Involvement of Man and Women in Paddy Cultivation Operation

Anshu[*], Dr. Varma SK [**]

[*] Department of Extension Education and Communication Management
[**] CCS Haryana Agricultural University, Hisar-125004

Abstract- The study was conducted in Kurukshetra district of Haryana state with the objective of analysing the involvement of man and women in paddy cultivation. Two blocks from Kurukshetra district were randomly selected i.e. Thanesar and Ladwa block. Two villages from each block were selected randomly. From Kurukshetradistrict 30 households from each village were selected randomly thus making a total sample of 120 households from different socio-economic categories. The study revealed that the average workload of men and women of low socio-economic strata were higher than those of medium and high socio-economic strata, in operation like Land preparation, Nursery raising, Manure and fertilizers application and Intercultural operation. It may therefore, be inferred that landless women and men performed more work in paddy cultivation than the women and men of medium and high socio-economic strata.

Index Terms- women, man, and paddy operation

I. INTRODUCTION

In developing countries, one third of total population was peasant and women. These women mainly work in their land and produce food for their family. Women get only one tenth of the total income of the world and were owner of less than 1 percent assets. They were lagging behind in representation of household heads, in education and in socio-economic conditions. They were not only involved in transplanting, weeding, application of fertilizer and harvesting but also raising and rearing of small and large ruminants, their care and marketing.

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 yet been highlighted in India. They still remain as invisible workers. It has been observed that more than 75 percent women are involved in activities like winnowing, weeding, grading, threshing and cleaning of field farm operations. The physical strain of female farmers seems to be too high because of heavy work tasks of various activities done by them in agriculture and allied field **(**Singh and Vinay, 2013).
According to 2011 census, India's total population is 121 crore, there are total 62.37 crore males and 58.64 crore females in India and in Haryana males population is around 1.35 crore and female population is 1.18 crore. According to the census, 56.7 percent of the main workers labour force employed in the agriculture and allied activities which reflect the predominance of agriculture in the matter of employment opportunity. In spite of having a significant place in the economy, this sector is facing various problems.

Women perform 66 percent of the world's work, produce 50 percent of the food, but earn 10 percent of the income and own 1 percent of the property. Globally, women represent 49.6 percent of the total population, but only 40.8 percent of the total workforce is in the formal sector (World Bank, 2011). Haryana has about one million hectare land under rice cultivation, which is mostly irrigated. The state average productivity is about 3.1 tonnes/ha. Rice is grown in 18 districts of Haryana. Out of which seven districts are in high productivity group i.e. yield more than 2,500 kg/ha. Throughout the world, rural women historically have played and continue to play an important role in rice production; because women provide a source of cheap labour for rice cultivation. The use of female labour in rice production is higher than male labour in the poorer families. In middle-class households, rice farming involved male and female labour almost equally.

II. METHODOLOGY

The study was conducted in Kurukshetra district of Haryana state with the objective of analyzing the involvement of man and women in paddy cultivation. Two blocks from Kurukshetra district were randomly selected i.e. Thanesar and Ladwa block thus making a total sample of 120 households from different socio-economic categories. A well-structured interview schedule was constructed for data collection. Data were collected personally by the researcher by paying repeated visits to the area. Frequency, percentage, mean, 't' test and correlation were computed for analysing data.
Two villages from each block were selected randomly. From Kurukshetra district 30 households from each village were selected randomly .

III. RESULT AND DISCUSSION

A. Socio-economic profile of respondents

More than half of the respondent (60.8%) were of middle age group, illiterate (66.7%), belonged to lower caste (40.8%), having low family education status (76.7%) and with negligible social participation. Most of the respondents (72.5%) had joint family, medium family size (40.0%), owned mixed type house (66.7%), cultivator (41.7%) as their main occupation. Less than half of the respondents (40.0%) were landless, having 1-2 milch animals (36.7%) with medium material possession (68.3%).

Most of the respondents (54.2%) were having medium localite source of information utilization and low cosmopolite sources of information utilization (81.7%).

The results indicate that, in case of paddy cultivation there are seven operations namely land preparation, nursery raising, manure and fertilizers application, intercultural operation, spade work during irrigation, plant protection measures and marketing of grains, which was performed exclusively by men. There are only three operations namely shifting produce to threshing floor, keeping parts of grains for consumption and sun drying which was performed exclusively by women. The remaining five operations namely uprooting, transplanting, harvesting, threshing and winnowing are performed by both man and women. The results indicate that in case of paddy cultivation, the mean score of the involvement of farm men was more in high, medium and low socio-economic status.

Amongst the male dominated operations viz., land preparation, manure and fertilizer application, nursery rising, spade work during field irrigation, pesticide dusting and marketing of grains, the mean score of men of low socio-economic strata was higher than men belonging to high and medium strata.

Table 1: Involvement in various operations- inter gender variation (paddy)

Sr. No.	Operations	Socio-economic status	Men (Mean score) men days	Women (Mean score) men days	't' test
Male dominated operations					
1.	Land preparation	High	0.79	-	-
		Medium	0.73	-	-
		Low	0.82	-	-
		Total	0.78	-	-
2.	Nursery raising	High	0.59	-	-
		Medium	0.53	-	-
		Low	0.60	-	-
		Total	0.58	-	-
3.	Manure and fertilizers application	High	0.34	-	-
		Medium	0.30	-	-
		Low	0.37	-	-
		Total	0.34	-	-
4.	Intercultural operation	High	0.52	-	-
		Medium	0.52	-	-
		Low	0.53	-	-
		Total	0.52	-	-
5.	Spade work during Irrigation	High	0.85	-	-
		Medium	0.75	-	-
		Low	0.77	-	-
		Total	0.78	-	-
6.	Plant protection measures	High	0.84	-	-
		Medium	0.72	-	-
		Low	0.74	-	-
		Total	0.78	-	-
7.	Marketing of grains	High	0.35	-	-
		Medium	0.34	-	-
		Low	0.36	-	-
		Total	0.35	-	-
Female dominated operations					
1.	Shifting produce to threshing floor	High	-	1.11	-
		Medium	-	1.19	-
		Low	-	1.24	-
		Total	-	1.19	-
2.	Keeping part of grains for consumption	High	-	0.30	-
		Medium	-	0.33	-

		Low	-	0.34	-
		Total	-	0.31	-
3.	Sun drying	High	-	0.24	-
		Medium	-	0.21	-
		Low	-	0.25	-
		Total	-	0.22	-
Jointly dominated operations					
1.	Uprooting of seedlings	High	0.73	0.90	1.19
		Medium	0.90	1.17	2.70
		Low	0.89	1.03	1.69
		Total	0.86	1.07	2.57
2.	Transplanting	High	2.77	2.40	2.02
		Medium	2.55	2.79	1.41
		Low	2.37	2.90	3.69*
		Total	2.53	2.74	2.25
3.	Harvesting	High	3.00	3.17	0.72
		Medium	3.47	2.95	2.06
		Low	3.15	3.05	0.47
		Total	3.22	3.06	1.25
4.	Threshing	High	1.15	1.27	0.94
		Medium	1.06	1.03	0.51
		Low	1.79	1.47	2.93*
		Total	1.10	1.28	2.54
5.	Winnowing	High	0.79	0.89	1.50
		Medium	0.68	0.83	4.97*
		Low	0.68	0.83	4.97*
		Total	0.70	0.84	5.27*

* Significant at 0.05 level of significance

The data further reveal that average workload of men and women of low socio-economic strata were higher than those of medium and high socio-economic strata, in most of the operations. It may therefore, be inferred that landless women and men performed more work in crop cultivation than the women and men of medium and high socio-economic strata. This may be mainly due to economic compulsions for sustaining their families for which they have to overburden themselves by agricultural work and that too in low paying, less skilled and monotonous activities.

The data further unfolds that't' value of jointly operated operation of uprooting of seedling, transplanting and winnowing was found to be statistically significant at 5% level of significance.

Relationship between independent variables and involvement of women in paddy cultivation operations

The results have been reported in Table 2. and 3. In case of women respondents' three variables viz., age, caste and size of family were found to be significantly but negatively correlated with involvement in paddy cultivation. The data further reveal that four variables viz., land holding, milch animal, occupation and material possession were found to be significantly but positively correlated with involvement in paddy cultivation.

It may be due to the fact that younger women, belonging to lower caste having medium sized families used to undertake more workload. Whereas, the respondents having less land holding, having less milch animals, agricultural labourers having low material possession used to undertake more workload in paddy cultivation.

Table 2. Relationship between independent variables and involvement of women in paddy cultivation operations

Sr. No.	Independents variables	'r' value
1.	Age	-0.26*
2	Caste	-0.28*
3	Education	-0.20
4.	Family education	0.05
5.	Social participation	0.03
6.	Size of family	-0.36*
7.	Type of family	0.23
8.	Type of house	0.11
9.	Land holding	0.32*
10.	Milch animal	0.35*
11.	Occupation	0.26*
12.	Material possession	0.37*

* Significant at 0.05 level of significance

However, in case of men respondents variables viz., age, caste and size of family, type of family, land holding, milch animal and material possession were found to be significant but negatively correlated

Table 3. Relationship between independent variables and involvement of men in paddy cultivation operations

Sr. No.	Independents variables	'r' value
1.	Age	-0.33*
2	Caste	-0.28*
3	Education	-0.15
4.	Family education	0.04
5.	Social participation	0.02
6.	Size of family	-0.37*
7.	Type of family	-0.26*
8.	Type of house	0.03
9.	Land holding	-0.29*
10.	Milch animal	-0.35*
11.	Occupation	0.18
12.	Material possession	-0.27*

with work load which might be due to the reason that the respondents who are young, belonging to lower caste, having large and joint family, more land holding and more milch animals used to undertake more workload in paddy cultivation.

DISCUSSION

Finding of the socio personal profile of the respondents revealed that most of the respondents belonged to middle age group, were illiterate, having medium sized joint family, belonging to lower caste, had negligible social participation and had mixed type of house. Majority of the respondents had low family education status. Similar findings were supported by Kumari (2009), Gita (2010) and Batra (2011). Finding of the socio economic profile of the respondents revealed that more than one third of the respondents were having cultivator as their occupation. Majority of the respondents were agricultural labour and landless, having 1-2 milch animals. Further, it was observed that majority of the respondents had medium material possession. Finding of Deepti (2008) supported the study.

The data further reveal that average workload of men and women of low socio-economic strata were higher than those of medium and high socio-economic strata, in most of the operations. It may therefore, be inferred that landless women and men performed more work in paddy cultivation than the women and men of medium and high socio-economic strata. This may be mainly due to economic compulsions for sustaining their families for which they have to overburden themselves by agricultural work and that too in low paying, less skilled and monotonous activities finding supported by Bala (2010).

The data further unfolds that't' value of jointly operated operation of uprooting of seedling, transplanting and winnowing was found to be statistically significant at 5% level of significance

IV. CONCLUSION

The average workload of men and women of low socio-economic strata were higher than those of medium and high socio-economic strata, in most of the operations. It may therefore, be inferred that landless men and women performed more work in paddy cultivation than the women and men of medium and high socio-economic strata.

In case of women respondents' three variables viz., age, caste and size of family were found to be significantly but negatively correlated with involvement in paddy cultivation. The data further reveal that four variables viz., land holding, milch animal, occupation and material possession were found to be significantly but positively correlated.

In case of men respondents variables viz., age, caste and size of family, type of family, land holding, milch animal and material possession were found to be significant but negatively correlated

REFERENCES

[1] Amin, H., Ali. T., Ahmad, M. and Zafar, M.I. (2009). Participation Level of Rural Women in Agricultural Activities. *Pak. J. Agri. Sci.* **46** (4): 294-301.

[2] Bala, N. (2010). Selective Discrimination against Women in Indian Agriculture- A Review. *Agric. Rev.***31** (3): 224-228

[3] Batra, P. (2011). Feasibility of Fruits and Vegetable Processing as an Enterprise for Women. M.Sc Thesis, CCS Haryana Agricultural University, Hisar.

[4] Census of India (2011). Government of India

[5] Chayal, K. and Dhaka, B. L. (2010). Analysis of Role Performance of Women in Farm Activities. Statusand Decision Making Power of Agricultural Farm Women: A Study in West U.P. *Indian Res. J.Ext. Edu.***10** (2):109-112.

[6] Chitnis, R. (2013). Women Farmers: The Invisible Face of Agriculture India. https:// www.greengrants.org/2013/04/09/women-farmers-the-invisible-face-of-agriculture-in-india/

[7] Deepti. (2008). Impact Assessment of All Indian Coordinated Research Project (AICRP) In Home Science on Farm Women. M.Sc. thesis, CCS Haryana Agricultural University, Hisar.

[8] FAO. (2004). Food and Population [on line] [Accessed on 10.10.2010]. Available at www.fao.org

[9] FAO (2010). Statistical Database of the Food and Agricultural Organization of the United Nations. http://faostat.fao.org/site/339/default.aspx page567

[10] Gita. (2010). Feasibility of Fruit Plant Nursery as an Enterprise for Rural Women. M.Sc. Thesis, CCS Haryana Agricultural University, Hisar.

[11] Goyal, G., Randhawa, V., Kaur, R., Kaur, V. and Pannu , K. (2003).Women Participation in Agricultural Operations. *Journal of Family Ecology*. **5**(1- 2): 167-171.

[12] Kumari, R. (2009). Capacity Building of Schedule Caste Rural Women through Energy Conservation. Unpublished Ph.D. thesis, CCSHAU Haryana Agricultural University, Hisar.

[13] Kumari, S., Singh, K., Mehta, M. and Dahiya, M. (2009). Women Involvement in Paddy Cultivation in Haryana State . *Agric. Sci. Digest*. **29** (4): 271-274.

[14] Lal, R. and Khurana, A. (2011).Gender Issues: The Role of Women in Agriculture Sector. *International Journal of Business Economics &Management Research.***1** (1).

[15] Rani, S., Promila and Tondon, C. (2002). Participatory Role of Rural Women in Farming Activities in Haryana. *J. Family Ecol.* **4** (1): 1-4.

[16] Rao, E.K. (2006). Role of Women in Agriculture: A Micro Level Study. *Journal of Global Economy.* **2** (2).

[17] Sharma, A., Singh, D. and Solanki, G.S. (2014). Role of Farm Women in Agricultural Operations and Decision Making Pattern. *Indian Res. J. Ext. Edu.***14** (2).

[18] Siddika, A. (2012).Women in Informal Sector. The News Today. News Corp Publications Limited, Dhaka, Bangladesh.

[19] Sidhu, K. (2007). Participation Pattern of Farm Women in Post harvesting. *Stud. Home Comm. Sci*. **1**(1):45-49.

[20] Sidhu, K. (2011). Participation Pattern of Farm Women in Post Harvesting. Stud. Home Comm. Sci. Department of Extension Education, Punjab Agricultural University.**1**(1): 45-49.

[21] Singh, D. and Vinay, D. (2013). Gender Participation in Indian Agriculture: An Ergonomic Evaluation of Occupational Hazard of Farm and Allied Activities. *International Journal of Agriculture, Environment &Biotechnology.* **6** (1): 157-168.

[22] Sultana, N. and Afrad, M.S.I. (2014).Women's Participation in Rice Mills in Sherpur Sadar Upazila of Bangladesh. *Int. J. Agril. Res. Innov. & Tech.***4** (1): 36-39.

[23] Thelma, P., Singh, A., Luis, J. and Hussain, M. (2005). Labour out Migration, Livelihood of Rice Farming House Hold and Women Left Behind – A Case Study in Eastern Uttar Pradesh. *Economic and Political Weekly*.**11** (25): 2522-2529.

[24] World Bank Group (2011).What We Know About Women in the Economy Today. http:// weconnectinternational.org/en/buying-for-impact#

AUTHORS

First Author – Anshu, M.Sc student, CCSHAU, Hisar (Haryana) and anshugahlawat3@gmail.com
Second Author – Dr. Varma , Professor , , CCSHAU, Hisar) and shashikvarma@gmai.com

Correspondence Author – Anshu, anshugahlawat3@gmail.com, 9996968684.