

Participation of Women in Sugarcane Farming System-A Case Study of Bijnor District (Western Uttar Pradesh)

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Abstract

Sugarcane is an annual crop engaging around 50 million farmers of which approximately half are women. Even though, women form the backbone of sugarcane cultivation, they still tend to exist as “the hidden farmers” with almost negligible access on land, resources, technologies, financial services, markets and even education. Despite their exclusive inputs in sugarcane farming operations like farmyard manure application, sett planting and treatments, hand weeding and detrashing, sugarcane bundling, disposal of trash and plant protection measures, the output of the land controlled by women is drastically lesser than the male counterparts. Against this backdrop the present paper is an attempt to examine the role of women in sugarcane farming in terms of their participation level, their decision making pattern in various activities, time utilization pattern, drudgeries involved and thereby implications. Hence, this study was conducted in Nehtaur Block of Bijnor District of Western Uttar Pradesh. Six villages from Nehtaur Block were selected for the purpose of the study. From these villages, 120 women who were engaged in sugarcane farming selected randomly and each was interviewed personally for the collection of data.

Keywords: sugarcane, women, hidden farmers, participation level, drudgery.

Introduction

Women play a significant and crucial role in agriculture and allied activities. By and large they have remained “invisible workers”. Because of small “visibility” of their contributions,

they are not regarded as equal partners in the development process (Das *et al.* 2006). In reality rural farm women are invisible in statistics, they remain unreached and unattended in planned development efforts and are with no access and control on the resources. Rural Indian women are extensively involved in agricultural activities. However, the nature and extent of their involvement differs with the variations in agro-production systems. The mode of female participation in agricultural production varies with the land-owning status of farm households. They range from manager to landless labourers (Singh and Kumari, 2007). Women work is getting harder and more time-consuming due to ecological degradation and changing agriculture technology and practices (Sharma *et al.* 2012). Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes. Many of these activities are not defined as “economically active employment” in national accounts, but they are essential to the well-being of rural households (SOFA Team and Doss, 2011).

As regard to sugarcane, women play a key role, and 60 per cent work of sugarcane farming is done by women. The tools employed for sugarcane harvesting are physically demanding and not suitable for women. According to an estimate 52-75 per cent of women engaged in sugarcane farming are illiterate (Solomon, 2013). Being a long-duration crop of 12 months and its sowing spreads from October to May, sugarcane is a labour-intensive crop, which requires about 166-325 labour days per hectare. Intercultural operation is the single largest consumer of labour in sugarcane cultivation in India. The other main components of labour-use in sugarcane cultivation are harvesting and planting operations.

Objectives

To keep the pace of role of women in sugarcane farming system the present study was undertaken with the following objectives:

1. To study the socio-economic characteristics of farm women.
2. To examine and analyze the role of women in sugarcane farming system.

Study Area and Methodology

Bijnor District lying at the foot of the Himalayas enjoys a unique place among the districts of the Western Uttar Pradesh. It is located between 29°2' and 29°57' North latitude and 77°59' and 78°56' East longitude. The main crops of this area are sugarcane, wheat and rice. The Bijnor District comprised of eleven development blocks, out of which one block namely Nehtaur was selected for the purpose of study. The present study was carried out during the agriculture year 2013-14. Six villages were randomly selected and from each village twenty farm women were randomly selected for the study. Thus, the total sample constitutes one hundred twenty

sugarcane farming women. An extensive survey was conducted in these villages for collection of data. All the selected farm women were interviewed personally using a well-structured questionnaire. For the analysis of data, simple percentage method has been used.

Results and Discussion

Socio–Economic Characteristics of Sugarcane Farm Women

Participation of farm women in sugarcane cultivation was significantly affected by socio-economic variables like age, education, caste, type of family and land holding. The socio-economic characteristics of farm women were analyzed and present in Table 1. The table explains that majority (48.33 percent) of farm women belonged to middle age group followed by young age (29.16 percent) and old age (22.50 percent) group. The study also shows that majority of middle age farm women were the most active in all sphere of work. While looking at their educational status, result revealed that the majority of farm women are illiterate (31.66 percent), followed by literate (26.66 percent), primary level (21.66 percent), middle level (15.83 percent) and only 4.16 percent are graduate. Caste is a permanent stratification of the rural society into higher and lower categories. It is a social category whose members are assigned a permanent status within a given social hierarchy (Tewari and Dwivedi, 2013). Result on caste category indicates that maximum 49.16 percent were belong to other backward class and 36.66 percent were from schedule caste and rest of the farm women 14.16 percent were to general category. Another important change in rural society is the emergence of nuclear families. Traditionally the social structure in the rural areas encouraged the joint family norm.

Table 1. Socio–Economic Characteristics of Sugarcane Farm Women

Variable	Category	Farm women (%)
Age	Young < 30	29.16
	Middle 31- 40	48.33
	Old > 40	22.50
Education	Illiterate	31.66
	Literate	26.66
	Primary	21.66
	Middle	15.83
	Graduation	4.16
Caste	General	14.16
	Other Backward Class	49.16
	Schedule Caste	36.66

Contd.

Type of Family	Nuclear Family	57.50
	Joint Family	42.50
Land Holding	Marginalized	36.66
	Small	32.50
	Medium	24.16
	Large	6.66

Source: Field Survey

However due to the impact of several interrelated social, economic as well as environmental factors, this system is gradually breaking up. The present study has shown that majority 57.50 percent of farm women belong to the nuclear family and followed by 42.50 percent were from the joint family. When the families become nuclear, the land holding has also tended to be divided between the siblings. Result on land holding depicts that majority 36.66 percent farm women are marginalized followed by 32.50 percent small and 24.16 percent medium land holding, only 6.66 percent had large land holdings. The farm women from marginalized and small land holding had a longer work day as they put in more work on the farm.

Participatory Role of Women and Men in Sugarcane Farming System

Women work in every sphere of the farm sector is recognized as farmer. Women are involved in various activities in the farm ranging from sowing and harvesting to marketing of the produce. Their contribution to food production is immense (Aggarwal *et al.* 2003).

Table 2: Participatory Role of Women and Men in Sugarcane Farming System (N=12)

S.No.	Activities	Men	Women
	Land preparation		
1.	Ploughing	100	0.00
	FYM application	41.66	58.33
	Forming ridges & furrows	80.00	20.00
2.	Planting		
	Sett cutting	30.83	69.16
	Sett treatment	46.66	53.33
	Sett transport	40.00	60.00
	Spreading setts	16.66	83.33
	Sett planting & covering	24.16	75.83
3.	Weed management		

Contd.

	Spraying weedicide	87.50	12.50
	Hand weeding	21.66	78.33
4.	Fertilizer application		
	Applying Super PO4	75.83	24.16
	N&K top dressing	40.83	59.16
5.	Irrigation		
	Guiding irrigation water	91.66	8.33
	Cleaning channels	21.66	78.33
6.	Earthing up	95.83	4.16
7.	Detrashing	59.16	40.83
8.	Plant protection		
	Supply of water	9.16	90.00
	Mixing chemicals	32.51	67.50
	Spraying chemicals	65.33	34.16
	Rouging affected clumps	25.83	74.16
9.	Harvesting		
	Cutting the cane	56.66	43.33
	Detopping the cane	50.83	32.50
	Cleaning the cane	8.33	91.66
	Bundling	15.83	84.16
	Transporting the cane	30.00	70.00
10.	Ratoon management		
	Collection of trash	20.83	79.16
	Trash disposal	13.33	86.66
	Off barring	64.16	35.83
11.	Miscellaneous		
	Gap filling	82.50	17.50
	Tying, wrapping and propping	89.16	10.83

Source: Field Survey

Table 2 explains that in the study area, sugarcane farming is being done both by women and men; their participation levels differ in various activities. Sugarcane farming activities like spreading setts, sett planting and covering, hand weeding, cleaning channels, supply of water, mixing chemicals, rouging affected clumps, cleaning the cane, bundling, transporting the cane, collection of trash and trash disposal are exclusively done by farm women. However women and men participate equally in sugarcane farming activities like farm yard manure (FYM) application, sugarcane sett cutting, sett treatment, sett transport, N& K top dressing,

detrashing, spraying chemicals, cutting the cane, detopping the cane and off barring. Table also reveal that the activities like ploughing, forming ridges and furrows, spraying weedicides, applying super PO₄, Guiding irrigation water, earthing, gap filling, tying, wrapping and propping are being exclusively done by men. These activities are laborious and cumbersome and hence being done by men.

Time Management of Farm Women

In the present study, majority of the farm women are busy in the farm activities and stated that agriculture is everything for them. Women work longer hours and perform more tasks; their work is more arduous than that undertaken by men. Most women did not have a concept of time and were not in the habit of keeping time for the various activities. In most cases, they did not follow a clock-time schedule, but rather followed the biological clock by way of rhythms of nature such as sunrise, noon, and sunset (Aggarwal *et al.*2003). Table 3 illustrates that time spent by farm women in all the daily activities both inside the house and outside. Women get up early morning and spend 1.30 hours on the cattle that is cleaning the cattle sheds, feeding the cattle, milking, etc. Women spend 5 hours at home doing cooking and other house hold work. Whereas a woman spends 7.30 hours in an agricultural operation like planting, supply of water, bundling, cleaning the cane, etc. Regarding water fetching the farm women reported that they spent hardly 30 minutes for drawing water from the Government hand pumps. Thus, the two hour spends child care and one hour in miscellaneous work and after that they take a rest.

Table 3: Time Management of Farm Women

S. No.	Activity	Average time spend (hours)
1.	Farm work	7.30
2.	Cattle rearing	1.30
3.	Water fetching	0.30
4.	Cooking	2.30
5.	Household work	2.30
6.	Child care	2.00
7.	Personal	1.00
8.	Rest	6.30

Source: Field Survey

Sugarcane Farm Women in Decision Making Pattern

According to Amartya Sen, "Women are less likely to secure favorable outcomes for themselves in household decision - making processes. They feel that their long term security

lies in subordinating their well being to that of male authority figures". Rural farm women are an important segment of the society because of their active participation in home and farm affairs. The extent of participation in the decision - making activities in household agriculture related and another socio-cultural affair reflects the status of women in the family as well as the society. Their participation in decision - making explains their control over household resources and agriculture, etc. (Choudhary, 2004). The process of decision making was studied pertaining to the decision taken related to the farm as well as the home. The farm decisions like area allotment for the selected crops, selection of variety, area allotment for different varieties, place of procuring sugarcane setts, fertilizer procurement, labour management, fixing rate, borrowing loans, maintaining account were all taken by the men in most of the families. The participation of farm women in these decisions was found to be very low.

Table 4 reveal that the sugarcane farming operation, activities like crops to be grown, times of planting, farm yard manure (FYM) application, plant protection, time of harvesting, selling/ supply to factory, deciding market etc. Either by men themselves or jointly in consultant with their wives or sometimes elders. However, the participation of farm women in decision

Table 4: Sugarcane Farm Women in Decision Making Pattern

S.No.	Item	Men	Women	Jointly
1.	Crops to be grown	57.50	15.83	26.66
2.	Area allotment for the selected crops	67.50	11.66	20.83
3.	Selection of variety	74.16	10.00	15.83
4.	Area allotment for different varieties	80.83	6.66	12.50
5.	Place of procuring setts	85.00	5.83	9.16
6.	Time of planting	68.33	10.83	20.83
7.	FYM application (Quantity, place)	46.66	18.33	35.00
8.	Fertilizer procurement	69.16	7.50	23.33
9.	Plant protection	54.16	22.5	31.66
10.	Time of harvesting	50.83	20.00	29.16
11.	Labour management			
	i) Type of labour to be engaged	62.50	15.00	22.50
	ii) Hiring of labourers	68.33	7.50	24.16
12.	Marketing			
	i) Selling / Supply to factory	60.00	13.33	26.66
	ii) Fixing rate	50.83	3.33	45.83
	iii) Deciding the market	55.83	9.16	35.00
13.	Money management			

i) Keeping & spending	31.33	35.83	32.50
ii) Capital transactions (buying & selling)	40.00	24.16	35.83
iii) Disposal of home/farm/other products	41.66	23.33	35.00
iv) Borrowing of loans	75.00	10.00	15.08
v) Savings	32.50	31.66	35.83
vi) Maintaining accounts	70.83	6.66	22.50

Source: Field Survey

making is major contribution in money management, keeping and spending, buying and selling, disposal of home/farm/other products and saving. Nevertheless, the participation of farm women in decision making remains to be quite low due to hesitation, illiteracy and unawareness.

Problem Faced by Farm Women in Sugarcane Farming

Many overlook the burden of women. Most of the laborious jobs with low output are required to be handled by women. In sugarcane, farming majority of the farm women face problems pertaining to health viz. fatigue, backache, headache, restlessness and unhygienic conditions in the field. Some farmwomen said that they felt shy to work with their in laws as at times they had to veil in front of male elder members. Most of the farm women said that they were unable to manage time between farm and household activities. Detrashing and hand weeding are reported to be very tedious operation of the farm women in sugarcane farming.

Concluding Remarks

The study highlights the role of the invisible working hands of farm women in the field of sugarcane, who are working side by side with the male farmers and contributing a lot towards sugarcane production. The increasing participation of women in family farms leads to process of 'feminization of agriculture' and making as 'principal cultivators'. The profile analysis of farm women with respect to the socio-economic characteristics revealed that majority of farm women were middle age, illiterate, backward class, nuclear family and marginalized. Participation of farm women's maximum in planting, hand weeding, plant protection and harvesting etc. whereas there is no participation of farm women in ploughing of field. Average time spent, which provide a more comprehensive assessment of farm women spend their time, the labour burden of women exceeds that of men, and includes a higher proportion of unpaid household responsibilities related to preparing food and collecting fuel and water. Farm women are actively involved in sugarcane operation but their involvement in decision making in sugarcane is very poor, low self confidence, lack of knowledge, belief that women are subordinate to male counterparts, poor access of to farm information were the major constraints perceived by farm women in decision making process. There is a need to impart

training to these women in order to strengthen the knowledge and technical know-how about the farm activities. To improve the productivity of sugarcane involvement of farm women in decision making needed to increase.

References

- Aggarwal, S., Khanna, K. and Malhan, S. (2003). *Quality of Life of Farm Women*. New Delhi: Abhijeet Publications.
- Choudhary, S. (2004). "Invisible activities of rural women". *Kurukshetra*. **52**(9): 30-36.
- Das, L., Mishra, S. K. and Nath, N. C. (2006). "Decent work and empowerment of women in agriculture." *Kurukshetra*. **54**(7): 21-28.
- Sharma, S., Dubey, A. and Sharma, R. (2012). "Participation of rural women in agricultural activities: A study of Marh block of Jammu District." *International Journal of Scientific and Research Publications*. **2**(7): 1-3.
- Singh, I. and Kumari, U. (2007). "Rural development and women empowerment." *Kurukshetra*. **55**(5): 4.
- Sofa Team and Doss, C. (2011). "The role of women in agriculture". Rome: Agriculture Development Economics Division, Food and Agriculture Organization, ESA Working Paper No. 11-02.
- Solomon (2013). "Meet focuses on women-friendly farm technology." *The Indian Express*. Retrieved from <http://archive.indianexpress.com>. Accessed on 14/10/2013.
- Tewari, N. and Dwivedi, A .K. (2013). "A case study on socio-economic status of farm women in Faizabad District of Uttar-Pradesh." Retrieved from <http://ssrn.com/abstract=1888078>. Accessed on 23/11/2013.