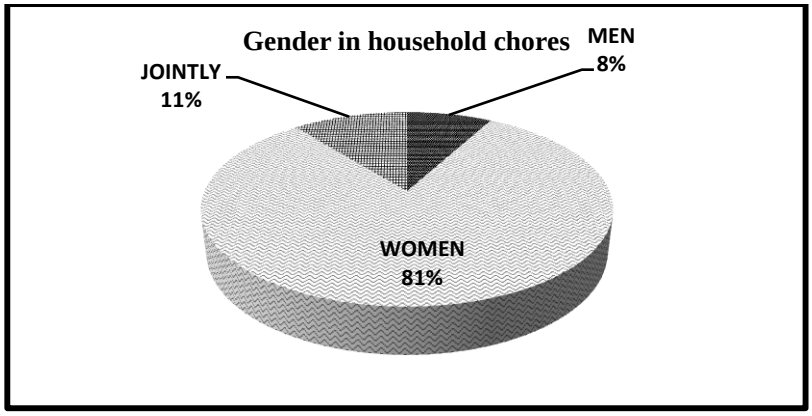

Fig 2: Gender roles in household activities

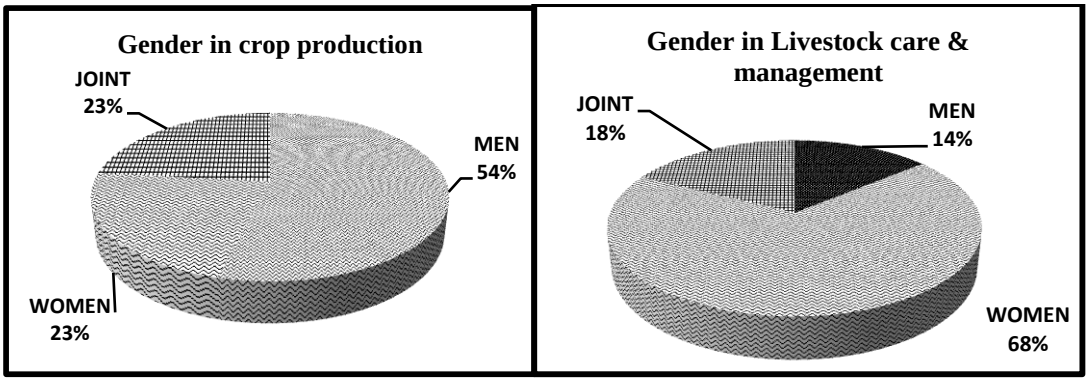

Fig 3: Gender roles in farming activities

Gender participation in crop production activities

In crop production, more than half (54%) of work is managed by men alone, followed by joint participation of men and women (23%) and women alone (23%) in rest of the activities. Table 2 displays the frequencies and percentages for division of labour in crop production activities in the interviewed households. (Fig. 2, 3)

Table 2 Gender role participation in crop production activities (N=60)

S.No.	Activities	Men	Women	Jointly
1	Field preparation	51(85)	0 (0)	9 (15)
2	Fertilizer/Manure application	39 (65)	1 (2)	20 (33)
3	Making bunds	42 (70)	1 (2)	17 (28)
4	Sowing	32 (53)	2 (3)	26 (43)
5	Irrigation	58 (97)	1 (2)	1 (2)
6	Plant protection	59 (98)	1 (2)	0 (0)
7	Weeding operations	12 (20)	33 (55)	15 (25)
8	Harvesting	14 (23)	14 (23)	32 (54)
9	Bringing crop to home	46 (77)	1 (2)	13 (22)
10	Winnowing	6 (10)	49 (82)	5 (8)
11	Processing	0 (0)	59 (98)	1 (2)
12	Marketing	60 (100)	0 (0)	0 (0)
13	Storage	2 (3)	15 (25)	43 (72)

*Figures in parentheses indicate percentages

Field preparation was the mainstay of men (85%), followed by joint participation of men and women (15%). None of the women performed the activity of land preparation alone. The reason was that land preparation activity has been

mechanized fully. It was done by tractor which is operated by males only. The respondents who responded for joint participation, they used to go along with men to level the ground. More than half (65%) women reported that in their fields, men apply manure and fertilizer as they only know the right amount of fertilizer to spread. About 33% of women were reported to apply manure to the fields jointly with men and only female headed households (2%) were reported to spread fertilizer alone by women. Harvesting was done jointly by male and female followed by equally performed by men and women alone. Storage was also done jointly by male and female. It could be inferred that field preparation, fertilizer application, making bunds, sowing, irrigation, plant protection and bringing crop to home were male dominant activity while weeding, processing and winnowing were women dominant activities. Marketing was reported as male specific activity as women do not go to markets for selling any agricultural products. None of the women was found performing marketing and selling of crop produces even not in the female headed households. This accounts for the socio-cultural norms of this region which women face as restrictions on mobility because of the much prevalent *pardah pratha.* The result of the study can be compared with some findings of some other researchers **[1, 3, 4, 5, &9]** .

This has been reported that women were mostly busy with post harvest operation in crop cultivation **[1]**. The pre dominant participation of males was noted in land preparation. Irrigation, plant protection, fertilizer application and marketing of produce and that of female in seed preparation for sowing **[3]**. Activities like spade work during field work and irrigations, puddling by plough and pesticide dusting were performed by men and transplanting of paddy was mainly performed by men and women both **[5]**. While higher participation of male in nursery raising , bunds making for irrigation and puddling operations and that of active participation of womrn in post-harvest operation was reported earlier **[9]**. However higher participation of males in paddy cultivation activities than women in Arunachal Pradesh have been recorded in various studies **[4]**. \

Gender participation in livestock care and management

Livestock care and management is one of the major livelihood activities carried out by the farm families in the selected villages along with crop production. Fig 3 shows that livestock rearing is a women dominant activity. Majority of women (68%) were found responsible for livestock care and management in their households followed by performing jointly (18%) with men. In a few households (14%) only, men took the responsibility for livestock rearing. The possible reason for higher participation of women in animal husbandry would be that women are at home for more period of time than men and are available at home to take care of the livestock.

The gender roles in total activities pertaining to livestock care and management is shown in Table 3.

Table 3 Gender participation in livestock care and management activities (N=60)

S.No.	Activity	Men	Women	Jointly
1.	Collection of fodder	15 (25)	27(45)	18 (30)
2.	Preparation	6(10)	39 (65)	15 (25)

	of feed for cattle			
3.	Operating chaff cutting machine	12 (20)	24 (40)	24 (40)
4.	Feeding cattle	3 (5)	47 (78)	10 (17)
5.	Cleaning of cattle shed	0 (0)	51 (85)	9 (15)
6.	Care of new borne calves	4 (7)	43 (72)	13 (22)
7.	Milking	4 (7)	51 (85)	5 (8)
8.	Processing of milk (curd, ghee preparation, etc.)	7 (12)	45 (75)	8 (13)
9.	Selling of milk	33 (55)	24 (40)	3 (5)
10.	Cattle dung cake making	0 (0)	60 (100)	0 (0)

Figures in parentheses indicate percentages

Almost all the activities related to livestock management were reported being carried out dominantly by women namely collection of fodder, preparation of cattle feed, feeding cattle, cleaning of cattle shed, care of new borne calves, milking and processing of milk. Cattle dung making was reported to be women specific activity. More than half (55 %) of the respondents reported milk selling as male dominant activity. Overall it could be inferred that livestock management and care was reported as predominantly women activity whilst selling milk was predominantly a male activity. It clearly indicates that in spite of performing all the major activities in livestock care and management in their households, the financial part i.e. selling of milk still remains a male dominant activity which indicates a type of financial disempowerment of women. The results are in line with study done by many others [6]. Who have reported that collection of fodder, cleaning of animals and sheds, feeding of animals and health care are performed by men. The findings of this study also have some similarity with the findings of other investigators [8].

Time use pattern of farm women

In participatory mode, women were asked about the average time spent by them in different household, livestock and crop production related activities. Table 4 reveals that on an average, a farm woman spends four hours per day doing work in the farm and two and a half hours per day in fodder collection.

Table 4 Time use pattern of farm women

S. No.	Activity	Time (hrs./day)
1.	Cooking	2.30
2.	Child care	1.45
3.	Household work	2.00
4.	Cattle rearing	2.30
5.	Fodder collection	2.30
6.	Field	4.00
7.	Leisure/Personal	2.00
8.	Sleep	6.30

They spent on an average 2-2.30 hours a day in cattle rearing like preparing feed, watering, feeding and cleaning cattle shed. Time spent for household work collectively was two hours. However they spend considerable time of nearly 4.30 hours in household work and cooking. Time spent on child care was reported as less than 2 hours on an average as most of the respondents were middle aged (35-50) and have crossed their child bearing age. The rest or spare time that these women got was 2 hours at day time in which they usually do some group activity like processing activities. The time for sleep of these farm women is about 6.30 hours.

Access to and control over resources and benefit sharing

Resources are critical to people's identities and livelihoods and to advance

autonomy, agency, and rights. Access to and control over resources lead to empowerment. Assessment of access to and control over resources has been a fundamental tool of gender analysis. In the present study, gender in resource allocation, use and control was examined to get answers of the questions like- which resources are under whose control? And do women have liberty to use these resources when required?

Gender in access to resources

The situation of gender roles and rights can be understood very well by one of the Hindi folks …*To my brother belong your green fields,…..O father, while I am banished afar….*

Access is the opportunity to make use of resources for a larger gain. Access profile will reflect the rules and norms that govern distribution and exchange in different arenas.

Table 5 Gendered pattern in access to resources (N=60)

S.No.	Activities	Men	Women	Jointly	None
1	Land	9 (100)	1 0)	50 (0)	-
2	Livestock	2 (55)	23 (7)	35 (38)	-
3	Agricultural implements	52 (98)	1 (2)	5 (0)	-
4	Seeds	54 (98)	1 (2)	5 (0)	-
5	Improved varieties/ Breeds	52 (93)	1 (2)	7 (5)	-
6	Training	33 (53)	0 (0)	0 (0)	27
7	Market	60 (100)	0 (0)	0 (0)	-

*Figures in parentheses indicate percentages

The study reveals that accessibility to resources was very minimal to women compared to men. Lack of access to resources and particularly the capital has limited women's abilities to accumulate assets that would serve as collateral when in need of credit as compared to men. The weakness of women's land rights results in an inability to use land as collateral to obtain access to credit. The reason for lack of access of women to land is culture, i.e., it is not considered culturally appropriate for women to inherit land. Though laws are there for inheritance but women said that they "love their brothers" and do not want to upset them by accepting their rights to claim land. Other responses were that women said that their fathers didn't have that much land to give land to sons and daughters both. Some women were of the belief that man is responsible for feeding his wife and therefore needs the land more. Thus women were not complaining of their lack of access to land.

Gender in control over resources

Control is the ability to choose or define how and for what purpose a resource will be used. In other words, another word for "control" might be power.

Table 6 Gendered pattern of control over resources (N=60)

S.No.	Activities	Men	Women	Jointly	None
1	Land	60 (100)	0 (0)	0 (0)	-
2	Livestock	33 (55)	4 (7)	23 (38)	-
3	Agricultural implements	59 (98)	1 (2)	0 (0)	-
4	Seeds	59 (98)	1 (2)	0 (0)	-
5	Improved varieties/ Breeds	56 (93)	1 (2)	3 (5)	-

6	Training	32 (53)	0 (0)	0 (0)	28 (47)
7	Market	60 (100)	0 (0)	0 (0)	

*Figures in parentheses indicate percentages

A perusal of Table 6 indicates that among all the household resources, the control over the resources were in the hands of men for being the head of the household. In only few households (2%) control over agricultural implements, seeds and improved breeds and varieties was reported to be in the hands of women. This was because of the absence of any male figure in these households. In some households (4%) women alone had control over livestock whereas in 38 per cent households, women shared the control over livestock resources jointly with men. Joint control of women along with men was also observed over improved varieties or breeds in a few (5 %) households. Overall it was observed that women reported to have control over only household resources in comparison to their male counterparts.

Benefit sharing from agriculture and allied activities

For analysing the sharing of benefits from different resources, respondents were asked "who keeps account of the money earned from different sources of income?". It was observed (Table 7) that in majority of the households (97%), it was men who used to keep the income earned from the crops and vegetable production except in case of female headed households (3%). Despite of being predominantly a women activity, women were reported lagging behind in sharing benefits from the income derived from livestock care and management.

Table 7 Benefit sharing of income from agricultural and allied activities (N=60)

Source of income	Men	Women	Jointly
Crops	58 (97)	2 (3)	0 (0)
Vegetables	60 (100)	0 (0)	0 (0)
Milk	28 (47)	22 (37)	10 (17)
Calves	58 (97)	2 (3)	0 (0)

*Figures in parentheses indicate percentages

Nearly half (47%) households reported men for keeping the income derived from livestock rearing enterprise followed by joint sharing (17%). Same trend was observed in benefit sharing of income derived from sale of calves. Income generated from crop production was strongly controlled by males only. Women's participation to control income generated from cereal crops and cash crops were almost none except in livestock rearing. However, there was a weaker level of participation of both men and women for the same. Women do not have access to the major part of household income to the same extent as men. Although the main producers are women, they do not control the end results

Conclusion

Most of the programmes targeting farming population often take 'household' as beneficiary which usually take men as the target, given that they are more visible farmers, own land and the restrictions placed on women. While some agricultural interventions may have benefited women in the villages through increased food production, but these programmes often do not target women's lack of land ownership, their lesser role on land, as well as their lesser control over the benefits generated . Furthermore, they do not tackle gender inequity since they do

not lead to changes in the social position of women vis-à-vis men.

Gender roles in Western plains are shaped by socio-cultural factors such as restricted mobility outside the village for many women especially the younger ones, their often restricted ability to work outside the compound — partly brought about by women's role as the keepers of family honour — as well as the lack of ownership of the majority of productive assets by most women. Gender roles and relations are often attributed to "culture," but it must be remembered that "culture" is not static and unchanging. It could take time but it can be changed with increasing educational level and gender sensitization. Gender sensitive programmes need to be carried out repetitively and role models and the success stories shall be displayed to the village communities to unfreeze the divide of conventional roles among men and women. The possibilities of a gradual sensitisation of men and women to the importance and value of the work that women currently do through media and socialization shall be explored.

The possibility of using common land for women's orchards and again accessing markets through those women who are able to leave the village, could be explored. This would provide women and their families with extra income and may enable these women to have more decision-making power. Since the gender analysis showed that women were more involved in livestock rearing and management and had more benefit sharing as well as voice in making decisions pertaining to livestock, interventions could be planned to develop skill of women in this area.

References

1. Awal, M.A., Islam, M.R. and Rahman, M.H. (1999). Gender analysis in farm activities in a selected area of Jamalpur district. *Bangladesh Journal of Training and Development*, **12**(1-2): 43-48.

2. Das, L., Mishra, S.K. and Nath, N.C. (2006). Decent work and empowerment of women in agriculture". Kurukshetra, **54**: 21-28.

3. Dhaka, J.P., Singh, C.B., Muylwijk, J. and Chakravarty, R. (1994). Gender analysis of dairy and crop farming systems in Karnal district. Proceedings of A National Seminar on Farming Systems Research for Improving Livestock Production and Crop Residue Utilization Held at National Dairy Research Institute, Karnal, Haryana (India) on November 24-26, 1994.

4. Kumar, R. and Arya, B.S. (2003). Involvement in tribal male and female in paddy cultivation in North Eastern Hill Region (Meghalaya and Arunachal Pradesh). Indian Research Journal of Extension Education, **3**(1): 13-17.

5. Lata, C., Verma, S. K. and Jain, V. (1997). Drudgery correlates of men and women involved in paddy cultivation. Indian Journal Extension Education, **33** (1&2): 76-79.

6. Mishra, S., Sharma, S., Vasudevan, P., Bhatt, R.K., Pandey, S., Singh, M., Meena, B.S. and Pandey, S.N. (2008). Gender participation and role of women in livestock management practices in Bundelkhand region of Central India. International Journal of Rural Studies, **15**:1- 9.

7. Ozkan, B., Ediz, D., Ceyhan, V. and Godley, K. (2000). Women's role in the vegetable farming systems in Antalya, Turkey: a gender analysis of labour participation and decision- making in the agricultural sector. Acta Horticulture, 536: 419-438.

8. Roy, M.L. (2010). Mixed Farming amongst Resource-poor Farm Families in West Bengal-A Gender Perspective. Unpublished Ph.D. Thesis. NDRI (Deemed University), Karnal, Haryana.

9. Sabharwal, K. and Kaushik, S. (2007). Gender differential in perception and performance of productive roles in paddy cultivation. Rajasthan Journal of Extension Education, 15:72-75.